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CITY OF WALNUT

June 26, 2013

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Regional Board Staff:

Enclosed please find the Notice of Intent (NOI) for the City of Walnut required as part of the new National Pollution Discharge Elimination System Municipal Separate Storm Sewer Systems Permit. As stated in the NOI, the City of Walnut will be developing a Watershed Management Plan and associated Integrated Monitoring Plan.

Please do not hesitate to contact me should you require any additional information. Thank you in advance for your time and assistance.

Sincerely,

Alicia Jensen

Alicia Jensen
Senior Management Analyst
City of Walnut
P.O. Box 682
Walnut, CA 91788-0682
909-598-5605 x222
ajensen@ci.walnut.ca.us

Notice of Intent

City of Walnut

Watershed Management Plan

Submitted to:

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Submitted by:

The City of Walnut
21201 La Puente Road
Walnut, CA 91789

June 28, 2013

Notice of Intent to Develop a Watershed Management Plan and Integrated Monitoring Plan
The City of Walnut hereby notifies the Los Angeles Regional Water Quality Control Board (LARWQCB) of the City's intent to proceed with the development of a Watershed Management Plan (WMP). Per Order No. R-2012-0175, NPDES Permit No. CAS 004001, Section VI.C.4.b.i. The City of Walnut will develop a Draft WMP and submit the plan for the Regional Board's review by June 28, 2014. Draft versions of the Low Impact Development Ordinance and Green Streets Policy are included in Appendix A and B. As required in Section VI.C.7 of NPDES Permit No. CAS 004001, the City will develop and submit an Integrated Monitoring Plan (IMP) in conjunction with the WMP.

Total Maximum Daily Loads (TMDL) & Water Quality Based Effluent Limitations (WQBEL)
In accordance with Section VI.C.4.b.ii of NPDES Permit CAS004001, the jurisdictional area of the City of Walnut discharges to tributaries subject to the TMDLs listed in Table A. Currently, the City is not subject to any interim or final Water Quality Based Effluent Limitations (WQBELs), however, the City will continue its existing programs and Minimum Control Measures until the WMP is approved and implemented.

Table A TMDLs Applicable to the City of Walnut

TMDL	Resolution Number	Effective Date	EPA Approval Date	Water Body	Impairment
San Gabriel River and Impaired Tributaries Metals and Selenium	2006-014	July 13, 2006	TBD	San Jose Creek	Dry Weather WLA for Selenium*

**As noted at the Board's June 6, 2013, LA Basin Plan Public Hearing, Walnut objects to the inclusion of the San Gabriel River Metals TMDL in the LA Basin Plan amendment since Selenium was removed as a TMDL on the USEPA's 2010 303(d) list.*

City Contact Information

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Attachment A

Draft LID Ordinance
City of Walnut

DRAFT LID ORDINANCE

ORDINANCE NO._____

AN ORDINANCE AMENDING [MUNICIPAL CODE SECTION REFERENCE(S)] OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING [NAME OF POST-CONSTRUCITON REQUIREMENTS – LIKELY "SUSMP" FOR MOST MUNICIPALITIES] REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

CITY COUNCIL OF THE CITY OF WALNUT HEREBY ORDAINS THE FOLLOWING:

(A) The City of Walnut is authorized by Article XI, §5 and §7 of the State Constitution to exercise the police power of the State by adopting regulations to promote public health, public safety and general prosperity.

(B) The City of Walnut has authority under the California Water Code to adopt and enforce ordinances imposing conditions, restrictions and limitations with respect to any activity which might degrade the quality of waters of the State.

(C) The city is a permittee under the "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," issued by the California Regional Water Quality Control Board--Los Angeles Region," (Order No. R4-2012-0175) which also serves as an NPDES Permit under the Federal Clean Water Act (NPDES No. CAS004001), as well as Waste Discharge Requirements under California law (the "Municipal NPDES permit"). In order to participate in a Watershed Management Program and/or Enhanced Watershed Management Program, the Municipal NPDES permit requires permittees to develop and implement a LID Ordinance.

(D) The City of Walnut has applied an integrated approach to incorporate wastewater, stormwater and runoff, and recycled water management into a single strategy through its (_____) Plan.

(E) The City of Walnut is committed to a stormwater management program that protects water quality and water supply by employing watershed-based approaches that balance environmental, social, and economic considerations.

(F) It is the intent of the City of Walnut to expand the applicability of the existing Standard Urban Stormwater Mitigation Plan (SUSMP) requirements by providing stormwater and rainwater LID strategies for Development and Redevelopment projects as defined under "Applicability."

[MUNICIPAL CODE SECTION REFERENCE(S)] of the [CITY NAME] Municipal Code is amended in its entirety to read as follows:

Definitions.

Except as specifically provided herein, any term used in this [SECTION REFERENCE] shall be defined as that term in the current Municipal NPDES permit, or if it is not specifically defined in either the Municipal NPDES permit, then as such term is defined in the Federal Clean Water Act, as amended, and/or the regulations promulgated thereunder. If the definition of any term contained in this chapter conflicts with the definition of the same term in the current Municipal NPDES permit, then the definition contained in the Municipal NPDES permit shall govern. The following words and phrases shall have the following meanings when used in this chapter:

Automotive Service Facility means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. For inspection purposes, Permittees need not inspect facilities with SIC codes 5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to stormwater (Source: Order No. R4-2012-0175).

Basin Plan means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments (Source: Order No. R4-2012-0175).

Best Management Practice (BMP) means practices or physical devices or systems designed to prevent or reduce pollutant loading from stormwater or non-stormwater discharges to receiving waters, or designed to reduce the volume of stormwater or non-stormwater discharged to the receiving water (Source: Order No. R4-2012-0175).

Biofiltration means a LID BMP that reduces stormwater pollutant discharges by intercepting rainfall on vegetative canopy, and through incidental infiltration and/or evapotranspiration, and filtration. Incidental infiltration is an important factor in achieving the required pollutant load reduction. Therefore, the term "biofiltration" as used in this Ordinance is defined to include only systems designed to facilitate incidental infiltration or achieve the equivalent pollutant reduction as biofiltration BMPs with an underdrain (subject to approval by the Regional Board's Executive Officer). Biofiltration BMPs include bioretention systems with an underdrain and bioswales (Modified from: Order No. R4-2012-0175).

Bioretention means a LID BMP that reduces stormwater runoff by intercepting rainfall on vegetative canopy, and through evapotranspiration and infiltration. The bioretention system typically includes a minimum 2-foot top layer of a specified soil and compost mixture underlain by a gravel-filled temporary storage pit dug into the in-situ soil. As defined in the Municipal NPDES permit, a bioretention BMP may be designed with an overflow drain, but may not include an underdrain. When a bioretention BMP is designed or constructed with an underdrain it is regulated by the Municipal NPDES permit as biofiltration (Modified from: Order No. R4-2012-0175).

Bioswale means a LID BMP consisting of a shallow channel lined with grass or other dense, low-growing vegetation. Bioswales are designed to collect stormwater runoff and to achieve a uniform sheet flow through the dense vegetation for a period of several minutes (Source: Order No. R4-2012-0175).

City means the City of Walnut.

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted in 1972, by Public Law 92-500, and amended by the Water Quality Act of 1987. The Clean Water Act prohibits the discharge of pollutants to Waters of the United States unless the discharge is in accordance with an NPDES permit.

Commercial Malls means any development on private land comprised of one or more buildings forming a complex of stores which sells various merchandise, with interconnecting walkways enabling visitors to easily walk from store to store, along with parking area(s). A commercial mall includes, but is not limited to: mini-malls, strip malls, other retail complexes, and enclosed shopping malls or shopping centers (Source: Order No. R4-2012-0175).

Construction Activity means any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that result in land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain the original line and grade, hydraulic capacity, or original purposes of the facility. See "Routine Maintenance" definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage by the State of California General Permit for Storm Water Discharges Associated with Industrial Activities or for Stormwater Discharges Associated with Construction Activities is required if more than one acre is disturbed or the activities are part of a larger plan (Source: Order No. R4-2012-0175).

Control means to minimize, reduce or eliminate by technological, legal, contractual, or other means, the discharge of pollutants from an activity or activities (Source: Order No. R4-2012-0175).

Development means construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail, and other non-residential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Directly Adjacent means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area (Source: Order No. R4-2012-0175).

Discharge means any release, spill, leak, pump, flow, escape, dumping, or disposal of any liquid, semi-solid, or solid substance.

Disturbed Area means an area that is altered as a result of clearing, grading, and/or excavation (Source: Order No. R4-2012-0175).

Flow-through BMPs means modular, vault type "high flow biotreatment" devices contained within an impervious vault with an underdrain or designed with an impervious liner and an underdrain (Modified from: Order No. R4-2012-0175).

General Construction Activities Storm Water Permit (GCASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from construction activities under certain conditions.

General Industrial Activities Storm Water Permit (GIASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from certain industrial activities under certain conditions.

Green Roof means a LID BMP using planter boxes and vegetation to intercept rainfall on the roof surface. Rainfall is intercepted by vegetation leaves and through evapotranspiration. Green roofs may be designed as either a bioretention BMP or as a biofiltration BMP. To receive credit as a bioretention BMP, the green roof system planting medium shall be of sufficient depth to provide capacity within the pore space volume to contain the design storm depth and may not be designed or constructed with an underdrain (Source: Order No. R4-2012-0175).

Hazardous Material(s) means any material(s) defined as hazardous by Division 20, Chapter 6.95 of the California Health and Safety Code.

Hillside means a property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is 25% or greater and where grading contemplates cut or fill slopes (Source: Order No. R4-2012-0175).

Impervious Surface means any man-made or modified surface that prevents or significantly reduces the entry of water into the underlying soil, resulting in runoff from the surface in greater quantities and/or at an increased rate, when compared to natural conditions prior to development. Examples of places that commonly exhibit impervious surfaces include parking lots, driveways, roadways, storage areas, and rooftops. The imperviousness of these areas commonly results from paving, compacted gravel, compacted earth, and oiled earth.

Industrial Park means land development that is set aside for industrial development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry (Source: Order No. R4-2012-0175).

Infiltration BMP means a LID BMP that reduces stormwater runoff by capturing and infiltrating the runoff into in-situ soils or amended onsite soils. Examples of infiltration BMPs include infiltration basins, dry wells, and pervious pavement (Source: Order No. R4-2012-0175).

LID means Low Impact Development. LID consists of building and landscape features designed to retain or filter stormwater runoff (Source: Order No. R4-2012-0175).

MS4 means Municipal Separate Storm Sewer System (MS4). The MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying stormwater;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

(40 CFR § 122.26(b)(8)) (Source: Order No. R4-2012-0175)

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA §307, 402, 318, and 405. The term includes an "approved program" (Source: Order No. R4-2012-0175).

Natural Drainage System means a drainage system that has not been improved (e.g., channelized or armored). The clearing or dredging of a natural drainage system does not cause the system to be classified as an improved drainage system (Source: Order No. R4-2012-0175).

New Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision (Source: Order No. R4-2012-0175).

Non-Stormwater Discharge means any discharge to a municipal storm drain system that is not composed entirely of stormwater (Source: Order No. R4-2012-0175).

Parking Lot means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use, with a lot size of 5,000 square feet or more of surface area, or with 25 or more parking spaces (Source: Order No. R4-2012-0175).

Person means any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, state, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine and the singular shall include the plural where indicated by the context.

Planning Priority Projects means development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution, prior to completion of the project(s) (Modified from: Order No. R4-2012-0175).

Pollutant means any "pollutant" defined in Section 502(6) of the Federal Clean Water Act or incorporated into the California Water Code Sec. 13373. Pollutants may include, but are not limited to the following:

(1) Commercial and industrial waste (such as fuels, solvents, detergents, plastic pellets, hazardous substances, fertilizers, pesticides, slag, ash, and sludge).

(2) Metals (such as cadmium, lead, zinc, copper, silver, nickel, chromium, and non- metals such as phosphorus and arsenic).

(3) Petroleum hydrocarbons (such as fuels, lubricants, surfactants, waste oils, solvents, coolants, and grease).

(4) Excessive eroded soil, sediment, and particulate materials in amounts that may adversely affect the beneficial use of the receiving waters, flora, or fauna of the State.

(5) Animal wastes (such as discharge from confinement facilities, kennels, pens, recreational facilities, stables, and show facilities).

(6) Substances having characteristics such as pH less than 6 or greater than 9, or unusual coloration or turbidity, or excessive levels of fecal coliform, or fecal streptococcus, or enterococcus.

Project means all development, redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Pub. Resources Code §21065) (Source: Order No. R4-2012-0175).

Rainfall Harvest and Use means a LID BMP system designed to capture runoff, typically from a roof but can also include runoff capture from elsewhere within the site, and to provide for temporary storage until the harvested water can be used for irrigation or non-potable uses. The harvested water may also be used for potable water uses if the system includes disinfection treatment and is approved for such use by the local building department (Source: Order No. R4-2012-0175).

Receiving Water means "water of the United States" into which waste and/or pollutants are or may be discharged (Source: Order No. R4-2012-0175).

Redevelopment means land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of routine maintenance activity; and land disturbing activity related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Regional Board means the California Regional Water Quality Control Board, Los Angeles Region.

Restaurant means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812) (Source: Order No. R4-2012-0175).

Retail Gasoline Outlet means any facility engaged in selling gasoline and lubricating oils (Source: Order No. R4-2012-0175).

Routine Maintenance
Routine maintenance projects include but are not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.
4. Update existing lines* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
5. Repair leaks

Routine maintenance does not include construction of new** lines or facilities resulting from compliance with applicable codes, standards and regulations.
* Update existing lines includes replacing existing lines with new materials or pipes.
** New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines (Source: Order No. R4-2012-0175).

Significant Ecological Areas (SEAs) means an area that is determined to possess an example of biotic resources that cumulatively represent biological diversity, for the purposes of protecting biotic diversity, as part of the Los Angeles County General Plan. Areas are designated as SEAs, if they possess one or more of the following criteria:

1. The habitat of rare, endangered, and threatened plant and animal species.
2. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis.
3. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind or are restricted in distribution in Los Angeles County.

4. Habitat that at some point in the life cycle of a species or group of species, serves as a concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or within Los Angeles County.
5. Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent an unusual variation in a population or community.
6. Areas important as game species habitat or as fisheries.
7. Areas that would provide for the preservation of relatively undisturbed examples of natural biotic communities in Los Angeles County.
8. Special areas (Source: Order No. R4-2012-0175).

Site means land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity (Source: Order No. R4-2012-0175).

Storm Drain System means any facilities or any part of those facilities, including streets, gutters, conduits, natural or artificial drains, channels, and watercourses that are used for the purpose of collecting, storing, transporting or disposing of stormwater and are located within the City of Walnut.

Storm Water or Stormwater means water that originates from atmospheric moisture (rain or snow) and that falls onto land, water, or other surfaces. Without any change in its meaning, this term may be spelled or written as one word or two separate words.

Stormwater Runoff means that part of precipitation (rainfall or snowmelt) which travels across a surface to the storm drain system or receiving waters.

SUSMP means the Los Angeles Countywide Standard Urban Stormwater Mitigation Plan. The SUSMP was required as part of the previous Municipal NPDES Permit (Order No. 01-182, NPDES No. CAS004001) and required plans that designate best management practices (BMPs) that must be used in specified categories of development projects.

Urban Runoff means surface water flow produced by storm and non-storm events. Non-storm events include flow from residential, commercial, or industrial activities involving the use of potable and non-potable water.

[MUNICIPAL CODE SECTION REFERENCE(S)] is amended to read as follows:

SEC. [X]. STORMWATER POLLUTION CONTROL MEASURES FOR DEVELOPMENT PLANNING AND CONSTRUCTION ACTIVITIES

(A) Objective. The provisions of this section contain requirements for construction activities and facility operations of Development and Redevelopment projects to comply with the current "Municipal NPDES permit," lessen the water quality impacts of development by using smart growth practices, and integrate LID design principles to mimic

predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use. LID shall be inclusive of SUSMP requirements.

(B) Scope. This Section contains requirements for stormwater pollution control measures in Development and Redevelopment projects and authorizes the City of Walnut to further define and adopt stormwater pollution control measures, develop LID principles and requirements, including but not limited to the objectives and specifications for integration of LID strategies, grant waivers from the requirements of the Standard Urban Stormwater Mitigation Plan, and collect funds for projects that are granted waivers. Except as otherwise provided herein, the City of Walnut shall administer, implement and enforce the provisions of this Section.

(C) Applicability. The following Development and Redevelopment projects, termed "Planning Priority Projects," shall comply with the requirements of [SECTION NUMBER]:

(1) All development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.

(2) Industrial parks 10,000 square feet or more of surface area.

(3) Commercial malls 10,000 square feet or more of surface area.

(4) Retail gasoline outlets with 5,000 square feet or more of surface area.

(5) Restaurants (Standard Industrial Classi ication (SIC) of 5812) with 5,000 square feet or more of surface area.

(6) Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.

(7) Streets and roads construction of 10,000 square feet or more of impervious surface area.

(8) Automotive service facilities (Standard Industrial Classification (SIC) of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.

(9) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:

a. Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and

b. Create 2,500 square feet or more of impervious surface area

(10) Single-family hillside homes.

(11) Redevelopment Projects

a. Land disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.

b. Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, the entire project must be mitigated.

c. Where Redevelopment results in an alteration of less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, only the alteration must be mitigated, and not the entire development.

d. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

e. Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

(D) **Effective Date.** The Planning and Land Development requirements contained in Section 7 of Order No. R4-2012-0175 shall become effective 90 days from the adoption of the Order (February 6, 2013). This includes Planning Priority Projects that are discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals within 90 days of adoption of the Order. Projects that have been deemed complete within 90 days of adoption of the Order are not subject to the requirements Section 7.

(E) **Stormwater Pollution Control Requirements.** The Site for every Planning Priority Project shall be designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention and/or rainfall harvest and use.

(1) A new single-family hillside home development shall include mitigation measures to:

a. Conserve natural areas;

b. Protect slopes and channels;

c. Provide storm drain system stenciling and signage;

d. Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability; and

e. Direct surface flow to vegetated areas before discharge, unless the diversion would result in slope instability.

(2) Street and road construction of 10,000 square feet or more of impervious surface shall follow USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets (December 2008 EPA-833-F-08-009) to the maximum extent practicable.

(3) The remainder of Planning Priority Projects shall prepare a LID Plan to comply with the following:

a. Retain stormwater runoff onsite for the Stormwater Quality Design Volume (SWQDv) defined as the runoff from:

i. The 85th percentile 24-hour runoff event as determined from the Los Angeles County 85th percentile precipitation isohyetal map; or

ii. The volume of runoff produced from a 0.75 inch, 24-hour rain event, whichever is greater.

b. Minimize hydromodification impacts to natural drainage systems as defined in the Municipal NPDES Permit. Hydromodification requirements are further specified in [NAME OF POST-CONSTRUCITON BMP HANDBOOK].

c. When, as determined by the City of Walnut, 100 percent onsite retention of the SWQDv is technically infeasible, partially or fully, the infeasibility shall be demonstrated in the submitted LID Plan. The technical infeasibility may result from conditions that may include, but are not limited to:

i. The infiltration rate of saturated in-situ soils is less than 0.3 inch per hour and it is not technically feasible to amend the in-situ soils to attain an infiltration rate necessary to achieve reliable performance of infiltration or bioretention BMPs in retaining the SWQDv onsite.

ii. Locations where seasonal high groundwater is within five to ten feet of surface grade;

iii. Locations within 100 feet of a groundwater well used for drinking water;

iv. Brownfield development sites or other locations where pollutant mobilization is a documented concern;

v. Locations with potential geotechnical hazards;

vi. Smart growth and infill or redevelopment locations where the density and/ or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.

d. If partial or complete onsite retention is technically infeasible, the project Site may biofiltrate 1.5 times the portion of the remaining SWQDv that is not reliably retained onsite. Biofiltration BMPs must adhere to the design specifications provided in the Municipal NPDES Permit.

i. Additional alternative compliance options such as offsite infiltration may be available to the project Site. The project Site should contact the City of Walnut to determine eligibility. Alternative compliance options are further specified in [NAME OF POST-CONSTRUCITON BMP HANDBOOK].

e. The remaining SWQDv that cannot be retained or biofiltered onsite must be treated onsite to reduce pollutant loading. BMPs must be selected and designed to meet pollutant-specific benchmarks as required per the Municipal NPDES Permit. Flow-through BMPs may be used to treat the remaining SWQDv and must be sized based on a rainfall intensity of:

i. 0.2 inches per hour, or
ii. The one year, one-hour rainfall intensity as determined from the most recent Los Angeles County isohyetal map, whichever is greater.

f. A Multi-Phased Project may comply with the standards and requirements of this section for all of its phases by: (a) designing a system acceptable to the City of Walnut to satisfy these standards and requirements for the entire Site during the first phase, and (b) implementing these standards and requirements for each phase of Development or Redevelopment of the Site during the first phase or prior to commencement of construction of a later phase, to the extent necessary to treat the stormwater from such later phase. For purposes of this section, "Multi-Phased Project" shall mean any Planning Priority Project implemented over more than one phase and the Site of a Multi-Phased Project shall include any land and water area designed and used to store, treat or manage stormwater runoff in connection with the Development or Redevelopment, including any tracts, lots, or parcels of real property, whether Developed or not, associated with, functionally connected to, or under common ownership or control with such Development or Redevelopment.

(F) Validity. If any provision of this Ordinance is found to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect remaining provisions of this Ordinance are declared to be severable.

(G) Certification. The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy.

APPROVED AND ADOPTED this __th day of _____, 20__.

_____
Mayor_____

ATTEST:

_____
Teresa De Dios, City Clerk

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF WALNUT)

I, Teresa De Dios, City Clerk of the City of Walnut, do hereby certify that the foregoing Ordinance _____ being:

AN ORDINANCE AMENDING [MUNICIPAL CODE SECTION REFERENCE(S)] OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING [NAME OF POST-CONSTRUCITON REQUIREMENTS – LIKELY "SUSMP" FOR MOST MUNICIPALITIES] REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

Said Ordinance was duly introduced at a regular meeting held on the __th day of _____, 20__, and was adopted and passed at a regular meeting of the City Council on the _____ day of _____, 20__ by the following vote, to wit:

AYES: COUNCILMEMBER(S):
NOES: COUNCILMEMBER(S):
ABSENT: COUNCILMEMBER(S):
ABSTAIN: COUNCILMEMBER(S):

ATTEST:

_____

Teresa De Dios, City Clerk

Attachment B

Draft Green Streets Policy
City of Walnut

Green Street Policy

City of Walnut

Purpose

The City of Walnut shall implement green street BMPs for transportation corridors associated with new and redevelopment street and roadway projects, including Capital Improvement Projects (CIPs). Implementation of this policy is to demonstrate compliance with the NPDES MS4 Permit for the Los Angeles Region (Order No. R4-2012-0175).

Green streets can provide many benefits including water quality improvement, groundwater replenishment, creation of attractive streetscapes, creation of parks and wildlife habitats, and pedestrian and bicycle accessibility. Green streets are defined as right-of-way areas that incorporate infiltration, biofiltration, and/or storage and use BMPs to collect, retain, or detain stormwater runoff as well as a design element that creates attractive streetscapes.

Policy

A. Application. The City of Walnut shall require new development and/or redevelopment streets and roadway projects and CIP projects conducted within the right-of-way of transportation corridors to incorporate green street BMPs. Transportation corridors projects are roadway projects that add at least 10,000 square feet of impervious surface. Routine maintenance or repair and linear utility projects are excluded from these requirements. Routine maintenance includes slurry seals, repaving, and reconstruction of the road or street where the original line and grade are maintained.

B. Amenities. The City of Walnut shall consider opportunities to replenish groundwater, create attractive streetscapes, create parks and wildlife habitats, and provide pedestrian and bicycle accessibility through new development and redevelopment of streets and roadway projects and CIPs.

C. Guidance. The City of Walnut shall use the City of Los Angeles Green Streets guidance, USEPA's *Managing Wet Weather with Green Infrastructure Municipal Handbook: Green Streets*[1], or equivalent guidance developed by the [DEPARTMENT OF PUBLIC WORKS] for use in public and private developments.

D. Retrofit Scope. The City of Walnut shall use the City's Watershed Management Program or Enhanced Watershed Management Program to identify opportunities for green street BMP retrofits. Final decisions regarding implementation will be determined by the City Engineer based on the availability of adequate funding.

E. Training. The Department of Public Works shall incorporate aspects of green streets into internal annual staff training.

October 22, 2013

Alicia Jensen
Senior Management Analyst
Community Services Division
City of Walnut
21201 La Fuente Road
Walnut, CA 91789

REVIEW OF NOTICE OF INTENT TO DEVELOP A WATERSHED MANAGEMENT PROGRAM PURSUANT TO THE LOS ANGELES COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT (NPDES Permit No. CAS004001, Order No. R4-2012-0175)

Dear Ms. Jensen:

Part VI, section C.4(c) of the above-mentioned Order allows permittees the option to submit to the Regional Board Executive Officer (EO) for approval a Notification of Intent (NOI) to prepare a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP). Regional Board staff received the City of Walnut's (the City) NOI to develop an individual WMP for its jurisdictional area. Preparing an Individual WMP allows the City to implement the requirements of the Order on a jurisdictional basis through customized strategies, control measures, and best management practices (BMPs) that meet the requirements of the Order.

Regional Board staff reviewed the City's NOI to prepare a WMP, which it submitted to the Regional Board on June 27, 2013. Staff review indicates that the NOI the City submitted meets the notification requirements of Part VI, section C.4(c)ii of Order No. R4-2012-0175 that pertain to the extended 18-month schedule to submit a draft WMP.

The City is hereby granted the 18-month schedule pursuant to Part VI, section C.4(c)ii which requires the City to demonstrate that there is a Low Impact Development (LID) ordinance in-place that meets the requirements of the Order's Planning and Land Development Program or commence development of a LID ordinance meeting the requirements of the Planning and Land Development Program. Specifically, the Order requires that the City demonstrate that it commenced development of the ordinance within 60 days of the effective date of the Order (February 26, 2013) and further requires that the City have a complete draft ordinance within 6 months of the effective date of the Order (June 28, 2013).

Likewise, the City was required to demonstrate that there is a green streets policy in-place or commence the development of a policy that stipulates the use of green street strategies for transportation corridors within 60 days of the effective date of the Order and have a draft policy within 6 months of the effective date of the Order. The City's NOI included copies of these

documents, documenting that the City has complied with the requirement to have a LID ordinance and green streets policy in-place or has developed a complete draft LID ordinance and a complete draft green streets policy.

Accordingly, pending Regional Board EO approval of the City's WMP, the City shall continuously perform the following:

1. Implement all the watershed control measures in its corresponding storm water management program, including actions within each of the six categories of minimum control measures consistent with Part VI.C.4.d.i of the Order and 40 C.F.R. section 122.26(d)(2)(iv).

2. Implement watershed control measures to eliminate non-storm water discharges through the MS4 that are a source of pollutants to receiving waters consistent with Part VI.C.4.d.ii of the Order and the Clean Water Act section 402(p)(3)(B)(ii).

3. Implement watershed control measures, including those identified in existing TMDL implementation plans, to ensure MS4 discharges achieve compliance with interim and final trash WQBELs and all other final WQBELs and receiving water limitations pursuant to Part VI.E and set forth in Attachments L through Q by the applicable compliance deadlines occurring prior to approval of the WMP per Part VI.C.4.d.iii of the Order.

4. Target implementation of city-wide control measures listed above to address known contributions of pollutants from MS4 discharges to receiving waters.

5. Meet all interim and final deadlines for development of a WMP, including City Council adoption of the aforementioned LID ordinance and green streets policy prior to June 28, 2014.

If you have any questions, please contact Carlos D. Santos at Carlos.Santos@waterboards.ca.gov at (213) 620-2093, or you may contact Ivar Ridgeway, Chief of the Storm Water Permitting Unit at Ivar.Ridgeway@waterboards.ca.gov.

Sincerely,

Samuel Unger

Samuel Unger, P.E.
Executive Officer

cc: Jennifer Fordyce, Office of Chief Counsel, State Water Board

Watershed Management Plan

City of Walnut

Submitted to:

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Submitted by:

The City of Walnut
21201 La Puente Road
Walnut, CA 91789

June 28, 2014

RB-AR17148

P.O. Box 682, Walnut, CA 91788-0682
21201 La Puente Road
Walnut, CA 91789-2018
Telephone (909) 595-7543
FAX (909) 595-6095
www.ci.walnut.ca.us

CITY OF WALNUT

June 26, 2014

Los Angeles Regional Water Quality Control Board
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Attention: Samuel Unger, Executive Officer

RE: CITY OF WALNUT, DRAFT WATERSHED MANAGEMENT PLAN

On June 28, 2013 the City of Walnut submitted a Notice of Intent to the Los Angeles Regional Water Board identifying the City's intention to develop a single permittee watershed management plan on the allowed 18 month schedule. The City of Walnut, in compliance with Order R4-2012-0175 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within Coastal Watersheds of Los Angeles County, except those discharges originating from the City of Long Beach MS4, NPDES Permit No. CAS00400, is pleased to present a draft Watershed Management Plan encompassing the jurisdictional area of the City.

Water quality preservation is, and will continue to be, a priority concern for the City of Walnut. The City will continue to implement the previously established NPDES programs and policies during the Regional Water Quality Control Board's review period as required by the current MS4 Permit. The City of Walnut looks forward to working with the Los Angeles Regional Water Quality Control Board in a coordinated effort to preserve local water quality.

Sincerely,

Mary Rooney
Director of Community Services

Copies: Robert Wishner, City Manager

Table of Contents

1.0- Municipal Separate Storm Sewer System Permit

On November 8, 2012 the Los Angeles Regional Water Quality Control Board adopted Order R4-2012-0175 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within Coastal Watersheds of Los Angeles County, except those discharges originating from the City of Long Beach MS4. Order R4-2012-0175 became effective 50 days later on December 28, 2013. Order R4-2012-0175 serves as the National Pollution Discharge Elimination System (NPDES) permit for Coastal Watershed storm water and non-storm water discharges originating from the Los Angeles County Region, excluding the City of Long Beach. The permit covers the land areas of the Los Angeles County Flood Control, unincorporated areas of Los Angeles County and 84 Cities within the County of Los Angeles. Permittees are subject to the requirements set forth in the MS4 permit for all storm water and non- storm water discharges into the MS4. The City of Walnut is located in the Los Angeles Region and is identified in the MS4 Permit as a permittee under Order R4-2012-0175.

The MS4 permit regulates municipal discharges of storm water and non-storm water from the MS4s of the permittees. Storm water and non-storm water discharges have been identified as a transport mechanism for pollutants into the receiving waters of the Los Angeles Region. Pollutants originating from various land uses are mobilized by surface flow of water which is then directed into the MS4 and eventually deposited into receiving water bodies. In many cases pollutant deposition into receiving water bodies has a noticeable impact on the local ecological system of the water body and recreational uses. It is the intent of the MS4 Permit to protect water quality and mitigate existing and potential sources of pollutants that are cause for impairment of receiving water bodies.

Conditions of the MS4 Permit require that all permittees develop a watershed management plan on an individual or joint basis that will address water quality issues with in the permittee's jurisdictional area. The City of Walnut submitted a Notice of Intent to the Los Angeles Regional Water Board on June 28, 2013 identifying the City's selected watershed management plan option. Due to the topographic nature and land use of the City of Walnut, the single permittee Watershed Management Plan (WMP) option was selected. A copy of the NOI is included in Attachment A of this document. The intention of the WMP is to provide a viable plan for implementing water quality improving infrastructure, policies and programs. The end result of the WMP is focused on complying with final effluent limitations and numeric targets for known pollutants in the receiving water.

The WMP is paired with an Integrated Monitoring Plan (IMP) to provide a complete program that will assess and address water quality in the City. The IMP will serve as the method for determining the need for pollutant reductions and ultimate compliance with the established water quality goals. The WMP and IMP were developed by RKA Consulting Group with exception to the Reasonable Assurance Analysis which was developed by Geosyntec Consultants.

1.1- The City of Walnut

The City of Walnut is a General Law city that was incorporated on January 19, 1959, and has a jurisdictional area of 8.9 square miles. Based on the 2010 Census, the City of Walnut has an approximate population of 30,000. One defining feature of the City is its rural charm which is preserved by a well-defined general plan. The City is located in the San Gabriel Valley region of Los Angeles County north of State Route 60 and west of State Route 57. Los Angeles County's map of the San Gabriel River Watershed (Figure 1-1) highlights in green, the City's location with respect to the watershed.

Land use in the City is primarily devoted to residential development consisting of 3,760 acres or 65% of the City. The remaining land use in the City is composed of 1,680 acres of open space or 29% of the jurisdictional area, 255 acres of commercial use or 4.5% of the jurisdictional area, and 86 acres of agricultural use or 1.5% of the jurisdictional area. Figure 1-2 is a map of the City of Walnut's land use. Table 1-1 compares the land uses of the City of Walnut with those of the entire San Gabriel River Watershed.

Table 1-1

Watershed Land Use		
Land Use	City of Walnut	San Gabriel River Watershed
Residential	65%	26%
Open Space	29%	50%
Agriculture/Other	1.5%	9%
Commercial/Industrial	4.5%*	15%

**There are no current industrial land uses in the City of Walnut.*

The City boundary extends from the San Jose Hills north of the City to Valley Boulevard to the south, and from Nogales Street to the west to the easterly boarder of the City with unincorporated areas of Los Angeles County and the City of Pomona. Other cities identified as MS4 Permittees bordering or in close proximity to the City of Walnut include: City of La Puente, City of Industry, City of West Covina, City of Diamond Bar, City of Pomona, and unincorporated areas of Los Angeles County (see Figure 1-1 for San Gabriel River Watershed Map).

1.2- Walnut Watershed Characteristics

The City of Walnut drains to the San Gabriel River Watershed and is part of the San Gabriel River Watershed Management Area (SGRWMA). The City's runoff drains to the San Gabriel River through two tributary water bodies in the SGRWMA. Reach 1 of the San Jose Creek is located to the south of the City and Walnut Creek Wash is located to the north. Both water bodies connect to Reach 3 of the San Gabriel River which runs parallel with State Route 605 and eventually drains directly to the Pacific Ocean. Figure 1-3 shows the City of Walnut and the two drainage areas within the City's jurisdiction.

1.2.1- San Jose Creek Reach 1

Due to the topography and location of the San Jose Hills, approximately 93% of the City drains to the South and is tributary to Reach 1 of the San Jose Creek. Storm water and non-storm water runoff is captured by catch basins and then carried through a network of storm drains and open channels to multiple outfalls connected to Reach 1 of the San Jose Creek.

The San Jose Creek transports runoff for the City of Walnut's outfalls approximately 12 miles to its confluence with San Gabriel River Reach 3 just north of the interchange of State Route 60 and State Route 605. The San Jose Creek is channelized from the area adjacent to the City of Walnut to approximately three quarters of a mile east of Workman Mill Road where the Creek is transitioned to soft bottomed. A number of other upstream and downstream permittees contribute runoff to Reach 1 of the San Jose Creek in addition to the City of Walnut. The Creek extends north east to connect with Thomson Wash which originates at easterly limits of Los Angeles County. Thompson Creek Dam is located at the very top of Thomson Wash.

Figure 1-1: San Gabriel River Watershed Management Area

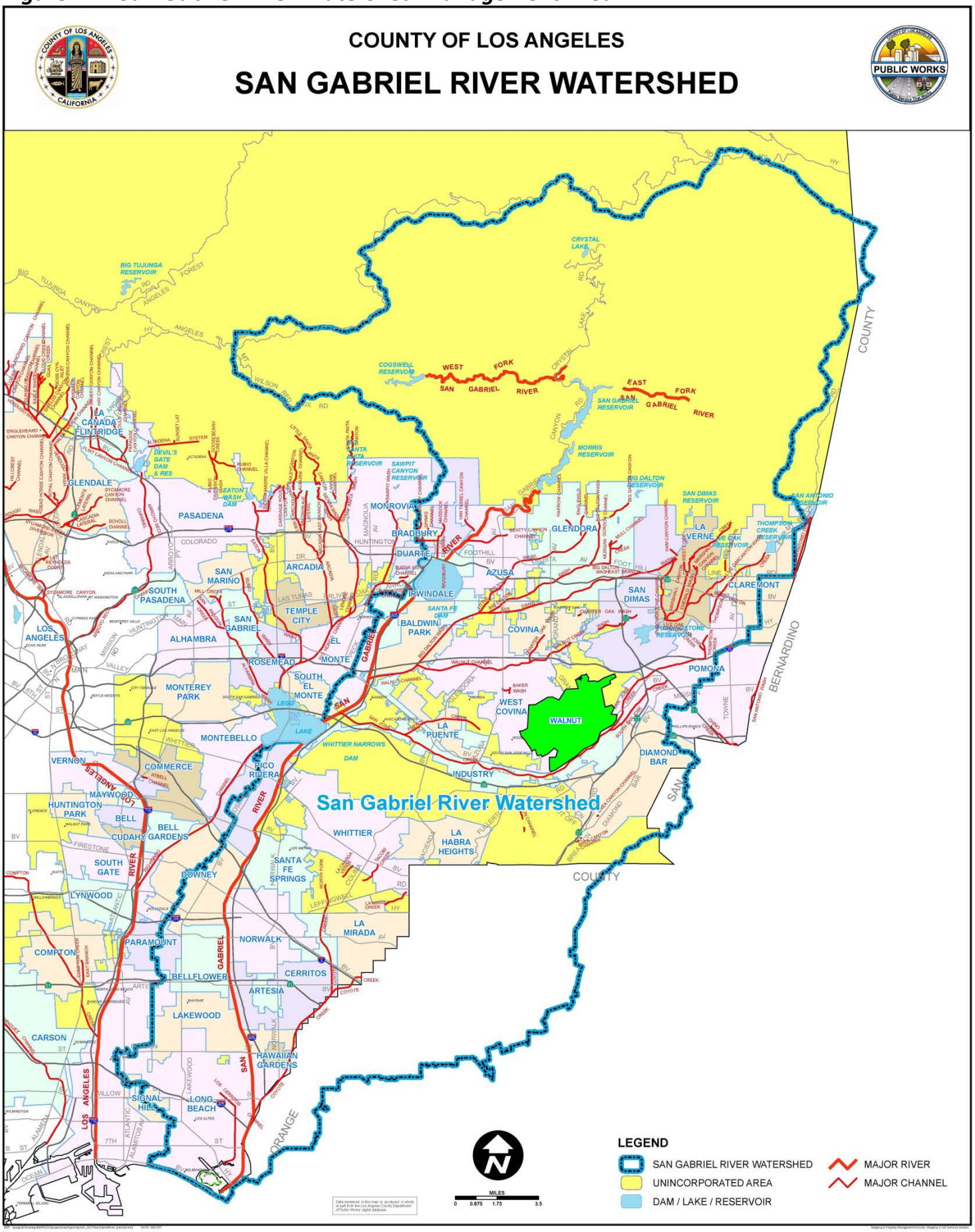
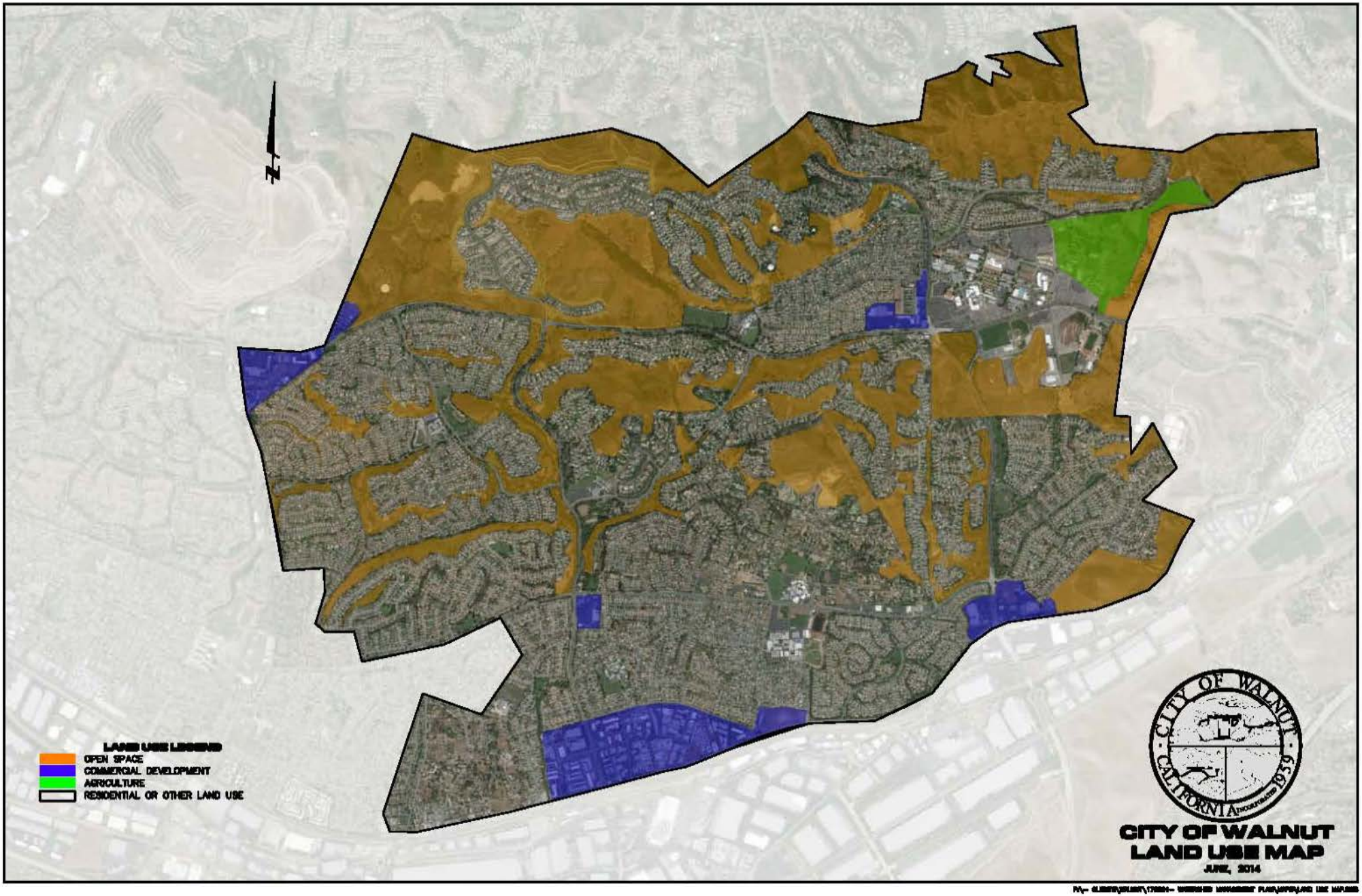


Figure 1-2: City of Walnut Land Use Map



1.2.2- Walnut Creek Wash

The remaining 7% of the City of Walnut's jurisdictional area drains to the Walnut Creek Wash. A majority of the City's tributary area to Walnut Creek Wash watershed is open space with a small portion of residential development. With a majority of the tributary area land use categorized as open space, MS4 discharges originating from this area are minimal. The existing MS4 flows drain to the north of the City into unincorporated Los Angeles County and eventually into Walnut Creek Wash.

Walnut Creek Wash originates at the Puddingstone Dam, and is soft bottom up to a quarter mile east of Covina Hills Road where it transitions to a channelized wash. The channelized wash returns to a soft bottom channel at Baldwin Park Boulevard and continues as such to confluence with the San Gabriel River. The confluence of Walnut Creek Wash and the San Gabriel River is located south west of the interchange of State Route 10 and State Route 605. The City of Walnut contributes a very small portion of flow to the Walnut Creek Wash which is primarily composed of flow from a number of other permittees in the SGRWMA

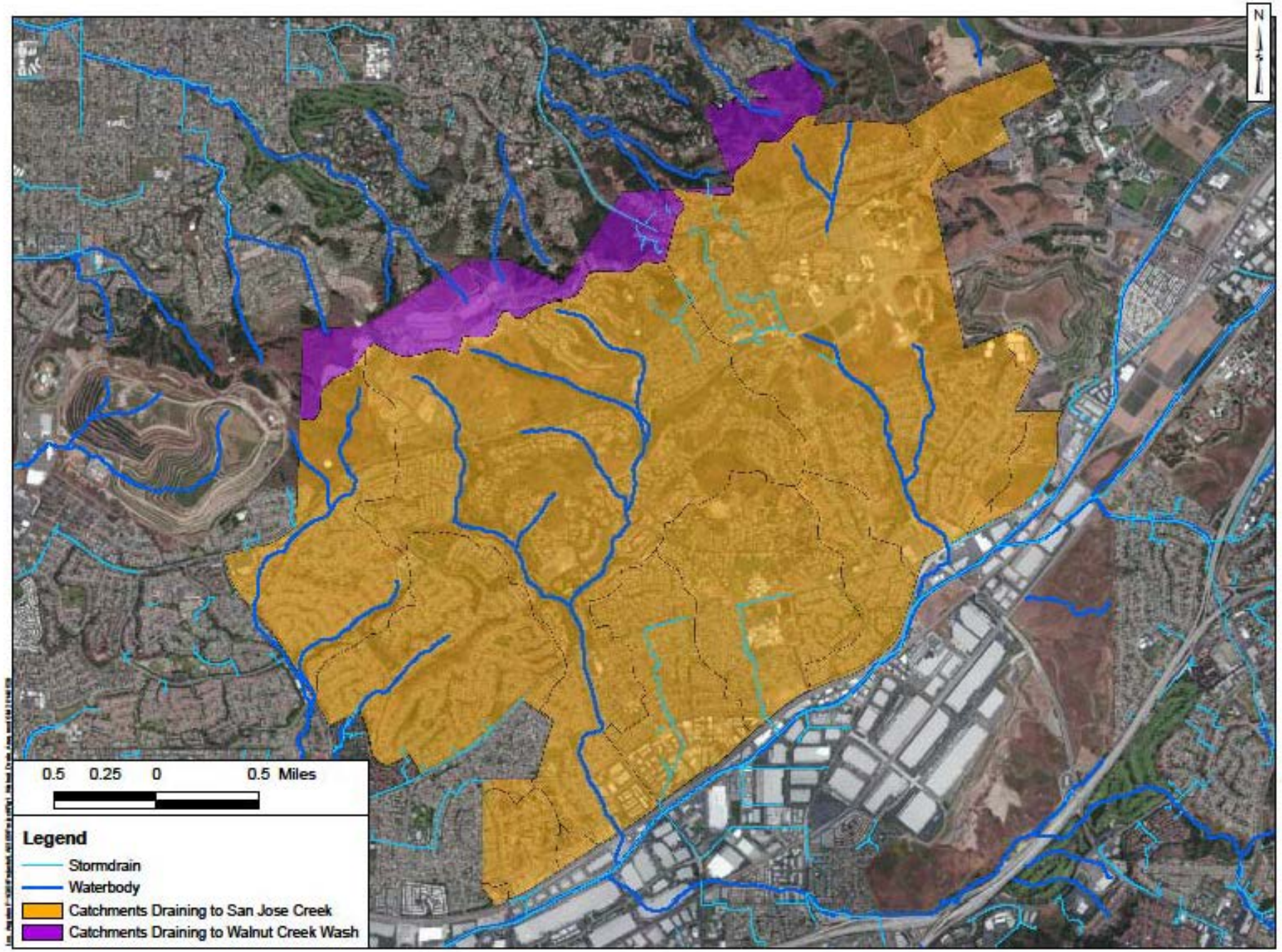
1.2.3- City of Walnut MS4 System

The City of Walnut's storm drain system consists of 644 City owned catch basins and 142 Los Angeles County Flood Control owned catch basins. A majority of the City's storm drain system outlets connect directly to Reach 1 of the San Jose Creek.

There is one storm drain outfall that contains flows originating from the Walnut Creek Wash watershed area of the City of Walnut. This singular outfall is an underground storm drain that drains to the north of the City into unincorporated Los Angeles County and eventually into Walnut Creek Wash. The referenced storm drain carries a relatively small amount of the total City run off and has 13 catch basins connected the line from the City of Walnut.

There are two open soft bottom creeks in the City which for much of their extents run in or adjacent to parks. Lemon Creek drains portions of the western side of the city and begins in the San Jose hills in the Vicinity of the Three Oaks Development and extends south to its confluence with Reach 1 of the San Jose Creek. Snow Creek begins near the intersection of Grand Avenue and Temple Avenue at Mount. San Antonio Community College located in the north eastern section of the City. Snow Creek travels south along Grand Boulevard to just south of Snow Creek Park where it connects to an underground reinforced concrete box (RCB). The RCB eventually connects directly with Reach 1 of San Jose Creek near the intersection of Somerset Drive and Valley Boulevard.

Figure 1-3: City of Walnut Drainage Areas



2.0- Water Quality Priorities

Per section VI.C.5.a.ii of the MS4 Permit, permittees are required to identify and prioritize water body pollutants within each Watershed Management Area (WMA) that overlays their jurisdictional area. The City of Walnut is wholly encompassed by one WMA. Per table K-6 of Attachment K in the MS4 Permit, the City of Walnut is included in the SGRWMA.

2.1- Water Quality Impairments

As described in section 1.2.1 "Watershed Characteristics" of this document, the City of Walnut is tributary to two tributary water bodies of the San Gabriel River. Each of the receiving water bodies that the City of Walnut is tributary to have individual water quality issues that have been established by a TMDL or by the California Clean Water Act Section 303(d) list. Table 2-1 of this document outlines the impairments for each of the receiving waters that the City of Walnut discharges MS4 flows into. These pollutants will be the primary focus for the City of Walnuts WMP.

Table 2-1

Watershed Management Area Impairments			
Water Body	**TMDL**	**303(d) List**	**Other Pollutants of Concern**
San Jose Creek Reach 1	• Selenium	• Ammonia • Coliform Bacteria • pH • Total Dissolved Solids • Toxicity	N/A
San Gabriel River Reach 3	N/A	• Indicator Bacteria	N/A
San Gabriel River Reach 2	• Lead	• Coliform Bacteria • Cyanide • Lead	N/A
Walnut Creek Wash	N/A	• Benthic-Micro invertebrate Bio-assessments • Indicator Bacteria • pH	N/A

The MS4 Permit's prioritization of pollutants is categorized into three levels. The highest prioritization (Category 1) is reserved for water body pollutant combinations for which water quality based effluent limitations and/or receiving water limitations are established in Part IV.E and Attachments L through R of the MS4 Permit. High prioritization (Category 2) has been defined as including pollutants for which data indicate water quality impairment in the receiving water according to the State's Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (State Listing Policy) and for which MS4 discharges may be causing or contributing to the impairment. Medium Priority Pollutants (Category 3) are defined as pollutants for which insufficient data indicate water quality impairment in the receiving water according to the States Listing Policy, but which exceed applicable receiving water limitations contained in this Order and for which MS4 discharges may be causing or contributing to the exceedance.

Table 2-2 identifies the prioritization of the individual constituents per the organization method defined in section VI.C.2.a. of the MS4 Permit.

Table 2-2

Water Quality Priorities		
Priority	**Water Body Pollutant**	**Source**
Category 1 (Highest)	Lead	TMDL
	Selenium	TMDL
Category 2 (High)	Ammonia	303(d)
	Benthic Micro-Invertebrates	303(d)
	Coliform Bacteria	303(d)
	Cyanide	303(d)
	pH	303(d)
	Total Dissolved Solids	303(d)
	Toxicity	303(d)
Category 3 (Medium)	N/A	N/A

Pollutants identified as Category 1 priority in Table 2-2 have Waste Load Allocations determined by their applicable TMDL. Both Lead and Selenium Waste Load Allocations (WLA) are established by the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL .

Table 2-3 identifies the established WLA for each of the applicable TMDL pollutants. Pollutants identified in Table 2-3 should be referenced against Table 2-1 to determine the applicable WLA for the associated water body.

Table 2-3

Category 1 (Highest Priority) Pollutant Waste Load Allocation		
Pollutant	**Daily Maximum**	**Weather**
Lead	81.34 µg/L X Daily Storm Volume (L)	Wet
Selenium	5 µg/L	Dry

Pollutants identified as Category 2 priority in Table 2-2 have Water Quality Based Effluent Limits (WQBELs) identified in the Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. WQBELs are established based on the beneficial uses also determined in the Basin Plan. Some Category 2 pollutants that are identified in Table 2-4 do not originate from MS4 discharges and will not be included in the Reasonable Assurance Analysis portion of this document.

Table 2-4

Category 2 (High Priority) Pollutant Waste Load Allocation	
Pollutant	**WQBEL**
Ammonia	See LARWQCB Basin Plan Table 3-1 through 3-4
Benthic Micro-Invertebrates	See Attachment D for Bio assessment
Coliform Bacteria	See Table 2-5
Cyanide	.005mg/L
Dissolved Oxygen (DO)	Mean Annual 7mg/L, but not less than 5 mg/L
pH	6.5-8.5 Standard Units
Total Dissolved Solids	750mg/L
Toxicity	See Attachment E for Toxicity Assessment

Allowable coliform bacteria loadings are based on the beneficial uses assigned to the impaired water body. As previously discussed in the document, the City of Walnut is tributary to two sub watersheds in the SGRWMA. Each of these sub-watersheds has a different beneficial use assigned for recreational activities. Subsequently the individual sub-watershed areas have different allowable coliform bacteria loadings. Table 2-5 identifies the applicable bacteria WQBEL for each of the sub-watershed receiving water bodies that the City is tributary to.

Table 2-5

Coliform Bacteria WQBEL		
Water Body	Recreational Use	Bacteria WQBEL
San Jose Creek Reach 1	REC1(P),High Flow Suspension	4000/100ml Not more than 10% allowed to exceed in 30 days
Walnut Creek Wash	REC1 (I), REC2(I)	400/100ml Not more than 10% allowed to exceed in 30 days

2.2- Pollution Source Assessment

Pollutants identified as causing impairments on the applicable receiving waters originate from various sources in the watershed. MS4 discharges from the City of Walnut are composed of surface runoff from storm events or other non-storm water sources. Pollutants that are mobilized by surface runoff are likely from non-point sources which are difficult to eliminate prior to mobilization. This section highlights potential sources of the specific pollutants of concern that have been established as causing or contributing to impairment of the local water bodies that the City is tributary to.

Ammonia

Ammonia has been identified on the 303(d) list as causing impairment in the San Jose Creek Reach 1. The 303(d) list support documents identify that discharges from Publicly Owned Treatment Works (POTWs) as a potential source of most of the ammonia in the Los Angeles Region Watersheds. The City of Walnut is downstream from a POTW facility that discharges to the San Jose Creek.

Alternative enforcement methods have been utilized to address ammonia exceedances. Modifications to treatment processes and facilities are expected to yield results that will reduce previously measured amounts of ammonia to acceptable levels. This pollutant does not likely originate from the MS4. The City of Walnut's WMP will not address this pollutant any further other than as required in the monitoring program.

Benthic Micro-invertebrate Bio assessment

The 303(d) listing for bio assessment of benthic micro-invertebrates was established by the State Water Board after recommendation by the LARWQCB. The Walnut Creek Wash has been identified as having pollutant combinations in concentrations that are detrimental to the populations of benthic micro-invertebrates in the water body. MS4 discharges with toxic properties are identified as causing impacts to populations of benthic micro-invertebrates. The jurisdiction area of Walnut that is tributary to Walnut Creek Wash is composed of open space and single family residential land use. A 30" RCP storm drain coveys all of water contributed to the Walnut Creek Wash. The volume of MS4 discharges contributed by the City of Walnut is relatively small and not likely to contribute pollutants in toxic levels. Water quality conveyed by said storm drain will be monitored as part of the IMP. The runoff that is deposited into the wash is connected to the channelized portion of the wash. It is unclear if this requirement is incorrectly assigned to the City of Walnut based on the beneficial uses applicable to channelized water bodies.

Coliform Bacteria

Coliform bacteria are used as an indicator to determine the likelihood of pathogenic bacteria present in surface waters. Coliform bacteria are linked to the presence of E. coli and other pathogens that originate from fecal contamination in surface waters. Storm water and non-storm water runoff originating from residential development land uses have been known to contribute to bacteria loading. Other potential sources may be natural or from contamination caused by interaction of septic or sanitary sewer system flows with the MS4 or run off that is captured by the MS4. Homeless populations have also been identified a potential sources of coliform bacteria in the Basin Plan.

Cyanide

Cyanides are produced in both natural and manmade processes. It is not clear of where the source of cyanide deposition into the receiving waters is from, but the MS4 is not a likely source of this pollutant. The inclusion of cyanide in this document is only for completeness. The WMP will not address this pollutant any further other than as required in the monitoring program.

Lead

Lead has been identified as a Category 1 priority pollutant per the MS4 permit. The source of lead in the watershed has been identified as natural and manmade. Atmospheric deposition and naturally occurring sources account for some of the lead loading found in the local watershed. The remaining portion of lead comes from non-point source deposition. Lead deposited on the surface is mobilized by surface runoff and transported to the receiving waters. Potential contributors of lead include but are not limited to urbanized land use, roadways, legacy contamination and commercial/industrial activities.

pH

The CWA 303(d) list identifies pH as an impairment in both San Jose Creek Reach 1 and Walnut Creek Wash. pH is a measure of acidic or basic chemistry properties of water. The scale is a range from 0 to 14 with 7 being the measurement that reflects pure water at a temperature of 25^{o}C. pH measurements of <7 indicate that the water sample is acidic whereas measurements of >7 are considered to have basic chemistry properties. Natural waters tend to have a pH slightly higher than 7, and are very sensitive to major shifts in either the acidic or basic direction. A number or environmental conditions can impact the pH of a receiving water including natural or manmade conditions. MS4 discharges may contribute to changes in pH in a receiving water.

Selenium

Selenium has been identified as a Category 1 priority pollutant per the MS4 permit. The source of Selenium in San Jose Creek is likely natural. Selenium is an element (Se on the periodic table) that is found naturally in local marine sedimentary soils. The local watershed area is known to have marine sedimentary soils. While the source is natural in nature the possibility that urbanization in the watershed has increased mobilization and deposition of the element in the receiving waters. The source may also be in the soft bottom portion of the San Jose Creek. Further studies are required to better understand the source of selenium. The IMP portion of this plan will be utilized as a tool to determine if the City of Walnut's MS4 discharges are contributing to the Selenium impairment in the San Jose Creek.

Total Dissolved Solids

Total Dissolved Solids (TDS) includes both organic and inorganic particles that are fully suspended in water. TDS identified in the watershed may be naturally occurring but can also be from compounds that a mobilized by urban runoff. Residential development is a known potential source of TDS in storm water and non-storm water runoff.

Toxicity

Toxicity in receiving waters is defined as when chemical properties of water adversely affect organism's ability to normally survive. Chronic Toxicity is identified as a level of toxicity that results in an impact in an organism's ability grow or reproduce, but not result in death. Toxicity at a level that results in death of an organism is classified as acute toxicity. Toxicity is not limited to concentrations of a singular pollutant, and can be caused by a number of pollutants. Urban runoff has been identified as a potential source of toxicity in MS4 discharges.

3.0- Minimum Control Measures

The MS4 Permit requires permittees to implement policies and practices that will aid in the improvement of water quality in the City and WMA. These policies and practices are defined as Minimum Control Measures (MCMs) and are outlined in section VI.D.5 for Non-LACFCD permittees. Many of the City's existing MCMs were implemented under the previous permit, but latest permit has expanded some of the requirements for the existing programs. Per the MS4 Permit, the City of Walnut is required to have the following MCM Programs.

- Public Information and Participation Program
- Industrial/Commercial Facilities Program
- Planning and Land Development Program
- New Development/Re-Development Program
- Development Construction Program
- Public Agency Activities Program
- Illicit Connection and Illicit Discharge Elimination Program

3.1- Public Information and Participation Program

Each permittee is required to implement a Public Information and Participation Program (PIPP) under the MS4 Permit. Improving public education and awareness is likely to have a positive impact on water quality by changing activities or actions of the public that negatively impact water quality. The PIPP encompass a number of outreach and education opportunities and expected to have a positive effect in water quality. The MS4 Permit identifies the primary goals of the PIPP as follows:

- The PIPP shall measurably increase the knowledge of the target audiences about the MS4, and the adverse impacts of storm water pollution on receiving waters and potential solution to mitigate the impacts.

- The PIPP shall also measurably change the waste disposal and storm water pollution generation behavior of target audiences by developing and encouraging the implementation of appropriate alternatives.

- The PIPP shall involve and engage a diversity of socio-economic groups and ethnic communities in Los Angeles County to participate in mitigating the impacts of storm water pollution.

The City of Walnut is approaching compliance with the MS4 Permit as a singular permittee implementing an individual WMP. The City currently maintains a PIPP program that was implemented under the previous MS4 Permit. Much of the same requirements from the previous permit are included in the latest permit, however this document will describe the program moving into the current permit term.

3.1.1- Public Reporting

The City currently contracts with Los Angeles County for maintenance of catch basins, storm drain and sanitary sewer networks. The City of Walnut is a contract city and utilizes the 888-CLEAN-LA hotline for its general public reporting contact in coordination with the Los Angeles County Maintenance Crews.

County hotline and City contact information for the Environmental Department and the Building and Safety Department is made available on the City's Website on the Storm Water pollution Prevention page. Contact information related to public reporting of storm water issues is also provided in pamphlets available at the City Hall and the City's Environmental Services Guide page on the City Website. The City maintains and will continue to maintain current contact information as updates are made necessary.

3.1.2- Public Outreach

The City's Environmental Services department hosts a community outreach booth at the Walnut Family Festival. At this booth, the City provides educational material regarding the importance of Walnut's commitment to storm water pollution prevention as well as specific information on how Walnut residents can help improve or reduce impacts on the local environment. Flyers on the importance of proper pet waste are distributed along with promotional pet waste bag dispensers to promote picking up after pets. The City also provides used oil containers for residents to facilitate the proper disposal of used oil, keeping it out of our storm water system.

In additional to the booth at the Family Festival, the City provides environmental information and storm water education material at all major city events including: Concerts in the Park, National Night Out, Fourth of July, and Arbor Day.

The City of Walnut also conducts two free composting workshops per year through SmartGardening. This workshop covers backyard composting as well as water-wise gardening. An information table and storm water education is provided at these events as well.

3.1.3- Public Education Materials

The City of Walnut develops a recreation brochure on a quarterly basis which has a section dedicated to environmental issues in Walnut. This section highlights environmental topics including storm water pollution. This section also promotes the "Go Green with Walnut" page of the City's website. The "Go Green with Walnut" page is where residents can find educational material related to environmental issues. The City also produces a quarterly mailer that is sent to every resident four times a year.

On the "Go Green with Walnut" page there is a specific page for Storm Water Pollution Prevention. This page provides a brief overview of the storm drain system and the importance of keeping common forms of storm water pollution out of the system. Here residents can find information on ways that they can contribute to Walnut's commitment to protect the environment and water resources. Listed are best management practices (BMPS) that they can implement as residents and business owners.

There are a number of helpful links to information sheets that outline proper procedures for handling and disposal of vehicle waste fluids, household waste materials, construction waste materials, gardening related materials and animal wastes. Copies of these information sheets have been included in Attachment C of this document. These information sheets are also distributed to local auto parts stores, home improvements centers, garden centers and pet supply stores. Additionally, the City includes environmental related education on a City mailer that is sent out quarterly.

The City's storm water pollution prevention page is easily accessible from the City Services tab on the City's website. The page is maintained by City staff and continuously updated with new information as it becomes available. The following is a direct link to the City's storm water pollution prevention page:

http://www.ci.walnut.ca.us/general.asp?id=282

The environmental services department is present at all of the City's special events where material regarding the City's storm water pollution prevention program is handed out. All the city facilities have access to and post the material for patrons. An environmental services brochure was created by the City which contains an overview of the storm water pollution prevention program and is passed out at the City facilities.

3.1.4- Storm Water Education in Schools

City staff works closely with environmental clubs at local educational sites. The City works with student groups at the high school, middle school, and elementary school levels to host park cleanup events twice a year. The City also interacts with other student community groups including the Boy Scouts of America and Girl Scouts of America which have partnered with the City of Walnut to host additional educational events throughout the year. Education material is made available to all of the local environmental clubs and the school district, as well as available at all of the park clean up events.

The City reaches out to the environmental club participants when looking for volunteers for the environmental services booth at the Family Festival. Staff is available for outreach to the local school districts and continuing to foster that partnership.

3.1.5- PIPP Outreach to Multi Cultural Communities

The City of Walnut has a number of culturally diverse communities that live and/or work in the City. Effectively communicating educational materials related to storm water quality can be a challenge when there is a language barrier. To address this hurdle, multilingual City staff located at City Hall are available to translate and answer any questions including environmental issues such as storm water pollution. Members of city staff are fluent in Spanish, Mandarin, Tagalog, German, Japanese, and Korean. All members of the public with questions or concerns relating to storm water or any other topic are encouraged communicate with City staff.

3.2- Industrial/Commercial Facilities Program

The industrial Facilities Program is designed to prevent illicit discharges from industrial and commercial facilities into the MS4 and receiving waters. It will also reduce storm water discharges from industrial and commercial facilities and prevent industrial and commercial discharges from causing or contributing to a violation of receiving water limitations. The MS4 permit identifies the minimum components of this program to include tracking, education, inspection and enforcement.

3.2.1- Industrial/Commercial Facilities Tracking

The City's tracking program will include an electronic based inventory that will identify all qualifying commercial and industrial facilities within the city boundaries. Information regarding the facility location and operations will be logged into the tracking system.

The City land use is primarily dedicated to single family residential and open space, allowing for only a small portion of the City to be utilized for commercial and industrial facilities. The MS4 Permit recommends that a Geographic Information System (GIS) is utilized for this task, however due to the relatively small number of these facilities a spreadsheet program will be utilized to track qualifying facilities. As the city develops its GIS program, the tracking information gathered as part of this plan will be reassessed to determine if adding a GIS element to the tracking program will improve effectiveness of the system.

The MS4 Permit requires that commercial and industrial facilities that are tracked. The following list outlines four categories that tracking is mandatory for.

1. Commercial Facilities
    - Restaurants
    - Automotive service facilities (including facilities located at automotive dealerships)
    - Retail Gasoline
    - Nurseries and Nursery Centers
2. USEPA "Phase I" Facilities [as specified in 40 CFR §122.26(b)(14)(i)-(xi)]
3. Other federally-mandated facilities [as specified in 40 CFR §122.26(d)(2)(vi)(C)]
    - Municipal Landfills
    - Hazardous waste treatment, disposal and recovery facilities
    - Industrial facilities subject to section 313 "Toxic Release Inventory" reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986 (EPCRA) [42 U.S.C. § 11023]
4. All other commercial or industrial facilities that the permittee determines may contribute a substantial pollutant load to the MS4.

The MS4 Permit requires the City to track minimum parameters under the commercial and industrial facilities program. Not all of this information is currently tracked by the City. Although the City has a limited number of commercial facilities and no industrial facilities, gathering and organizing the required data is a demanding task. Upon receipt of the Regional Boards approval of the City's WMP, the City will begin the process of organizing and centralizing all available tracking information.

Outstanding tracking information will be assessed and gathered within a reasonable time frame. Once a complete inventory is developed, the City's Planning department will maintain and update the database on an as needed basis with the frequency of updates occurring at least annually. The information for new Commercial/Industrial site data will be gathered from the City's permitting program and field inspections.

The following list includes the minimum parameters to be included in the tracking program:

- Name of facility
- Name of owner/ operator and contact information
- Address of Facility (physical and mailing)
- North American Industry Classification System (NAICS) code
- Standard Industrial Classification (SIC) code
- A narrative description of the activities performed and/or principal produces produced
- Status of exposure of materials to storm water
- Name of receiving water
- Identification of whether the facility is tributary to a CWA §303(d) listed water body segment or water body segment subject to a TMDL, where the facility generates pollutants for which the water body segment is impaired.
- Ability to denote if the facility is known to maintain coverage under the State Water Board's General NPDES Permit for the Discharge of Storm water Associated with Industrial Activities (Industrial General Permit) or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Water Board pertaining to storm water discharges.
- Ability to denote if the facility has filed a No Exposure Certification with the State Water Board.

3.2.2- Industrial/Commercial Education

Per section VI.D.6.c, the City of Walnut is required to notify commercial and industrial site owners/operators of applicable BMPs based on the activities that take place at the site. City Staff will utilize the commercial and industrial facilities tracking data base to identify sites requiring notice. Notices sent will include a list of BMPs and related BMP implementation information applicable to the commercial site. Notices will be directed to the owner/operator of each of the inventoried commercial and industrial sites. This notice will occur at least once during the five year period of the MS4 permit. The City Environmental Services Department will utilize the commercial/industrial facility tracking database to document when such notification is made.

In coordination with the City's BMP education notice, the City will provide all commercial/industrial facility owners with contact information for a City Business Assistance Program. The program will provide additional information to businesses, upon request, to facilitate their efforts in the reduction of pollutant discharges. The Business Assistance Program will also further target business sectors or small businesses that have been determined as potential sources of pollutant loads to the MS4 or receiving

water. The City will utilize the results from the monitoring of MS4 outfalls and receiving waters to better direct efforts in reducing or eliminating pollutant loading.

Additional technical information provided to businesses in the City of Walnut may include the following items listed below:

- Provision of education materials
- Telephone and/or e-mail consultation
- On-site technical assistance

A determination of what will be provided to the business will be made on a case by case basis and will be tailored to the needs of the businesses that fit the criteria for providing additional assistance. All additional information and support provided to will be at the discretion of the City.

3.2.3- Commercial Facility Inspection

Per section VI.D.6.d of the MS4 permit the City of Walnut will implement a commercial facility inspection program. Inspections at all of the facilities identified in the City's database will take place at least twice during the five year term of the MS4 Permit. The first inspection will take place no later than December 28, 2014, two years after the effective date of the permit (December 28, 2013). The second inspection will have a minimum interval of at least six months following the first inspection.

Parameters to be included in the above mentioned inspections are as follows:

- Proper Implementation of storm water and non-storm water BMPs
- Proper maintenance of storm water and non-storm water BMPs
- Verification of effective source control BMP implementation
- Review/Enforcement for proper BMP implementation in areas that drain to a Significant Ecological Areas (SEA), water body subject to a TMDL or CWA § 303(d) listed impaired water body.
- Require additional BMPs if necessary

3.2.4- Industrial Facility Inspection

Per section VI.D.6.e of the MS4 permit the City of Walnut will implement an industrial facility inspection program. Currently, there are no Industrial facilities within the Jurisdictional boundaries of the City. Should that change in the future the following inspection program will be implemented.

Inspections at all of the facilities identified in the City's database will take place at least once during the five year term of the MS4 Permit. The deadline established by the MS4 permit of December 28, 2015 will not apply to the City of Walnut due to the lack of industrial facilities at the time of adoption of this plan. Should that change, the City will inspect the industrial site within a reasonable time period after the site begins normal operations. After the initial inspection, all facilities that have not filed a No Exposure Certification with the State Water board are subject to a second mandatory inspection to take place at least six months after the first inspection.

As part of the first industrial facility inspection, the City will identify if a facility has filed a No Exposure Certification with the State Water Board. Approximately three to four years after the effective date of the MS4 Permit, the City will evaluate its inventory of industrial facilities and perform a secondary inspection for at least 25% of the facilities identified to have a No Exposure Certification if any exist in the City.

Industrial facilities that have been inspected by the Regional Water Board within prior a 24 period are not required to be inspected. The City will review the State Water Board's Storm Water Multiple Application and Report Tracking System (SMARTS) database on an annual basis if an industrial site opened in the City. If a facility is subject to a second inspection, it shall take place approximately four years following the effective date of the MS4 Permit. Similar to the conditions of the first inspection, a second inspection is not required if the Regional Water Board has previously inspected the site within a 24 month period.

Parameters to be included in the above mentioned inspections are as follows:

- Verify Waste Discharge Identification (WDID) number for coverage under the Industrial General Permit.
- Verify that a Storm Water Pollution Prevention Plan (SWPPP) is on site; or
- Verify the site has applied for, and has received a current No Exposure Certification for facilities subject to the requirement
- Verify BMPs are effectively implemented in compliance with municipal ordinances. Facilities must implement the source control BMPs identified in table 3-1 below.

Applicable industrial facilities identified as not having either a current WDID or No Exposure Certification shall be notified that they must obtain coverage under the Industrial General Permit and shall be referred to the Regional Water Board per the Progressive Enforcement Policy identified in part VI.D.2.

Table 3-1

Industrial Facility BMP Applications	
Pollutant-Generating Activity	**BMP Narrative Description**
Unauthorized Non-Storm water Discharges	Effective elimination of non-storm water discharges
Accidental Spills/Leaks	Implementation of effective spills/leaks prevention and response procedures
Vehicle/Equipment Fueling	Implementation of effective fueling source control devices and practices
Vehicle/Equipment Cleaning	Implementation of effective equipment vehicle cleaning practices and appropriate wash water management
Vehicle/Equipment Repair	Implementation of effective vehicle/equipment repair practices and source control devices
Outdoor Liquid Storage	Implementation of effective outdoor liquid storage control devices and practices
Outdoor Equipment Operations	Implementation of effective outdoor equipment source control devices and practices
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices

Table 3-1 (Continued)

Industrial Facility BMP Applications	
Pollutant-Generating Activity	**BMP Narrative Description**
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/handling practices and appropriate control measures
Building and Grounds Maintenance	Implementation of effective facility maintenance practices
Parking/Storage Area Maintenance	Implementation of effective parking /storage area designs and housekeeping/maintenance practices
Storm water conveyance system maintenance practices	Implementation of proper conveyance system operation and maintenance protocols
Sidewalk Washing	Remove trash, debris, and free standing oil/grease spills/leaks (use absorbent material, if necessary) from the area before washing; and Use high pressure, low volume spray washing using only potable water with no cleaning agents at an average usage of 0.006 gallons per square feet of sidewalk area.
Street Washing	Collect and divert wash water to the sanitary sewer – publically owned treatment works (POTW) Note: POTW approval may be needed.

3.3- Planning and Land Development Program

Per section VI.D.7 the City of Walnut will implement a Planning and Land Development Program for all new development and redevelopment projects. The goal of the Planning and Land Development Program is to lessen the potential water quality impact from new or redevelopment through implementation of water quality driven development practices.

The program will promote smart growth practices that minimize adverse impacts from storm water runoff on the biological integrity of Natural Drainage Systems, and the beneficial uses of water bodies in accordance with requirements under the California Environmental Quality Act (CEQA). Future developments will focus on minimizing the percentage of impervious surfaces and utilize Low Impact Development features and BMPs to maintain a site's predevelopment hydrology in accordance with the MS4 Permit requirements.

3.3.1- Low Impact Development Ordinance

On November 13, 2013, the Walnut City Council adopted a Low Impact Development (LID) Ordinance in compliance with the requirements VI.C.4.c.ii. and section VI.D.7 of the MS4 permit. A copy of the adopted ordinance is included in Attachment B of this document. The LID Ordinance is an enforcement tool the City will utilize when reviewing and permitting development projects that qualify under the triggering requirements of the ordinance.

The list below outlines project parameters that qualify for implementation of LID design requirements under the City of Walnut's LID Ordinance.

- All Development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.
- Industrial parks 10,000 square feet or more of surface area.
- Commercial malls 10,000 square feet or more of surface area.
- Retails gasoline outlets with 5,000 square feet or more of surface area.
- Restaurants (SIC of 5812) with 5,000 square feet or more of surface area.
- Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.
- Streets and roads construction of 10,000 square feet or more of impervious surface area.
- Automotive service facilities (SIC of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.
- Projects located in or directly to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
    - Discharge storm water runoff that is likely to impact a sensitive biological species or habitat; and
    - Create 2,500 square feet or more of impervious surface area
- Single family hillside homes (see ordinance for definition)
- Redevelopment Projects
    - Land Disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.
    - Where redevelopment would result in an alteration to more than 50% of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction storm water quality control requirements, only the alteration must be mitigated, and not the entire development.
    - Where redevelopment results in an alteration of less than 50% of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction storm water quality control requirements, only the alteration must be mitigated, and not the entire development.
    - Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb addi9tional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.
    - Existing single-family dwelling and accessory structures area exempt from the redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

3.3.2- New Development/Redevelopment Project Performance Criteria

Qualifying development projects will be subject to storm water pollution control requirements including retention of all storm water resulting from a specified rain event as outlined in more detail in the City's LID ordinance. The City Planning department will work with developers to ensure that all requirements set forth in the LID ordinance are met.

Should a project applicant find that technical infeasibilities prevent a new or re-development project from meeting the storm water pollution control requirements, they must demonstrate to the City that the project cannot retain 100% of the water resulting from the design storm volume on-site. The technical infeasibility demonstration must include the maximum application of City approved BMPs. Such a demonstration would include a site-specific hydrologic and/or design analysis conducted and endorsed by a registered professional engineer, geologist, architect and/or landscape architect.

Alternative compliance measures are available in instances of technical infeasibility or if there is the opportunity for regional ground water replenishment. These options include on-site biofiltration, offsite infiltration, ground water replenishment projects, and offsite retrofits to existing development.

3.4- Development Construction Program

The MS4 Permit requires that the City of Walnut develop and implement a Development Construction Program. The general nature of construction activities has a high potential for discharges of pollutants and/or sediment from a site. Conditions on construction sites often include potential sources of pollution including but not limited to disturbed soils, stockpiled materials and construction vehicles. General construction activities or storm water surface flow can often result in transport and discharge of these pollutants. It is the internet of the development construction program to prevent discharges from construction sites to the MS4.

The program shall prevent illicit construction-related discharges of pollutants into the MS4, require the implementation and maintenance of structural and non-structural BMPs to reduce pollutants in storm water runoff from construction sites, reduce construction site discharges of pollutants to the MS4 or to the maximum extent practicable, and prevent construction site discharges to the MS4 from causing or contributing to a violation of water quality standards. The Development Construction Program shall also include an enforceable erosion control and sediment control ordinance for all construction sites that disturb soil.

3.4.1- Construction Sites of Less Than One Acre

Construction sites of less than one acre are required to comply with the provisions of this section and section VI.D.8.d of the MS4 Permit. Construction activities covered by this section include but are not limited to grading, vegetation clearing, soil compaction, paving re-paving and linear underground/overhead projects (LUPs).

The City of Walnut will require that all qualifying construction sites implement the BMPs identified in Table 3-2 in an effective manner to prevent erosion and the discharge of construction wastes.

The City will maintain an inventory of construction sites with soil disturbing activities requiring a permit. The City will conduct inspections at these sites on an as-needed basis. When determining the need for inspection the City will take into account factors that may result in the discharge of construction site pollutants. Factors in the construction site assessment may include soil erosion potential, site slope, project size and type, receiving water body sensitivities, past record of construction site compliance by the operator of the construction site. The City will also utilize a progressive enforcement policy to ensure that construction sites found to be out of compliance are brought back into compliance with the requirements of the MS4 Permit.

Table 3-2

Applicable Set of BMPs for All Construction Sites	
BMP Type	**BMP**
Erosion Control	Scheduling
	Preservation of Existing Vegetation
Sediment Controls	Silt Fence
	Sand Bag Barrier
	Stabilized Construction Site Entrance/Exist
Non-Storm Water Management	Water Conservation Practices
	Dewatering Operations
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management
	Concrete Waste Management
	Sanitary/Septic Waste Management

3.4.2- Construction Site Inventory

The City of Walnut will develop and maintain permit tracking data base for all grading, encroachment, demolition, building and construction permits issued by the City. The database will be an electronic system that includes the following site specific information.

- Owner and Contractor Contact Information
- Site location, size, status and disturbed area
- Proximity of Water Bodies to the Construction Site
- Significant threat to water quality status (Appendix 1 of the Construction General Permit)
- Current Phase of Construction
- Required Inspection Frequency
- Start and anticipated end date
- Is the project covered under the Construction General Permit
- Date of City approval of the Erosion and Sediment Control Plan (ESCP)
- Post Construction Structural BMPs subject to operation and maintenance requirements

3.4.3- Construction Plan Review and Approval Procedures

The City of Walnut will review and approve relevant construction documents prior to issuing permits. Each operator of a construction activity within the City's jurisdiction will be required to prepare and submit to the City, for review and approval, an Erosion and Sediment Control Plan (ESCP). An ESCP shall include site specific BMPs that are appropriate for the activities that will take place on the site and elements of a Storm Water Pollution Prevention Plan (SWPPP). SWPPPs that conform to the requirements of the Construction General Permit may be accepted as a project's ESCP.

ESCP Shall include the Following:

- Methods used to minimize the foot print of disturbed area and to prevent soil compaction of outside of the disturbed area
- Methods used to protect native vegetation and trees
- Sediment and Erosion Control
- Controls to prevent tracking on and off site
- Non-storm water controls
- Materials Management
- Spill Prevention and Control
- Waste Management
- Site Risk Level as classified by the Construction General Permit
- BMP Selection Rationale including expected soil loss
- ESCP Developed and certified by QSD
- BMPs are designed by a California licensed Engineer

Additionally the City will require that the landowner or the landowner's agent include and sign the following certification statement on the ESCP:

> *"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/ or inaccurate information, failing to update the ESCP to reflect current conditions or failing to properly and/or adequately implement the ESCP may result in revocation of grading and/ or other permits or other sanctions provided by law."*

Prior to issuing a grading or building permit, The City of Walnut will verify that the construction site operators have existing coverage under applicable permits, including, but not limited to the State Water Board's Construction General Permit, and State Water Board 401 Water Quality Certification.

The City of Walnut will also develop and implement an ESCP checklist for City staff to use when conducting a document review of each ESCP.

3.4.4- BMP Implementation Requirements

The City of Walnut will develop and implement a construction site BMP program that adequately addresses the potential for construction site pollutants reaching the City's MS4. The City will utilize the Los Angeles County Department of Public Works BMP Design Manual as a technical reference for construction site operators to select, design and maintain BMPs on their construction site.

All construction sites shall undergo a risk assessment during the ESCP development process. The risk assessment shall identify a projects risk level on a low risk (Risk 1) to high risk (Risk 3) scale. The project risk assessment will be based on the potential for erosion from the site and the sensitivity of the receiving water. Receiving waters listed on the Clean Water Act (CWA) section 303(d) list for sediment or siltation are considered to be high risk. Receiving water bodies that have beneficial uses of SPWN, COLD and MIGR will also be categorized high risk. The risk assessment shall conform to the procedures defined in Appendix 1 of the California Construction General Permit. Minimum BMPs for high risk construction sites shall include BMPs identified in Table 3-3.

Table 3-3

Enhanced BMPs for High Risk Sites	
BMP Type	**BMP**
Erosion Controls	Hydraulic Mulch
	Hydroseeding
	Soil Binders
	Straw Mulch
	Geotextiles and Mats
	Wood Mulching
	Slope Drains
Sediment Controls	Silt Fence
	Fiber Rolls
	Sediment Basin
	Check Dam
	Gravel Bag Berm
	Street Sweeping and / or Vacuum
	Sand Bag Barrier
	Storm Drain Inlet Protection
Additional Controls	Wind Erosion Controls
	Stabilized Construction Entrance/ Exit
	Stabilized Construction Roadway
	Entrance/ Exit Tire Wash
	Advanced Treatment Systems
Non-Storm Water Management	Water Conservation Practices
	Dewatering Operations (Ground water dewatering only under NPDES Permit No. CAG994004)
	Vehicle and Equipment Washing
	Vehicle and Equipment Fueling
	Vehicle and Equipment Maintenance
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management

BMPs identified in Table 3-4 and the List of Minimum BMPs for Paving Projects shall be utilized for all construction sites of one acre or more and paving projects.

Table 3-4

Applicable Set of BMPs for All Construction Sites	
BMP Type	**BMP**
Erosion Controls	Hydraulic Mulch
	Hydroseeding
	Soil Binders
	Straw Mulch
	Geotextiles and Mats
	Wood Mulching
Sediment Controls	Fiber Rolls
	Gravel Bag Berm
	Street Sweeping and / or Vacuum
	Storm Drain Inlet Protection
	Scheduling
	Check Dam
Additional Controls	Wind Erosion Controls
	Stabilized Construction Entrance/ Exit
	Stabilized Construction Roadway
	Entrance/ Exit Tire Wash
Non-Storm Water Management	Vehicle and Equipment Washing
	Vehicle and Equipment Fueling
	Vehicle and Equipment Maintenance
Waste Management	Material Delivery and Storage
	Spill Prevention and Control

Paving Project Minimum BMPs

- Restrict paving and re-paving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions.
- Install gravel beds and filter fabric or to the equivalent inlet protection at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat.
- Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or receiving waters.
- Minimize non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
- Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
- Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly.
- Cover the “Cold-mix” asphalt (i.e. per-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm.
- Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
- Minimize airborne dust by using water spray or other approved dust suppressants during grinding.

Paving Project Minimum BMPs (continued)

- Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or receiving waters.
- Protect stockpiles with a cover or sediment barriers during rain.

All ESCPs submitted to the City shall include BMP cut sheets, design guidelines and maintenance expectations that are approved by the City of Walnut. BMPs design guidelines shall conform to the Los Angeles County Department of Public Works BMP Design Manual or a City approved equal.

3.4.5- Construction Site Inspection

The construction site inspection program is critical to the Development and Construction Program. Construction site inspections aid the City in verifying and enforcing the requirements of an ESCP or standard practices focused on maintain water quality in the City. The City of Walnut will continue to implement a construction site inspection program and train inspectors on NPDES related concerns that may originate from construction sites.

Inspection frequencies will vary based on construction site size and activities. Sites of one acre or larger that discharge to a receiving water listed on the CWA section 303(d) for sedimentary or turbidity list, or determined to pose a significant threat to water quality shall be inspected at minimum, prior to a rain event of two or more consecutive days with greater than 50% chance of rain fall forecasted by NOAA, within 48 hours of a ½-inch rain event and at least once every two weeks. All other construction sites of one acre or more shall be inspected at least monthly.

The City will inspect construction sites during all phases of construction. The first inspection will take place prior to disturbance of soil to ensure that all required BMPs are in place. Site inspections shall also take place during active construction activities to ensure that all applicable BMPs are in place and properly maintained. A final inspection shall take place as a condition of, and prior to issuing a Certificate of Occupancy. The final inspection will confirm that the site has reached final stabilization and that all temporary erosion and sediment BMPs are removed.

Construction site inspections shall include:

- Verification of active coverage under the Construction General Permit (sites >1 acre)
- Review of applicable ESCP and verification of installation of all selected BMPs
- Assessment of appropriateness of the planned and installed BMPs
- Observation of record keeping of non-storm water discharges
- Development of a written or electronic inspection report
- Tracking of inspections

When a site inspection results in observed deficiencies in an ESCP implementation or other NPDES related requirements, the City will notify the construction site operator of the issues identified. The site operator will be assigned a reasonable time period to fix the issue prior to the enforcement being escalated through the progressive enforcement policy.

3.5- Public Agency Activities

The City of Walnut is required to develop and implement a Public Agency Activities Program. It is the intent of this program to minimize storm water pollution impacts from city owned or operated facilities and activities. The program will also identify opportunities to reduce storm water pollution impacts from areas of existing development.

Requirements for Public Facilities and Activities Program shall include the following:

- Public Construction Activities Management
- Public Facilities Inventory
- Inventory of Existing Development for Retrofitting Opportunities
- Public Facility and Activity Management
- Vehicle and Equipment Wash Areas
- Landscape, Park, and Recreational Facilities Management
- Storm Drain Operational and Maintenance
- Emergency Procedures
- Municipal Employee and Contractor Training

3.5.1- Public Construction Activities Management

The City of Walnut's public construction activities shall conform to the Planning and Development (Section 3.3) and Development Construction Programs (Section 3.4) included in this document. The City will require that all contractors and construction related activities that take place under a City contract will conform to the requirements of the MS4 Permit and the California Construction General Permit.

3.5.1- Public Facility Inventory

The City will develop an inventory of all City owned or operated facilities that are potential sources of storm water pollution within its jurisdiction. Facilities that are required to be tracked are as follows:

- Chemical Storage Facilities
- Composting Facilities
- Equipment Storage and Maintenance Facilities
- Fueling or Fuel Storage Facilities
- Material Storage Yards
- Pesticide Storage Facilities
- Fire Stations
- Public Restrooms
- Public Parking Lots
- Public Pools
- Public Parks
- Public Works Yard
- Vehicle Storage and Maintenance Yards
- Storm Water Management Facilities
- All Other City Owned Facilities

Not all of the facilities listed in the MS4 Permit are included in the above list. City owned facilities excluded from the list are not found within the City's jurisdiction.

Of the facilities identified in this document, the following minimum information shall be tracked by the City:

- Name of the Facility
- Name of the Facility Manager
- Address of the facility (physical and mailing)
- Narrative of the activities performed at the site
- If the site has coverage under the Industrial General Permit

3.5.2- Inventory of Existing Retrofitting Opportunities

The MS4 Permit requires that Permittees develop an inventory of retrofitting opportunities with in the public right of way. The inventory of retrofitting opportunities will be utilized by permittees when considering potential projects. All opportunities considered for retrofitting are required to undergo a screening process. Factors that may be considered when screening a project are outlined below.

- Feasibility
- Cost Effectiveness
- Pollution Removal Effectiveness
- Tributary Area Potentially Treated
- Maintenance Requirements
- Land Owner Cooperation
- Neighborhood Acceptance
- Aesthetic Qualities
- Potential Improvements to Public Health and Safety

Projects determined to have high levels of feasibility and effectiveness in water quality improvement shall be given the highest priority for implementation. High priority projects should be considered when off-site mitigation is required for a re-development or new development project. The City of Walnut will work with residents and land owners to develop and implement an effective retrofitting program. The City will educate residents and landowners of the benefits for implementing BMPs through the education and outreach program. City staff will work with owners of development projects subject to the requirements of the LID Ordinance to ensure that feasible opportunities for water quality improvement are maximized. At the discretion of the City, retrofit projects may also be included in other public infrastructure projects.

3.5.3- Public Agency Facility and Activity Management

Permittees are required to obtain coverage under the Industrial General Permit for all permittee owned or operated facilities that require coverage based on activities that take place at the sites. The City of Walnut does not currently have any public facilities that require separate coverage under the Industrial General Permit.

All other City owned or operated sites shall implement activity based BMPs identified in Table 3-5:

Table 3-5

BMPs for Public Agency Facilities and Activities	
Activity	**BMP**
General BMPs	Scheduling and Planning
	Spill Prevention and Control
	Sanitary/Septic Waste Management
	Material Use
	Safer Alternative products
	Vehicle/Equipment Cleaning, Fueling and Maintenance
	Illicit Connection Detection, Reporting and Removal
	Illegal Spill Discharge Control
	Maintenance Facility Housekeeping Practices
Flexible Pavement	Asphalt Cement Crack and joint Grinding/ Sealing
	Asphalt Paving
	Structural Pavement Failure (Digouts) Pavement Grinding and Paving
	Emergency Pothole Repairs
	Sealing Operations
Rigid Pavement	Portland Cement Crack and Joint Sealing
	Mudjacking and Drilling
	Concrete Slab and Spall Repair
Slope/Drains/ Vegetation	Shoulder Grading
	Non-landscape Chemical Vegetation Control
	Non-landscape Mechanical Vegetation Control/
	Mowing
	Nonlandscape Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal
	Fence Repair
	Drainage Ditch and Channel Maintenance
	Drain and Culvert Maintenance
Litter/ Debris/ Graffiti	Sweeping Operations
	Litter and Debris Removal
	Emergency Response and Cleanup Practices
	Graffiti Removal
Landscaping	Chemical Vegetation Control
	Manual Vegetation Control
	Landscape Mechanical Vegetation Control
	Landscape Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal
	Irrigation Line Repairs
	Irrigation (Watering), Potable and Non-potable
Environmental	Storm Drain Stenciling
	Roadside Slope Inspection
	Roadside Stabilization
	Storm Water Treatment Devices
	Traction Sand Trap Devices

Table 3-5 Continued

BMPs for Public Agency Facilities and Activities	
Activity	**BMP**
Bridges	Welding and Grinding
	Sand Blasting, Wet Blast with Sand Injection and Hydroblasting
	Painting
	Bridge Repairs
Other Structures	Pump Station Cleaning
	Tube and Tunnel Maintenance and Repair
	Tow Truck Operations
	Toll Booth Lane Scrubbing Operations
Electrical	Sawcutting and Loop Installation
Traffic Guidance	Thermoplastic Striping and Marking
	Paint Striping and Marking
	Raised/ Recessed Pavement Marker Application and Removal
	Sign Repair and Maintenance
	Median Barrier and Guard Rail Repair
	Emergency Vehicle Energy Attenuation Repair
Storm Maintenance	Minor Slides and Slipouts Cleanup/ Repair
Management and Support	Building and Grounds Maintenance
	Storage of Hazardous Materials (Working Stock)
	Material Storage Control (Hazardous Waste)
	Outdoor Storage of Raw Materials
	Vehicle and Equipment Fueling
	Vehicle and Equipment Cleaning
	Vehicle and Equipment Maintenance and Repair
	Aboveground and Underground Tank Leak and Spill Control

**These BMPs may not all apply to the public facilities and activities that are conducted by the City of Walnut. These have been included in the WMP to conform to the requirements of the MS4 Permit.*

3.5.4- Vehicle and Equipment Washing

All vehicle and equipment washing activities that take place at a City owned or maintained facility will conform to the requirements of the MS4 Permit. Per section VI.D.9.f of the MS4 Permit, the City of Walnut will implement and maintain applicable BMPs identified in table 3-5 of this document.

All vehicles washing of public vehicles and equipment takes place at the City yard. The City retains all runoff from washing activities in an on-site take which is emptied on an as-needed basis. The contents of the tank are hauled off site and disposed outside of the City of Walnut in accordance with all local and state requirements.

No vehicle or equipment maintenance takes place at a City owned or operated facility. City staff are trained to address spills and prevent discharge of pollutants to the MS4. The City also works with Los Angeles County Fire and Public Works to provide spill response for spills that are beyond the City's ability to mitigate.

3.5.5- Landscape, Park, and Recreational Facilities Management

All landscape, park and recreational facilities that are City owned or maintained will conform to the requirements of the MS4 Permit. Per section VI.D.9.g of the MS4 Permit, the City of Walnut will implement and maintain applicable BMPs identified in Table 3-5 of this document.

The MS4 Permit requires that the City implement an Integrated Pest Management (IPM) program. The intent of the IPM is to limit or prevent the impact on water quality from the use of pesticides. The IPM is required to have the following provisions:

- Pesticides are only used if monitoring indicates that they are needed, and pesticides are applied according to applicable permits and established guidelines.
- Treatments are made with the goal of removing only the target organism.
- Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial non-targeted organisms, and the environment.
- The use of pesticides, including Organophosphates and Pyrethroids, does not threaten water quality.
- Partner with other agencies and organizations to encourage the use of IPM.
- Adopt and verifiably implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and encouraging the use of IPM techniques (including beneficial insects) for Public Agency Facilities and Activities.
- Policies, procedures, and ordinances shall include commitments and a schedule to reduce the use of pesticides that cause impairment to surface waters by implementing the following procedures:
    - Prepare and annually update an inventory of pesticides used by all internal departments, divisions, and other operational units.
    - Quantify pesticides use by staff and hired contractors.
    - Demonstrate implementation of IPM alternatives where feasible to reduce pesticide use.

As part of a normal landscaping maintenance program, the City does utilize fertilizers. The City of Walnut does not use pesticides or herbicides on a regular basis. On an as needed basis, pesticides are used to eliminate fire ants and gofers. Pesticides are applied by qualified staff that have been trained on the proper application methods and potential impacts of the pesticides utilized. All use of pesticides is recorded and reported to the Los Angeles County Agriculture Commission.

3.5.6- Storm Drain Operation and Maintenance

The City of Walnut is required to conform to the requirements of the section VI.D.9.h of the MS4 Permit. The City of Walnut will implement and maintain applicable BMPs identified in table 3-5 of this document.

The City has an effective trash management program in place for public events. If required, additional trash receptacles are placed throughout the area that an event is to take place. Following the conclusion of the event trash receptacles are emptied with in one business day after the event.

The City utilizes staff and volunteers in an effort to minimize trash and litter generated at an event. Sites of public events are restored to their daily operation following the conclusion of an event.

The City contracts to Los Angeles County Public Works for maintenance of the City's storm drain system and catch basins. City owned catch basins are cleaned of any trash or debris present on an annual basis prior to the start of the rainy season. Also included in the Los Angeles County Departments maintenance services is the painting of "No Dumping" messages on catch basins. There is no current Trash TMDL for the San Gabriel River thus no Catch Basin Connector Pipe Screens have been installed in the City.

The City of Walnut is required to prevent infiltration from the sanitary sewer system into the MS4. The City of Walnut utilizes the following program controls:

- Adequate plan checking for construction and new development
- Incident response training for its municipal employees that identify sanitary sewer spills
- MS4 maintenance and inspections
- Interagency coordination with sewer agencies
- Proper education of municipal staff and contractors conducting field operations on the sanitary sewer or MS4

The City of Walnut has a Sanitary Sewer management Plan (SSMP) in place to prevent or minimize the effects on receiving waters and public health from a sanitary sewer overflow. One of the measures put in place by the SSMP involves video inspection of the City's Sanitarily Sewer System. The video inspection in addition to the City's plan check and inspection system and clean up response coordination with the Los Angeles County maintenance crews are critical programs that the City utilizes to eliminate sewer leaks from infiltrating into the MS4.

The City owned treatment control BMPs shall be maintained per the requirements of the MS4 Permit. The City shall implement an inspection program that ensures that BMPs are properly maintained. The City will conduct inspections of all City owned Structural BMPs on a quarterly basis or as required by manufacture recommendations or special site conditions.

Any residual water that is produced by a treatment control BMP not being internal to the BMP performance shall be removed by an approved method. The MS4 Permit allows residual water to be hauled away and legally disposed of, applied to the land without runoff, discharged to the sanitary sewer system, or treated/filtered to remove bacteria, sediments, and nutrients to limitations identified in Table 3-6.

Table 3-6

Discharge Limitations for Dewatering Treatment BMPs		
Parameter	**Units**	**Limitation**
Total Suspended Solids	mg/L	100
Turbidity	NTU	50
Oil and Grease	mg/L	10

3.5.7- Streets, Roads and Parking Facilities Maintenance

Streets, Roads and Parking Facilities play a major role in the generation and transportation of pollutants to the MS4. The City of Walnut plans to utilize aggressive programs to limit or reduce the contamination of surface flow water in an effort.

The City of Walnut has classified all of the street segments in the City as "Priority C" streets. The City is predominately single family residential developments which generate low volumes of trash and debris. Priority C streets are required to be swept at least once per year, however the City of Walnut utilizes a bi-monthly street sweeping frequency for all of the streets in the City's jurisdiction.

Road reconstruction shall include the following BMPs:

- Restrict Paving and repaving activity to exclude periods of rainfall of predicted rainfall unless required by emergency conditions.
- Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat.
- Prevent the discharge of release agents including soybean oil, other oils or diesel into the MS4 or receiving waters.
- Prevent non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
- Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
- Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly.
- Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused recycled or disposed of properly.
- Cover the "cold-mix" asphalt with protective sheeting during a rain storm.
- Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
- Minimize airborne dust by using water spray during grinding.
- Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in our near MS4 or receiving waters.
- Protect stockpiles with a cover or sediment barriers during a rain.

City owned or operated parking lots exposed to storm water shall be kept clear of debris and excessive oil buildup and cleaned no less than two times per month on the same schedule as the City's street sweeping.

3.5.8- Emergency Procedures

The City of Walnut is a Contract City and depends on outside agencies or contractors to provide maintenance services. In the event of an NPDES emergency, the City will contact the applicable agency or contractor that the City contracts with for maintenance services that are related to the emergency. Contact information is distributed to City staff and residents.

NDPES Emergency Contacts- City of Walnut

Emergency Contacts for the City of Walnut:		(909) 595-7543
Los Angeles County Sewer Maintenance District:		(800) 675-HELP
Los Angeles County Department of Public Works:		(888) CLEAN-LA
Los Angeles County Fire Department:	Non-Emergency	(909) 595-3001
	Emergency	911

The MS4 Permit allows for permittees to conduct repairs essential to public service systems and infrastructure in emergency situations with a self-waiver of the provisions of the order as follows:

- The City shall abide by all other regulatory requirements, including notification to other agencies as appropriate.
- Where the self-waiver has been invoked, the City of Walnut shall submit to the Regional Water Board Executive Officer a statement of the occurrence of the emergency, an explanation of the circumstances, and the measures that were implemented to reduce the threat to water quality, no later than 30 business days after the situation of emergency has passed.
- Minor repairs of essential public services systems and infrastructure in emergency situation (that can be completed in less than one week) are not subject to the notification provisions. Appropriate BMPs to reduce the threat to water quality shall be implemented.

3.5.9- Employee and Contractor Training

The City of Walnut has implemented an employee training program that targets job specific and general BMP training to City maintenance staff. City staff receive training on NPDES related topics and procedures at least once per year.

The City's training program address the potential for pesticide-related surface water toxicity, proper use and disposal of pesticides, least toxic methods of pest prevention and control and the reduction of pesticide use.

3.6- Illicit Connection and Illicit Discharge Elimination Program

The City of Walnut is required to develop and implement an illicit connection and illicit discharge elimination program. The program will be utilized by City staff to identify and eliminate illicit connections and discharges to the MS4. MS4 discharges containing illicit connections and discharges have been known to contain pollutants which may cause or contribute to the impairment of a receiving water body. The program shall include the following components:

- Procedures for conducting source investigations for IC/IDs
- Procedures for eliminating the source of IC/IDs
- Procedures for public reporting of illicit discharges
- Spill response plan
- IC/IDs education and training for Permittee staff

3.6.1- Illicit Discharge Source Investigation and Elimination

The City of Walnut will make a reasonable effort to initiate an illicit discharge source investigation as soon as staff receives notification of an event. All reports of illicit discharges will be investigated. As required by the MS4 Permit, the City will initiate an illicit discharge source investigation within 72 hours of becoming aware to the illicit discharge. Investigations will be conducted by available qualified City or County Staff in the applicable department based on the initial details reported.

Illicit discharges suspected to contain sanitary sewage shall be the highest priority for investigation. The source of sanitary sewer discharges should be traced back to the point of origination and stopped immediately if possible. Discharges of sanitary sewage from the sanitary sewer system shall be differed to Los Angeles County Sewer Maintenance District. The City has a Sewer System Management Plan (SSMP) in place to address sanitary sewer overflows (SSOs). The City of Walnut, as a member of the Consolidated Sewer Maintenance District (CSMD) utilizes the County reporting hotline 1-800-675-HELP (4357) for sewer related emergencies. The SMD reporting hotline is posted on the City website for residents should an event occur after business hours. City Staff are also trained to contact SMD if a report is received directly by the City.

The City will track all reports and investigations of illicit discharges that are determined to originate from or enter the jurisdictional area of the City of Walnut. Minimum information included in the City's tracking program is as follows:

- Date and time of observed illicit discharge
- Location of observed illicit discharge
- Results of the investigation
- Date the investigation was closed

Illicit discharge inspection and response procedures shall conform to the following:

1. Following receipt of a reported illicit discharge qualified staff will be directed to investigate as soon as possible but no later than 72 hours after initial receipt of the report.
   a. Suspected discharge from construction site, private residents, or commercial site: Staff shall contact the on call building inspector to conduct an investigation.
   b. Suspected discharge from public works project site: Staff shall contact the City Engineer's office. The project manager will conduct an investigation or coordinate with the public works inspector to investigate.
   c. Suspected Hazmat discharge: Staff shall contact Los Angeles County Fire Department. Station 61 is located at 20011 La Puente Road, Walnut. Phone:(909) 595-3001; Emergency: 911
   d. All other suspected discharges: Staff shall contact Los Angeles Flood Control District at 1-888-CLEAN-LA.
2. Staff dispatched to the reported discharge site shall conduct an investigation and if possible identify the source of the discharge.
3. Dispatched staff shall notify the responsible party of the issue and require that corrective measures are taken to eliminate the illicit discharge. It shall be noted by staff if the illicit discharge has made it to the MS4 by catch basin or other route.

4. The City shall conduct a follow up investigation following the elimination of the illicit discharge to confirm that the illicit discharge is eliminated and that the site has been cleaned to the satisfaction of the City.
5. If the source is determined to be upstream from the City's jurisdiction, staff dispatched to the site shall report back to the City's Community Services Department staff. City staff will provide notice of the illicit discharge to the agency as soon as possible. City staff will notify in writing the upstream agency and the Regional Board of the illicit discharge no later than 30 days following the determination of the discharge origination.
6. If the source of an ongoing illicit discharge is unidentified the City shall proceed with the required actions identified in section VI.D.10.v of the MS4 Permit.

3.6.2- Illicit Connection Source Investigation and Elimination

The City of Walnut will make a reasonable effort to initiate an illicit connection source investigation as soon as staff receives notification. As required by the MS4 Permit, the City will initiate an illicit connection source investigation within 21 days of becoming aware of the illicit connection. Investigations will be conducted by available qualified City or County Staff.

During the initial investigation of a reported or identified illicit connection, Staff shall record the following conditions:

- Source of the connection
- Nature and volume of discharge from the connection
- Responsible party for the connection

Upon confirmation that the reported/identified connection is illicit the City shall ensure that the connection is permitted and documented only if the connection discharges storm water and exempt or conditionally exempt non-storm water discharges allowed under the MS4 Permit or other individual or general NPDEs permits. If the illicit connection does not qualify for undergoing the permitting or documentation option it shall be eliminated within 180 days of completion of the investigation. Formal enforcement authority shall be used if necessary, to eliminate the illicit connection. All illicit connection investigations shall be documented.

3.6.3- Public Reporting of Non-Storm Water Discharges and Spills

The City of Walnut publicizes and promotes the importance of public reporting of illicit discharges on the City's website and through the public outreach and education program. The City participates in the Los Angeles County Reporting hotline, and has made the hotline number available through the City website, quarterly mailers, and education materials. The City of Walnut has also implemented and will continue to maintain signage adjacent to open channels or creeks that display information regarding dumping prohibitions.

City staff will be trained to document all reports of complaint calls received by the City. Complaints will be documented and tracked. The City will investigate all complaints in a timely manner and will include the results and follow up actions if needed on the tracking system selected by the City to document complaints.

3.6.4- Spill Response Plan

The City of Walnut is a Contract City. Upon receipt of a complaint or notice of an illicit discharge during normal business hours the City will determine based on the details reported to either dispatch an inspector to investigate or forward the complaint to Los Angeles County. The County reporting hotline is available to residents and City Staff.

Once reported to Los Angeles County through the reporting hotline. County hotline operators direct the call to the appropriate maintenance crew. The County crew will then be dispatched to the location reported to address the issue identified.

3.6.5- Illicit Connection and Illicit Discharge Education and Training

The City of Walnut will continue to train all City staff on the critical impact that illicit discharges and connections play in MS4 discharge water quality. Field staff will receive annual training to reinforce how to recognize an illicit discharge or connection. Field staff will also receive training on the City's procedures for documenting and reporting illicit discharges and connections.

City field staff will be trained to properly eliminate and cleanup a site of an illicit discharge. City staff will only be trained to address sediment related illicit discharges that have not made it into the MS4. All other illicit discharges will be referred to the Los Angele County Department of Public Works reporting hotline. The City of Walnut is a contract City and relies on the Los Angeles County Department of Public Works for spill response related to illicit discharges that are beyond the City's ability to address.

4.0- Reasonable Assurance Analysis

The Permit allows an agency to customize their storm water programs through the development and implementation of WMP to demonstrate compliance with relevant receiving water limitations through a Reasonable Assurance Analysis (RAA). The Permit specifies that a viable RAA must identify a suite of best management practices (BMPs), both structural and non-structural, that demonstrates compliance with appropriate water quality standards as developed through applicable TMDLs and other Permit limitations (WQBELs, receiving water limitations [RWLs], and water quality objectives [WQOs]).

This section summarizes the Walnut RAA approach and results of the following steps:

- Setting target load reductions based on Permit limitations;
- Modeling identified structural BMPs and quantifying their associated load reductions;
- Demonstrating, with reasonable assurance, that target load reductions (and therefore Permit limitations) can be met by the final compliance dates; and
- Phasing of structural and non-structural BMPs to achieve interim milestones.

The RAA modeling approach presented herein conforms to Part VI.C.5.b.iv(5) of the Permit, which states:

> *"Permittees shall conduct a Reasonable Assurance Analysis for each water body-pollutant combination addressed by the [WMP]. [The] RAA shall be quantitative and performed using a peer-reviewed model in the public domain. Models to be considered for the RAA, without exclusion, are the Watershed Management Modeling System (WMMS), Hydrologic Simulation Program-FORTRAN (HSPF), and the Structural BMP Prioritization and Analysis Tool (SBPAT)…. The objective of the RAA shall be to demonstrate the ability of [the WMP] to ensure that Permittees' MS4 discharges achieve applicable water quality based effluent limitations and do not cause or contribute to exceedances of receiving water limitations."*

The Regional Board has developed a guidance document titled, "Guidelines for Conducting Reasonable Assurance Analysis in a Watershed Management Program, Including an Enhanced Watershed Management Program (March 25, 2014)." Although the guidance document presents guidelines and not necessarily requirements, the results of the RAA presented in this Technical Memorandum have been developed to conform to the Regional Board guidance document where appropriate. The approach outlined in this Technical Memorandum was presented to the Regional Board by Geosyntec during meetings on January 30, 2014 and April 9, 2014 (each for other Watershed Management Groups) and was found to be consistent with their guidelines.

The analysis described below focuses on wet weather only. No quantitative RAA for dry weather is presented here as the City of Walnut's compliance approach is to eliminate 100% of non-exempt dry weather MS4 discharges using a suite of non-structural controls. By eliminating flows, this is equivalent to 100% load reduction for all pollutants, thereby demonstrating reasonable assurance of meeting all applicable Permit limitations during dry weather.

4.1- Water Body Pollutant Combinations

Permit Attachment K indicates that the Walnut WMA drains to two receiving water bodies, San Jose Creek to the south and Walnut Creek Wash to the north, and that the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL applies to both. Both of these receiving waters are tributary to San Gabriel River Reach 3, which is itself tributary to San Gabriel River Reach 2. Permit Attachment P sets a waste load allocation (WLA) for lead for San Gabriel River Reach 2 and all tributaries at 81.34 µg/L x daily storm volume (L) for periods when the maximum daily flow of the River is greater than or equal to 260 cfs as measured at USGS station 11085000, which is located at the base of Reach 3 above the Whittier Narrows Dam. Therefore lead in San Jose Creek and Walnut Creek Wash is the only Category 1 (Highest Priority) Water Body Pollutant Combinations (WBPCs) evaluated in this RAA.

San Jose Creek and Walnut Creek Wash are 303(d) listed for indicator bacteria. These water bodies are also listed for other pollutants including ammonia, total dissolved solids, toxicity, pH, and benthic microinvertebrate bioassessment, however these pollutants are either not modelable given currently available datasets or are not typically associated with MS4 wet weather discharges. Therefore indicator bacteria in San Jose Creek and Walnut Creek Wash are the only Category 2 (High Priority) WBPCs evaluated in this RAA. Applicable bacteria water quality objectives used for the RAA are identified in Table 4-1.

Table 4-1

Bacteria Objectives Used for the Walnut RAA		
Receiving Water Segment	**Recreational Beneficial Use**	**Water Quality Objective**
San Jose Creek	REC2 (intermittent) with High Flow Suspension*	4000/100mL fecal coliform (10% of samples not to exceed)
Walnut Creek Wash	REC1 (intermittent), REC2 (intermittent)	400/100mL fecal coliform** (single sample limit)

REC1 = water contact recreation

REC2 = non-water contact recreation

* Based on Table 2-1a, Order #2003-010. "Potential" use designations not included here.

** While the REC1 fecal coliform objective was removed from the Los Angeles Basin Plan through Order R10-005, fecal coliform is used in this RAA as the modeling surrogate for indicator bacteria, therefore the old REC1 objective is used here.

No Category 3 (Medium Priority, based on other receiving water exceedances) pollutants have been identified at this time.

4.2- Analysis of Existing Conditions

The existing conditions analyzed in this section will establish the target load reductions. The load reduction will ultimately steer the approach taken to address the modeled water quality issues. The target load reductions are determined through analysis of hydrologic conditions and projected pollutant loading, and then compared against the allowable pollutant loads established in the applicable water body pollution regulation.

4.2.1- 90th Percentile Year

The Regional Board's RAA guidance document requires that RAAs consider critical conditions, defined as the 90th percentile year, when evaluating structural and non-structural BMPs. The 90th percentile year, based on both number of "wet days" (i.e., days with 0.1 inch of rain and the three days that follow) and total rainfall depth, for the Walnut WMA is 1993[1]. This is based on the most representative Los Angeles County Flood Control District precipitation gauge, or Mt. San Antonio College Station (D255), for the 1989-2011 period of record. This gauge location is shown in Figure 1.

4.2.2- Baseline Loads

The Los Angeles County Loading Simulation Program C++ (LSPC) model is a publically available watershed model that was developed for Los Angeles County in connection with the greater Watershed Management Modeling System (WMMS) framework. LSPC uses Hydrologic Simulation Program Fortran (HSPF) algorithms to simulate hydrology, sediment transport, water quality, and the fate and transport of pollutants within receiving waters and through a watershed. GIS is used for the spatial component of the analysis as well as general visualization. WMMS' LSPC model has been calibrated for hydrology as well as water quality in the San Gabriel River basin. Additional documentation regarding the development and calibration of LSPC within the greater WMMS modeling framework can be found in the Los Angeles County Department of Public Works' WMMS portal (Los Angeles County DPW, 2010).

The published LSPC model's catchments were revised to reflect the catchments or portions of catchments that fall within the Walnut WMA. Figure 1-3 presents revised LSPC model catchments, storm drains, and receiving waters for the WMA. The majority of the WMA (93%) drains towards San Jose Creek.

In order to establish baseline (or existing condition) pollutant loads, a single model run without any BMPs or treatment control measures was carried out for both the San Jose Creek and Walnut Creek Wash sides of the WMA. Bacteria (modeled using fecal coliform[2]) and lead loads were computed for the 1993 TMDL year, and are summarized in Table 4-2. These loads are based on default (i.e., unchanged from the County's calibrated values) LSPC hydrologic and water quality input parameters, as well as land uses. LSPC land uses in the San Gabriel River Watershed represent 2000 conditions. While new development has occurred in the City since 1996 (and therefore this developed area isn't captured by the existing LSPC model), the storm water impacts of this development have been at least partially mitigated through Standard Urban Storm water Management Plan (SUSMP) implementation consistent with requirements from the 2001 MS4 permit.

[1] The Regional Board's definition of "TMDL year" (for example, as used in the Los Angeles River Bacteria TMDL), was used throughout this RAA. For 1993, this is November 1, 1992 to October 31, 1993.

[2] Fecal coliform is used as the representative indicator bacteria for RAA modeling given its relatively larger land use event mean concentration datasets and given that it is the basis for the REC2 objective, which is the applicable recreational use for the water body that most of the City drains to.

Table 4-2

Baseline loads derived from LSPC for the 90th percentile model year		
Receiving Water Segment	**Total Lead (lbs)**	**Fecal Coliform (MPN*10^12)**
San Jose Creek	153	436
Walnut Creek Wash	89	7.4

4.2.3- Allowable Loads

The allowable load for lead was computed by multiplying the concentration-based WQBEL (81.34 µg/L) by LSPC-derived runoff volumes for the 1993 TMDL year. Because the WQBEL value is above typical urban land use event mean concentrations, the allowable load is greater than the baseline load. Therefore the allowable lead load was set equal to the baseline load.

Since there is no bacteria TMDL for the San Gabriel River watershed, the bacteria allowable load is based on assumed allowable exceedance day[3] (AED)-based limitations consistent with the Los Angeles River Bacteria TMDL. The 90th percentile year has 77 wet days (i.e., days with 0.1 inch of rain and the three days that follow). In San Jose Creek, 30 of these days are exempt from recreational objectives through the High Flow Suspension (HFS)[4], and 10% of the remaining wet days (47) are allowed to exceed REC2 objectives, resulting in 5 AEDs (in addition to the HFS days). The net result for San Jose Creek is that, of the 77 wet days that occur during 1993, 35 are allowed to exceed recreational objectives (the combination of the HFS and reference-based AEDs). For Walnut Creek Wash, consistent with the Los Angeles region bacteria TMDLs for creeks, 19% of the 77 wet days are allowed to exceed REC1 objectives based on average reference stream exceedance rates, resulting in 15 AEDs. For both creeks, these AEDs were used to directly calculate target load reductions through a methodology that is described in the next section. Allowable loads were then calculated by subtracting target load reductions from baseline loads.

[3] An exceedance day is a day in which bacteria concentrations exceed the applicable recreational objectives.

[4] The HFS applies during days with greater than or equal to 0.5 inches of rain and the following day.

Table 4-3 summarizes the allowable loads for lead and bacteria for the 90th percentile year.

Table 4-3

Allowable loads for 90th percentile year		
Receiving Water Segment	**Total Lead (lbs)**	**Fecal Coliform (MPN*10^12)**
San Jose Creek	153	353
Walnut Creek Wash	89	5.0

4.2.4- Target Load Reductions

Target load reductions (TLRs) are the reduction of baseline loads needed to achieve allowable loads for the 90th percentile year. The TLRs for lead were determined to be zero since baseline and allowable loads are the same. The zero TLR serves as reasonable assurance demonstration that the lead WQBEL will be met in both receiving water bodies without the need for new BMPs. Therefore, quantification of BMP load reductions for lead are not reported in the BMP sections of this RAA.

TLRs for bacteria were established as the load reductions from baseline conditions that are required to decrease the number of wet-weather exceedance days (i.e., non-HFS wet days with receiving water concentrations above 4000 MPN/100 mL for San Jose Creek and 400 MPN/100 mL in Walnut Creek Wash) in the 90th percentile year to the AEDs described earlier. In order to calculate this required load reduction, a hypothetical infiltration basin was modeled at the outlets of the San Jose Creek and Walnut Creek Wash drainage areas in LSPC. The two basins were iteratively sized until modeled receiving water exceedance days met the number of AEDs for each water body. This is achieved through elimination of discharge on non-allowed exceedance days. The fecal coliform target load reductions were then set to the load reductions that were achieved by these hypothetical infiltration basins.

Table 4-4 summarizes the TLRs for lead and bacteria.

Table 4-4

Target Load Reductions for the 90th percentile year		
Receiving Water Segment	**Total Lead (lbs)**	**Fecal Coliform (MPN*10^12)**
San Jose Creek	0	83 (19% of baseline load)
Walnut Creek Wash	0	(32% of baseline load)

4.3- Modeling assumptions for WMP Control Measures

SBPAT, a public domain GIS-based water quality analysis tool was used to evaluate structural BMP performance for the purposes of this RAA. SBPAT links a modified USEPA Storm Water Management Model (SWMM) hydrologic engine to a Monte Carlo analysis capable of repeated random sampling of pollutant event mean concentrations (EMCs) and BMP effectiveness distributions to obtain numerical results regarding the expected performance of a specific BMP configuration (Geosyntec Consultants, 2012). Each Monte Carlo analysis typically involves 10,000 iterations of EMC distributions and BMP effluent concentrations taken from the International BMP Database. SBPAT's land use EMCs are presented in Table 4-5. SBPAT is capable of quantifying model output variability, which is a component of the Regional Board's recent RAA guidance. The model:

- Calculates and tracks inflows to BMPs, treated discharge, bypassed flows, evaporation, and infiltration at a user-defined time step (e.g., 15 minutes);
- Distinguishes between individual runoff events by defining six-hour minimum inter-event times in the rainfall record, yet tracks inter-event antecedent conditions;
- Tracks volume treated by BMPs and summarizes and records these metrics by storm event; and
- Produces a table of each BMP's hydrologic performance, including concentration and load metrics by storm event, and consolidates these outputs on an annual basis.

SBPAT is specifically referenced in the MS4 Permit Part VI.C.5.b.iv and was presented at the first two Permit Group TAC RAA Subcommittee meetings. Additional information regarding SBPAT can found in the SBPAT portal at www.SBPAT.net.

The following sections describe the approach for modeling each BMP category. An iterative process was employed to identify the final proposed suite of structural and non-structural BMPs that were found to be capable of achieving the bacteria TLRs.

Table 4-5

SBPAT Fecal Coliform Event Mean Concentrations for the Walnut WMA – Arithmetic Estimates of the Lognormal Summary Statistics (means with standard deviations in parentheses)[a]		
Land Use	**Fecal Coliform**	**MPN/100mL**
Single Family Residential	31,100[b]	(94,200)
Commercial	51,600	(173,400)[c]
Industrial	3,760	(4,860)
Education (Municipal)	11,800[d]	(23,700)
Transportation	1,680	(456)
Multi-Family Residential	11,800[e]	(23,700)
Agriculture (Row Crop)	60,300	(153,000)
Vacant / Open Space	484	(806)

[a] Fecal coliform EMC statistics are calculated based on 2000-2005 SCCWRP Los Angeles region land use data (SCCWRP, 2007b). These EMC datasets are summarized in the SBPAT User's Guide (Geosyntec, 2012).

[b] The fecal coliform EMC for the single-family residential land use is based on SCCWRP's dataset for "low-density residential".

[c] The default log distribution best fit summary statistics for this land use-pollutant combination produced an unreasonably high deviation, therefore the arithmetic estimate of the log mean was held constant while the log summary statistics were recomputed based on the log CoV for SFR (SCCWRP's low-density residential EMC).

[d] Multi-family residential EMC used here since educational land use site not available in the SCCWRP fecal coliform dataset.

[e] The fecal coliform EMC for the multi-family residential land use is based on SCCWRP dataset for "high-density residential".

4.3.1- Low Impact Development Ordinance

Implementation of Low Impact Development (LID) as a result of redevelopment was modeled uniformly throughout the WMA. Permit Section VI.C.4.c.i(1) requires Permittees to develop and implement a LID ordinance applicable to redevelopment meeting minimum criteria thresholds of disturbance. Based on recent development activity in the City, there is approximately one residential redevelopment project per year would meet the Permit's post-construction onsite retention applicability requirements. Average residential lots within the Walnut WMA were assumed to be 0.15 acres. The redevelopment of a single lot would therefore account for 0.0053% of the WMA's single family residential land use area. The City's LID ordinance was assumed to become effective in 2014 and the area redeveloped each year was sampled without replacement (i.e., areas that had undergone redevelopment in previous years were not available to undergo redevelopment again in subsequent years). Extrapolating the annual redevelopment rate without replacement for 10 years, or until the 2024 final compliance date, suggests

that 1.6 acres or 0.058% of the City's residential land use area would be required to implement onsite retention LID BMPs.

Areas treated by LID as a result of the ordinance were modeled assuming bioretention systems (without underdrains) sized for the 85th percentile 24 hour storm depth for the WMA, or 0.98 in (Los Angeles County DPW, 2004a), with a saturated hydraulic conductivity (Ksat) of 0.15 in/hr.

4.3.2- Proposed BMP Implementation Plan

The City of Walnut has developed an approach for complying with the MS4 Permit water quality requirements that includes a combination of Source Control BMPs and Structural BMPs. The City's proposed BMP implementation plan has been confirmed through the RAA process to be effective in reducing the modeled pollutant loads to the allowable levels established by applicable TMDLs and the Basin Plan. Source control BMPs proposed by the City include policies, programs and ordnances that support practices that improve or prevent additional pollution from being deposited into the local rivers and creeks. A majority of the pollutant reductions will come from the proposed structural BMP plan. Structural BMPs are devices or capital projects that are focused on removing pollutants from MS4 flows.

The City's planned structural BMPS include Regional and Local approaches. The combination of structural BMPs has been formulated to reach the water quality goals established by the Basin Plan and applicable TMDLs through the treatment of wet weather runoff originating from the City.

The City has identified four regional BMPs to be located at existing parks modeled as sub-surface wetlands. The proposed regional BMPs will be complimentary to existing park uses after construction. In coordination with the regional BMPS, the City has developed a plan for the implementation of local BMPs. The proposed local BMPs are identified as biofilters, which may include proprietary products.

If BMPs are necessitated through the results of the IMP, the City will schedule an annual CIP program over the life of the permit to ensure the BMPs are cost feasible and reduce pollutant load reduction. This stepped approach will enable the City to implement the BMPs to determine which approach is most effective.

For dry weather conditions the City of Walnut is proposing to eliminate man made discharges to prevent exceedances in the receiving waters. The City of Walnut does have existing natural springs that flow into the City's MS4 system. The City will utilize the monitoring plan and source investigations of dry weather flows to eliminate non-natural discharges of flow into the City's MS4. Source investigations will include water quality testing and field investigations. The City will utilize City staff and contractors to assess the sources of dry weather flows. The City of Walnut will utilize its legal jurisdiction and BMP program to eliminate dry weather flows.

4.3.3- Non-Modeled Non-Structural BMPs

A range of load reductions derived from non-modeled non-structural BMPs were assumed based on Geosyntec discussion with Regional Board staff during an RAA meeting on April 9, 2014. A total of 8% of the baseline fecal coliform load was assumed to be removed for the average load reduction scenario, and a range of 5% to 10% was assumed for the "low" and "high" load reduction scenarios, respectively. These non-structural BMPs will include the following program enhancements (i.e., beyond the Permit minimum), with an emphasis on those BMPs that most effectively target urban storm water bacteria sources: enhanced street sweeping, enhanced catch basin and storm drain cleaning, enhanced commercial and food outlet inspection, enhanced pet waste controls, enhanced education and outreach, septic inspection/enforcement, and enhanced Illicit Discharge Detection Elimination (IDDE) efforts (including microbial source tracking to identify inputs of human fecal contamination into the MS4).

4.4- Final Milestone Load Reductions

The following tables present individual and summed BMP load reductions for fecal coliform for the San Jose Creek and Walnut Creek Wash drainage areas. Bacteria load reduction results (Tables 4-6 and 4-7) are shown for the final wet weather bacteria TMDL compliance date of 2024 (based on an assumed compliance schedule of 10 years from the WMP submittal date), modeled using rainfall data from the 90th percentile year (1993). Average (mean) load reduction results are shown, as well as the interquartile ranges (25th to 75th percentiles), to reflect model output variability, which is primarily driven by land use EMC variability. A total BMP load reduction that exceeds the TLR indicates that reasonable assurance (of meeting the Permit limits) has been demonstrated for that drainage area.

Lead load reductions are not quantified here since target load reductions were determined to be zero, however lead loads will be reduced considerably through implementation of the proposed non-structural and structural BMPs.

Table 4-6

Fecal coliform load reductions (10^12 MPN) for the San Jose Creek drainage area for the 90th percentile year			
BMP Program	**Average**	**Low (25th %ile)**	**High (75th %ile)**
Non-Structural BMPs			
LID Ordinance	0.1	0.1	0.1
Other non-modeled	35	22	44
Regional BMPs			
RBMP_01	4	3	5
RBMP_02	3	2	3
RBMP_03	2	2	3
RBMP_04	9	6	10
Distributed BMPs			
Green Streets	36	26	41
Target Load Reduction	83		
Total BMP Load Reduction	89[5]	61	106

Table 4-7

Fecal coliform load reductions (10^12 MPN) for the Walnut Creek Wash drainage area for the 90th percentile year			
BMP Program	**Average**	**Low (25th %ile)**	**High (75th %ile)**
Non-Structural BMPs			
LID Ordinance	0.0020	0.0012	0.0020
Other non-modeled	0.6	0.4	0.7
Distributed BMPs			
Green Streets	1.5	1.0	1.8
Target Load Reduction	**2.4**		
Total BMP Load Reduction	**2.1**	**1.4**	**2.6**

[5] The San Jose Creek fecal coliform TLR was exceeded by $6x10^{12}$ MPN for the 90th percentile year, therefore the City has some flexibility to adjust their implementation of BMPs to more precisely meet the TLR.

4.5- Interim Milestones

Bacteria is a Category 2 pollutant, therefore a compliance schedule and interim milestones must be developed in the WMP. An interim milestone date was set as the end of the permit term, or December 2017. The interim target for this date is assumed to be the estimated load reduction resulting from the BMPs that will be implemented by that date based on the City's proposed phasing of BMPs.

Table 8 identifies the proposed BMP implementation schedule. The resulting bacteria load reductions for the interim and final milestones are presented in Figures 4-1 and 4-2 for the San Jose Creek and Walnut Creek Wash drainage areas, respectively.

Table 4-8

Assumed BMP Implementation Schedule

BMP Program	Assumed Date BMP is Implemented by:
LID Ordinance	June, 2024*
Non-Modeled Non-Structural BMPs	December, 2017*
RBMP_01	June, 2024
RBMP_02	June, 2024
RBMP_03	June, 2024
RBMP_04	June, 2024
Green Streets	June, 2024

* Non-structural program implementation may be continuous and ongoing, however the estimated load reduction for this BMP category is applied to this date for the purpose of this phasing analysis.

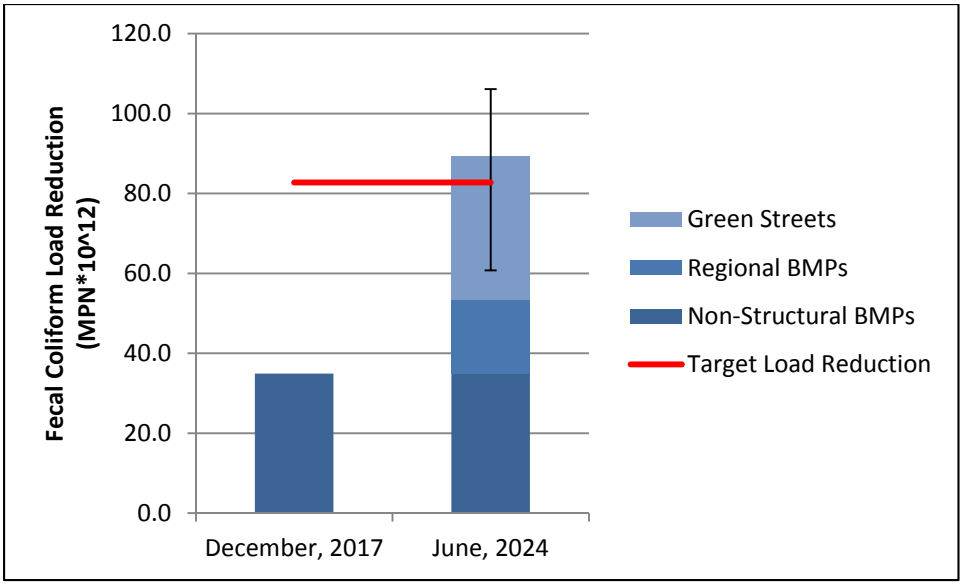


Figure 4-1: Fecal coliform interim and final load reductions (with the final TLR shown for comparison) for the San Jose Creek drainage area, by BMP category. The bars represent the average predicted load reduction and the whiskers represent the 25th to 75th percentile ranges.

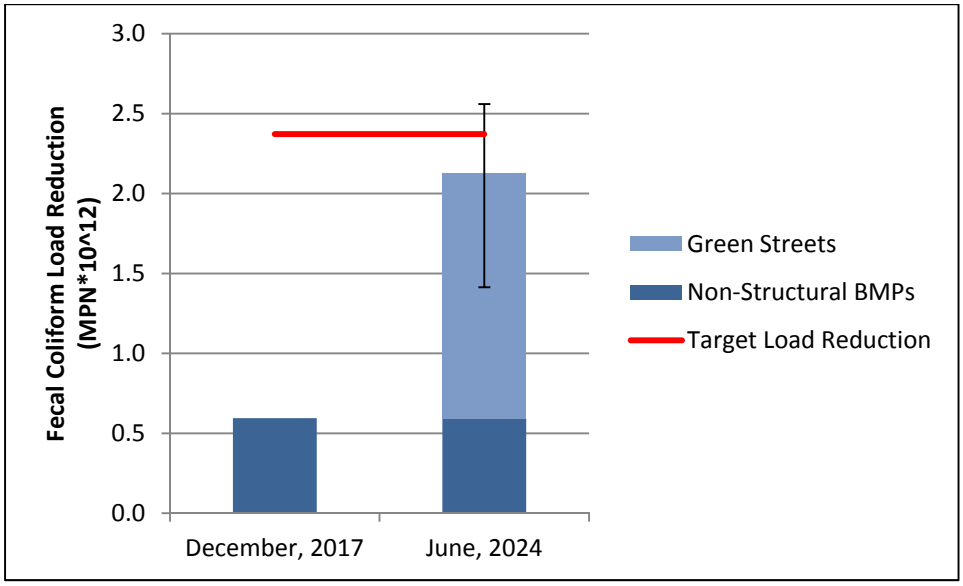


Figure 4-2: Fecal coliform interim and final load reductions (with the final TLR shown for comparison) for the Walnut Creek Wash drainage area, by BMP category. The bars represent the average predicted load reduction and the whiskers represent the 25th to 75th percentile ranges.

4.6- Conditions for RAA Revision

If future outfall or receiving water monitoring datasets suggests that Walnut's storm water quality is substantially different than what is assumed by the LSPC or SBPAT models used to carry out the RAA, the model(s) input datasets may be updated, and if appropriate, the proposed suite of structural and non-structural BMPs may be adjusted accordingly. Similarly, if the applicable recreational uses or bacteria objectives change, then relevant modeling assumptions and/or TLRs, and the resulting suite of structural and non-structural BMPs, will be adjusted accordingly. This is part of the adaptive management process for the WMP.

4.7- Reasonable Assurance Demonstration

Lead TLRs were found to be zero for both drainage areas of the WMA, therefore new BMPs were not needed to demonstrate reasonable assurance of compliance with this WQBEL. For bacteria in San Jose Creek, summed BMP load reductions, using average values, exceed the TLR. For bacteria in Walnut Creek Wash, summed BMP load reductions, using 75th percentile values, exceed the TLR. Therefore, reasonable assurance has been demonstrated for both pollutants for both water bodies based on the proposed suite of non-structural and structural BMPs for the Walnut WMA.

5.0- Interim and Final Compliance Schedule

The City of Walnut is not subject any TMDL established interim or final compliance time lines. The MS4 Permit requirements the City develop a compliance schedule as part of the WMP. Source control BMPs will begin implementation during the remaining term of the MS4 Permit. The planning and cost required for the implementation of structural BMPs pushes actual implementation of structural water treatment options farther into and beyond the current MS4 Permit's term. The City is proposing a 10 year compliance term associated with the proposed BMP implementation schedule. Table 4-8 outlines the City's proposed BMP implementation schedule. Table 4-9 outline the proposed compliance schedules for all TMDL and 303(d) listed pollutants that the City is currently subject to.

Table 4-9

Compliance Schedule						
Selenium Waste Load Allocation (5µg/L) Compliance Schedule – Dry Weather TMDL						
Watershed	**2014**	**2016**	**2018**	**2020**	**2022**	**2024**
San Jose Creek Reach 1	-	-	-	-	-	100%
Lead Waste Load Allocation (81.34µg/L) Compliance Schedule – Wet Weather TMDL						
City of Walnut	**2014**	**2016**	**2018**	**2020**	**2022**	**2024**
	-	-	-	-	-	100%
Fecal Coliform Load Reduction in (MPN*10^12)						
Watershed	**2014**	**2016**	**2018**	**2020**	**2022**	**2024**
San Jose Creek Reach 1	0	0	34.9	-	-	82.7
Walnut Creek Wash	0	0	.6	-	-	2.3
pH WQBEL Compliance Schedule						
City of Walnut	**2014**	**2016**	**2018**	**2020**	**2022**	**2024**
	-	-	-	-	-	100%

Table 4-9 (Continued)

Total Dissolved Solids WQBEL Compliance Schedule						
City of Walnut	**2014**	**2016**	**2018**	**2020**	**2022**	**2024**
	-	-	-	-	-	100%
Toxicity WQBEL Compliance Schedule						
City of Walnut	**2014**	**2016**	**2018**	**2020**	**2022**	**2024**
	-	-	-	-	-	100%
Cyanide WQBEL Compliance Schedule						
City of Walnut	**2014**	**2016**	**2018**	**2020**	**2022**	**2024**
	-	-	-	-	-	100%
Benthic- Micro Invertebrates WQBEL Compliance Schedule						
City of Walnut	**2014**	**2016**	**2018**	**2020**	**2022**	**2024**
	-	-	-	-	-	100%

6.0- Adaptive Management Process

The City of Walnut will utilize the MS4 Permit required adaptive management process to review and potentially modify the WMP in an effort to improve the effectiveness of the plan. The adaptive management process will take place every two years from the date of approval by the Regional Water Quality Control Board. The review process of the plan will include consideration of the following items:

- Progress toward achieving interim and/or final water quality-based effluent limitations and/or receiving water limitations in Part VI.E and Attachment L through R, according to established compliance schedules.
- Progress toward achieving improved water quality in MS4 discharges and achieving receiving water limitations through implementation of the watershed control measures based on an evaluation of outfall-based monitoring data and receiving water monitoring data.
- Achievement of interim milestones.
- Re-evaluation of water quality priorities identified for the WMA based on more recent water quality data for discharges from the MS4 and the receiving water(s) and a reassessment of sources of pollutants in MS4 discharges.
- Availability of new information and data from sources other than the monitoring program with in the WMA that informs the effectiveness of the actions implemented by the WMP.
- Regional Water Board recommendations.
- Recommendations for modifications to the Watershed Management Program solicited through a public participation process.

The findings of the adaptive management review process can result in modifications to the WMP including changes to compliance deadlines, interim milestones necessary to improve the effectiveness of the program. Modifications to compliance deadlines established by TMDLs will not be allowed through the adaptive management process. Proposed modifications to the WMP shall be reported by the City of Walnut in the Annual Report. Proposed modifications identified through the adaptive management process shall be implemented upon approval by the Regional Board Executive Officer within 60 days of their submittal if the Regional Board Executive has not expressed any objections to the modifications.

7.0- References

Geosyntec Consultants, 2012. A User's Guide for the Structural BMP Prioritization and Analysis Tool (SBPAT v1.1): Technical Appendices. December.

Los Angeles County Department of Public Works, 2004a. "Analysis of 85th Percentile 24-hour Rainfall Depth Analysis Within the County of Los Angeles." February.

Los Angeles County Department of Public Works, 2004b. "Soil Types." January.

Los Angeles County Department of Public Works, 2010. "Watershed Management Modeling System Portal." June. http://dpw.lacounty.gov/wmd/wmms/res.aspx

Los Angeles Regional Water Quality Control Board (Regional Board), 2012. Order No. R4-2012-0175 NPDES Permit No. CAS004001 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, except those Discharges Originating from the City of Long Beach MS4. November 8. http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/la_ms4/2012/Order%20R4-2012-0175%20-%20A%20Final%20Order%20revised.pdf

Los Angeles Regional Water Quality Control Board (Regional Board), 1994. "Water Quality Control Plan Los Angeles Region." June. http://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/electronics_documents/bp1_introduction.pdf

Los Angeles Regional Water Quality Control Board (Regional Board), 2007. "Total Maximum Daily Loads for Metals and Selenium San Gabriel River and Impaired Tributaries." March. http://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/Established/San%20Gabriel%20River%20Metals%20TMDL/final_sangabriel_metalstmdl_3-27-07.pdf

Los Angeles County Department of Public Works, 2014. "San Gabriel River Watershed." June. http://ladpw. org/wmd/watershed/sg/

Attachment A

City of Walnut

Notice of Intent

P.O. Box 682, Walnut, CA 91788-0682
21201 La Puente Road
Walnut, CA 91789-2018
Telephone (909) 595-7543
FAX (909) 595-6095
www.ci.walnut.ca.us

CITY OF WALNUT

June 26, 2013

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Regional Board Staff:

Enclosed please find the Notice of Intent (NOI) for the City of Walnut required as part of the new National Pollution Discharge Elimination System Municipal Separate Storm Sewer Systems Permit. As stated in the NOI, the City of Walnut will be developing a Watershed Management Plan and associated Integrated Monitoring Plan.

Please do not hesitate to contact me should you require any additional information. Thank you in advance for your time and assistance.

Sincerely,

Alicia Jensen

Alicia Jensen
Senior Management Analyst
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ajensen@ci.walnut.ca.us

Notice of Intent

City of Walnut

Watershed Management Plan

Submitted to:

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Submitted by:

The City of Walnut
21201 La Puente Road
Walnut, CA 91789

June 28, 2013

Notice of Intent to Develop a Watershed Management Plan and Integrated Monitoring Plan
The City of Walnut hereby notifies the Los Angeles Regional Water Quality Control Board (LARWQCB) of the City's intent to proceed with the development of a Watershed Management Plan (WMP). Per Order No. R-2012-0175, NPDES Permit No. CAS 004001, Section VI.C.4.b.i. The City of Walnut will develop a Draft WMP and submit the plan for the Regional Board's review by June 28, 2014. Draft versions of the Low Impact Development Ordinance and Green Streets Policy are included in Appendix A and B. As required in Section VI.C.7 of NPDES Permit No. CAS 004001, the City will develop and submit an Integrated Monitoring Plan (IMP) in conjunction with the WMP.

Total Maximum Daily Loads (TMDL) & Water Quality Based Effluent Limitations (WQBEL)
In accordance with Section VI.C.4.b.ii of NPDES Permit CAS004001, the jurisdictional area of the City of Walnut discharges to tributaries subject to the TMDLs listed in Table A. Currently, the City is not subject to any interim or final Water Quality Based Effluent Limitations (WQBELs), however, the City will continue its existing programs and Minimum Control Measures until the WMP is approved and implemented.

Table A TMDLs Applicable to the City of Walnut

TMDL	Resolution Number	Effective Date	EPA Approval Date	Water Body	Impairment
San Gabriel River and Impaired Tributaries Metals and Selenium	2006-014	July 13, 2006	TBD	San Jose Creek	Dry Weather WLA for Selenium*

**As noted at the Board's June 6, 2013, LA Basin Plan Public Hearing, Walnut objects to the inclusion of the San Gabriel River Metals TMDL in the LA Basin Plan amendment since Selenium was removed as a TMDL on the USEPA's 2010 303(d) list.*

City Contact Information

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Attachment A

Draft LID Ordinance
City of Walnut

DRAFT LID ORDINANCE

ORDINANCE NO._____

AN ORDINANCE AMENDING [MUNICIPAL CODE SECTION REFERENCE(S)] OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING [NAME OF POST-CONSTRUCITON REQUIREMENTS – LIKELY "SUSMP" FOR MOST MUNICIPALITIES] REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

CITY COUNCIL OF THE CITY OF WALNUT HEREBY ORDAINS THE FOLLOWING:

(A) The City of Walnut is authorized by Article XI, §5 and §7 of the State Constitution to exercise the police power of the State by adopting regulations to promote public health, public safety and general prosperity.

(B) The City of Walnut has authority under the California Water Code to adopt and enforce ordinances imposing conditions, restrictions and limitations with respect to any activity which might degrade the quality of waters of the State.

(C) The city is a permittee under the "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," issued by the California Regional Water Quality Control Board--Los Angeles Region," (Order No. R4-2012-0175) which also serves as an NPDES Permit under the Federal Clean Water Act (NPDES No. CAS004001), as well as Waste Discharge Requirements under California law (the "Municipal NPDES permit"). In order to participate in a Watershed Management Program and/or Enhanced Watershed Management Program, the Municipal NPDES permit requires permittees to develop and implement a LID Ordinance.

(D) The City of Walnut has applied an integrated approach to incorporate wastewater, stormwater and runoff, and recycled water management into a single strategy through its (_____) Plan.

(E) The City of Walnut is committed to a stormwater management program that protects water quality and water supply by employing watershed-based approaches that balance environmental, social, and economic considerations.

(F) It is the intent of the City of Walnut to expand the applicability of the existing Standard Urban Stormwater Mitigation Plan (SUSMP) requirements by providing stormwater and rainwater LID strategies for Development and Redevelopment projects as defined under "Applicability."

[MUNICIPAL CODE SECTION REFERENCE(S)] of the [CITY NAME] Municipal Code is amended in its entirety to read as follows:

Definitions.

Except as specifically provided herein, any term used in this [SECTION REFERENCE] shall be defined as that term in the current Municipal NPDES permit, or if it is not specifically defined in either the Municipal NPDES permit, then as such term is defined in the Federal Clean Water Act, as amended, and/or the regulations promulgated thereunder. If the definition of any term contained in this chapter conflicts with the definition of the same term in the current Municipal NPDES permit, then the definition contained in the Municipal NPDES permit shall govern. The following words and phrases shall have the following meanings when used in this chapter:

Automotive Service Facility means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. For inspection purposes, Permittees need not inspect facilities with SIC codes 5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to stormwater (Source: Order No. R4-2012-0175).

Basin Plan means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments (Source: Order No. R4-2012-0175).

Best Management Practice (BMP) means practices or physical devices or systems designed to prevent or reduce pollutant loading from stormwater or non-stormwater discharges to receiving waters, or designed to reduce the volume of stormwater or non-stormwater discharged to the receiving water (Source: Order No. R4-2012-0175).

Biofiltration means a LID BMP that reduces stormwater pollutant discharges by intercepting rainfall on vegetative canopy, and through incidental infiltration and/or evapotranspiration, and filtration. Incidental infiltration is an important factor in achieving the required pollutant load reduction. Therefore, the term "biofiltration" as used in this Ordinance is defined to include only systems designed to facilitate incidental infiltration or achieve the equivalent pollutant reduction as biofiltration BMPs with an underdrain (subject to approval by the Regional Board's Executive Officer). Biofiltration BMPs include bioretention systems with an underdrain and bioswales (Modified from: Order No. R4-2012-0175).

Bioretention means a LID BMP that reduces stormwater runoff by intercepting rainfall on vegetative canopy, and through evapotranspiration and infiltration. The bioretention system typically includes a minimum 2-foot top layer of a specified soil and compost mixture underlain by a gravel-filled temporary storage pit dug into the in-situ soil. As defined in the Municipal NPDES permit, a bioretention BMP may be designed with an overflow drain, but may not include an underdrain. When a bioretention BMP is designed or constructed with an underdrain it is regulated by the Municipal NPDES permit as biofiltration (Modified from: Order No. R4-2012-0175).

Bioswale means a LID BMP consisting of a shallow channel lined with grass or other dense, low-growing vegetation. Bioswales are designed to collect stormwater runoff and to achieve a uniform sheet flow through the dense vegetation for a period of several minutes (Source: Order No. R4-2012-0175).

City means the City of Walnut.

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted in 1972, by Public Law 92-500, and amended by the Water Quality Act of 1987. The Clean Water Act prohibits the discharge of pollutants to Waters of the United States unless the discharge is in accordance with an NPDES permit.

Commercial Malls means any development on private land comprised of one or more buildings forming a complex of stores which sells various merchandise, with interconnecting walkways enabling visitors to easily walk from store to store, along with parking area(s). A commercial mall includes, but is not limited to: mini-malls, strip malls, other retail complexes, and enclosed shopping malls or shopping centers (Source: Order No. R4-2012-0175).

Construction Activity means any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that result in land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain the original line and grade, hydraulic capacity, or original purposes of the facility. See "Routine Maintenance" definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage by the State of California General Permit for Storm Water Discharges Associated with Industrial Activities or for Stormwater Discharges Associated with Construction Activities is required if more than one acre is disturbed or the activities are part of a larger plan (Source: Order No. R4-2012-0175).

Control means to minimize, reduce or eliminate by technological, legal, contractual, or other means, the discharge of pollutants from an activity or activities (Source: Order No. R4-2012-0175).

Development means construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail, and other non-residential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Directly Adjacent means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area (Source: Order No. R4-2012-0175).

Discharge means any release, spill, leak, pump, flow, escape, dumping, or disposal of any liquid, semi-solid, or solid substance.

Disturbed Area means an area that is altered as a result of clearing, grading, and/or excavation (Source: Order No. R4-2012-0175).

Flow-through BMPs means modular, vault type "high flow biotreatment" devices contained within an impervious vault with an underdrain or designed with an impervious liner and an underdrain (Modified from: Order No. R4-2012-0175).

General Construction Activities Storm Water Permit (GCASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from construction activities under certain conditions.

General Industrial Activities Storm Water Permit (GIASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from certain industrial activities under certain conditions.

Green Roof means a LID BMP using planter boxes and vegetation to intercept rainfall on the roof surface. Rainfall is intercepted by vegetation leaves and through evapotranspiration. Green roofs may be designed as either a bioretention BMP or as a biofiltration BMP. To receive credit as a bioretention BMP, the green roof system planting medium shall be of sufficient depth to provide capacity within the pore space volume to contain the design storm depth and may not be designed or constructed with an underdrain (Source: Order No. R4-2012-0175).

Hazardous Material(s) means any material(s) defined as hazardous by Division 20, Chapter 6.95 of the California Health and Safety Code.

Hillside means a property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is 25% or greater and where grading contemplates cut or fill slopes (Source: Order No. R4-2012-0175).

Impervious Surface means any man-made or modified surface that prevents or significantly reduces the entry of water into the underlying soil, resulting in runoff from the surface in greater quantities and/or at an increased rate, when compared to natural conditions prior to development. Examples of places that commonly exhibit impervious surfaces include parking lots, driveways, roadways, storage areas, and rooftops. The imperviousness of these areas commonly results from paving, compacted gravel, compacted earth, and oiled earth.

Industrial Park means land development that is set aside for industrial development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry (Source: Order No. R4-2012-0175).

Infiltration BMP means a LID BMP that reduces stormwater runoff by capturing and infiltrating the runoff into in-situ soils or amended onsite soils. Examples of infiltration BMPs include infiltration basins, dry wells, and pervious pavement (Source: Order No. R4-2012-0175).

LID means Low Impact Development. LID consists of building and landscape features designed to retain or filter stormwater runoff (Source: Order No. R4-2012-0175).

MS4 means Municipal Separate Storm Sewer System (MS4). The MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying stormwater;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

(40 CFR § 122.26(b)(8)) (Source: Order No. R4-2012-0175)

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA §307, 402, 318, and 405. The term includes an "approved program" (Source: Order No. R4-2012-0175).

Natural Drainage System means a drainage system that has not been improved (e.g., channelized or armored). The clearing or dredging of a natural drainage system does not cause the system to be classified as an improved drainage system (Source: Order No. R4-2012-0175).

New Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision (Source: Order No. R4-2012-0175).

Non-Stormwater Discharge means any discharge to a municipal storm drain system that is not composed entirely of stormwater (Source: Order No. R4-2012-0175).

Parking Lot means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use, with a lot size of 5,000 square feet or more of surface area, or with 25 or more parking spaces (Source: Order No. R4-2012-0175).

Person means any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, state, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine and the singular shall include the plural where indicated by the context.

Planning Priority Projects means development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution, prior to completion of the project(s) (Modified from: Order No. R4-2012-0175).

Pollutant means any "pollutant" defined in Section 502(6) of the Federal Clean Water Act or incorporated into the California Water Code Sec. 13373. Pollutants may include, but are not limited to the following:

(1) Commercial and industrial waste (such as fuels, solvents, detergents, plastic pellets, hazardous substances, fertilizers, pesticides, slag, ash, and sludge).

(2) Metals (such as cadmium, lead, zinc, copper, silver, nickel, chromium, and non- metals such as phosphorus and arsenic).

(3) Petroleum hydrocarbons (such as fuels, lubricants, surfactants, waste oils, solvents, coolants, and grease).

(4) Excessive eroded soil, sediment, and particulate materials in amounts that may adversely affect the beneficial use of the receiving waters, flora, or fauna of the State.

(5) Animal wastes (such as discharge from confinement facilities, kennels, pens, recreational facilities, stables, and show facilities).

(6) Substances having characteristics such as pH less than 6 or greater than 9, or unusual coloration or turbidity, or excessive levels of fecal coliform, or fecal streptococcus, or enterococcus.

Project means all developmen , redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Pub. Resources Code §21065) (Source: Order No. R4-2012-0175).

Rainfall Harvest and Use means a LID BMP system designed to capture runoff, typically from a roof but can also include runoff capture from elsewhere within the site, and to provide for temporary storage until the harvested water can be used for irrigation or non-potable uses. The harvested water may also be used for potable water uses if the system includes disinfection treatment and is approved for such use by the local building department (Source: Order No. R4-2012-0175).

Receiving Water means "water of the United States" into which waste and/or pollutants are or may be discharged (Source: Order No. R4-2012-0175).

Redevelopment means land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of routine maintenance activity; and land disturbing activity related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Regional Board means the California Regional Water Quality Control Board, Los Angeles Region.

Restaurant means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812) (Source: Order No. R4-2012-0175).

Retail Gasoline Outlet means any facility engaged in selling gasoline and lubricating oils (Source: Order No. R4-2012-0175).

Routine Maintenance

Routine maintenance projects include but are not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.
4. Update existing lines* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
5. Repair leaks

Routine maintenance does not include construction of new** lines or facilities resulting from compliance with applicable codes, standards and regulations.

* Update existing lines includes replacing existing lines with new materials or pipes.

** New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines (Source: Order No. R4-2012-0175).

Significant Ecological Areas (SEAs) means an area that is determined to possess an example of biotic resources that cumulatively represent biological diversity, for the purposes of protecting biotic diversity, as part of the Los Angeles County General Plan. Areas are designated as SEAs, if they possess one or more of the following criteria:

1. The habitat of rare, endangered, and threatened plant and animal species.
2. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis.
3. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind or are restricted in distribution in Los Angeles County.

4. Habitat that at some point in the life cycle of a species or group of species, serves as a concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or within Los Angeles County.
5. Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent an unusual variation in a population or community.
6. Areas important as game species habitat or as fisheries.
7. Areas that would provide for the preservation of relatively undisturbed examples of natural biotic communities in Los Angeles County.
8. Special areas (Source: Order No. R4-2012-0175).

Site means land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity (Source: Order No. R4-2012-0175).

Storm Drain System means any facilities or any part of those facilities, including streets, gutters, conduits, natural or artificial drains, channels, and watercourses that are used for the purpose of collecting, storing, transporting or disposing of stormwater and are located within the City of Walnut.

Storm Water or Stormwater means water that originates from atmospheric moisture (rain or snow) and that falls onto land, water, or other surfaces. Without any change in its meaning, this term may be spelled or written as one word or two separate words.

Stormwater Runoff means that part of precipitation (rainfall or snowmelt) which travels across a surface to the storm drain system or receiving waters.

SUSMP means the Los Angeles Countywide Standard Urban Stormwater Mitigation Plan. The SUSMP was required as part of the previous Municipal NPDES Permit (Order No. 01-182, NPDES No. CAS004001) and required plans that designate best management practices (BMPs) that must be used in specified categories of development projects.

Urban Runoff means surface water flow produced by storm and non-storm events. Non-storm events include flow from residential, commercial, or industrial activities involving the use of potable and non-potable water.

[MUNICIPAL CODE SECTION REFERENCE(S)] is amended to read as follows:

SEC. [X]. STORMWATER POLLUTION CONTROL MEASURES FOR DEVELOPMENT PLANNING AND CONSTRUCTION ACTIVITIES

(A) **Objective**. The provisions of this section contain requirements for construction activities and facility operations of Development and Redevelopment projects to comply with the current "Municipal NPDES permit," lessen the water quality impacts of development by using smart growth practices, and integrate LID design principles to mimic

predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use. LID shall be inclusive of SUSMP requirements.

(B) Scope. This Section contains requirements for stormwater pollution control measures in Development and Redevelopment projects and authorizes the City of Walnut to further define and adopt stormwater pollution control measures, develop LID principles and requirements, including but not limited to the objectives and specifications for integration of LID strategies, grant waivers from the requirements of the Standard Urban Stormwater Mitigation Plan, and collect funds for projects that are granted waivers. Except as otherwise provided herein, the City of Walnut shall administer, implement and enforce the provisions of this Section.

(C) Applicability. The following Development and Redevelopment projects, termed "Planning Priority Projects," shall comply with the requirements of **[SECTION NUMBER]:**

(1) All development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.

(2) Industrial parks 10,000 square feet or more of surface area.

(3) Commercial malls 10,000 square feet or more of surface area.

(4) Retail gasoline outlets with 5,000 square feet or more of surface area.

(5) Restaurants (Standard Industrial Classi ication (SIC) of 5812) with 5,000 square feet or more of surface area.

(6) Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.

(7) Streets and roads construction of 10,000 square feet or more of impervious surface area.

(8) Automotive service facilities (Standard Industrial Classification (SIC) of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.

(9) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:

a. Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and

b. Create 2,500 square feet or more of impervious surface area

(10) Single-family hillside homes.

(11) Redevelopment Projects

a. Land disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.

b. Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, the entire project must be mitigated.

c. Where Redevelopment results in an alteration of less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, only the alteration must be mitigated, and not the entire development.

d. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

e. Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

(D) **Effective Date.** The Planning and Land Development requirements contained in Section 7 of Order No. R4-2012-0175 shall become effective 90 days from the adoption of the Order (February 6, 2013). This includes Planning Priority Projects that are discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals within 90 days of adoption of the Order. Projects that have been deemed complete within 90 days of adoption of the Order are not subject to the requirements Section 7.

(E) **Stormwater Pollution Control Requirements.** The Site for every Planning Priority Project shall be designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention and/or rainfall harvest and use.

(1) A new single-family hillside home development shall include mitigation measures to:

a. Conserve natural areas;

b. Protect slopes and channels;

c. Provide storm drain system stenciling and signage;

d. Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability; and

e. Direct surface flow to vegetated areas before discharge, unless the diversion would result in slope instability.

(2) Street and road construction of 10,000 square feet or more of impervious surface shall follow USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets (December 2008 EPA-833-F-08-009) to the maximum extent practicable.

(3) The remainder of Planning Priority Projects shall prepare a LID Plan to comply with the following:

a. Retain stormwater runoff onsite for the Stormwater Quality Design Volume (SWQDv) defined as the runoff from:

i. The 85th percentile 24-hour runoff event as determined from the Los Angeles County 85th percentile precipitation isohyetal map; or

ii. The volume of runoff produced from a 0.75 inch, 24-hour rain event, whichever is greater.

b. Minimize hydromodification impacts to natural drainage systems as defined in the Municipal NPDES Permit. Hydromodification requirements are further specified in [NAME OF POST-CONSTRUCITON BMP HANDBOOK].

c. When, as determined by the City of Walnut, 100 percent onsite retention of the SWQDv is technically infeasible, partially or fully, the infeasibility shall be demonstrated in the submitted LID Plan. The technical infeasibility may result from conditions that may include, but are not limited to:

i. The infiltration rate of saturated in-situ soils is less than 0.3 inch per hour and it is not technically feasible to amend the in-situ soils to attain an infiltration rate necessary to achieve reliable performance of infiltration or bioretention BMPs in retaining the SWQDv onsite.

ii. Locations where seasonal high groundwater is within five to ten feet of surface grade;

iii. Locations within 100 feet of a groundwater well used for drinking water;

iv. Brownfield development sites or other locations where pollutant mobilization is a documented concern;

v. Locations with potential geotechnical hazards;

vi. Smart growth and infill or redevelopment locations where the density and/ or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.

d. If partial or complete onsite retention is technically infeasible, the project Site may biofiltrate 1.5 times the portion of the remaining SWQDv that is not reliably retained onsite. Biofiltration BMPs must adhere to the design specifications provided in the Municipal NPDES Permit.

i. Additional alternative compliance options such as offsite infiltration may be available to the project Site. The project Site should contact the City of Walnut to determine eligibility. Alternative compliance options are further specified in [NAME OF POST-CONSTRUCITON BMP HANDBOOK].

e. The remaining SWQDv that cannot be retained or biofiltered onsite must be treated onsite to reduce pollutant loading. BMPs must be selected and designed to meet pollutant-specific benchmarks as required per the Municipal NPDES Permit. Flow-through BMPs may be used to treat the remaining SWQDv and must be sized based on a rainfall intensity of:

i. 0.2 inches per hour, or
ii. The one year, one-hour rainfall intensity as determined from the most recent Los Angeles County isohyetal map, whichever is greater.

f. A Multi-Phased Project may comply with the standards and requirements of this section for all of its phases by: (a) designing a system acceptable to the City of Walnut to satisfy these standards and requirements for the entire Site during the first phase, and (b) implementing these standards and requirements for each phase of Development or Redevelopment of the Site during the first phase or prior to commencement of construction of a later phase, to the extent necessary to treat the stormwater from such later phase. For purposes of this section, "Multi-Phased Project" shall mean any Planning Priority Project implemented over more than one phase and the Site of a Multi-Phased Project shall include any land and water area designed and used to store, treat or manage stormwater runoff in connection with the Development or Redevelopment, including any tracts, lots, or parcels of real property, whether Developed or not, associated with, functionally connected to, or under common ownership or control with such Development or Redevelopment.

(F) **Validity.** If any provision of this Ordinance is found to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect remaining provisions of this Ordinance are declared to be severable.

(G) **Certification.** The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy.

APPROVED AND ADOPTED this __th day of _____, 20__.

_____

Mayor_____

ATTEST:

_____

Teresa De Dios, City Clerk

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF WALNUT)

I, Teresa De Dios, City Clerk of the City of Walnut, do hereby certify that the foregoing Ordinance _____ being:

AN ORDINANCE AMENDING [MUNICIPAL CODE SECTION REFERENCE(S)] OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING [NAME OF POST-CONSTRUCITON REQUIREMENTS – LIKELY "SUSMP" FOR MOST MUNICIPALITIES] REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

Said Ordinance was duly introduced at a regular meeting held on the __th day of _____, 20__, and was adopted and passed at a regular meeting of the City Council on the _____ day of _____, 20__ by the following vote, to wit:

AYES: COUNCILMEMBER(S):
NOES: COUNCILMEMBER(S):
ABSENT: COUNCILMEMBER(S):
ABSTAIN: COUNCILMEMBER(S):

ATTEST:

_____

Teresa De Dios, City Clerk

Attachment B

City of Walnut

LID Ordinance

ORDINANCE NO. 13-13

AN ORDINANCE AMENDING TITLE V, CHAPTER 21, OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING STANDARD URBAN STORM WATER MITIGATION PLAN REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

CITY COUNCIL OF THE CITY OF WALNUT HEREBY ORDAINS THE FOLLOWING:

(A) The City of Walnut is authorized by Article XI, §5 and §7 of the State Constitution to exercise the police power of the State by adopting regulations to promote public health, public safety and general prosperity.

(B) The City of Walnut has authority under the California Water Code to adopt and enforce ordinances imposing conditions, restrictions and limitations with respect to any activity which might degrade the quality of waters of the State.

(C) The city is a permittee under the "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," issued by the California Regional Water Quality Control Board--Los Angeles Region," (Order No. R4-2012-0175) which also serves as an NPDES Permit under the Federal Clean Water Act (NPDES No. CAS004001), as well as Waste Discharge Requirements under California law (the "Municipal NPDES permit"). In order to participate in a Watershed Management Program and/or Enhanced Watershed Management Program, the Municipal NPDES permit requires permittees to develop and implement a LID Ordinance.

(D) The City of Walnut has applied an integrated approach to incorporate wastewater, stormwater and runoff, and recycled water management into a single strategy through its Integrated Resources Plan.

(E) The City of Walnut is committed to a stormwater management program that protects water quality and water supply by employing watershed-based approaches that balance environmental, social, and economic considerations.

(F) It is the intent of the City of Walnut to expand the applicability of the existing Standard Urban Stormwater Mitigation Plan (SUSMP) requirements by providing stormwater and rainwater LID strategies for Development and Redevelopment projects as defined under "Applicability."

TITLE V PUBLIC WORKS, CHAPTER 21, ARTICLE III STORM WATER AND URBAN RUNOFF POLLUTION CONTROL, SECTION 21-61 PARAGRAPH C IS AMENDED IN ITS ENTIRETY TO READ AS FOLLOWS:

The City of Walnut is a permittee under the "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," issued by the California Regional Water Quality Control Board--Los Angeles Region," (Order No. R4-2012-0175) which also serves as an NPDES Permit under the Federal Clean Water Act (NPDES No. CAS004001), as well as Waste Discharge Requirements under California law (the "Municipal NPDES permit").

TITLE V PUBLIC WORKS, CHAPTER 21, ARTICLE III STORM WATER AND URBAN RUNOFF POLLUTION CONTROL, SECTION 21-63 DEFINITIONS OF THE CITY OF WALNUT MUNICIPAL CODE IS AMENDED IN ITS ENTIRETY TO READ AS FOLLOWS:

Definitions.

Except as specifically provided herein, any term used in this Section 21-63 shall be defined as that term in the current Municipal NPDES permit, or if it is not specifically defined in either the Municipal NPDES permit, then as such term is defined in the Federal Clean Water Act, as amended, and/or the regulations promulgated thereunder. If the definition of any term contained in this chapter conflicts with the definition of the same term in the current Municipal NPDES permit, then the definition contained in the Municipal NPDES permit shall govern. The following words and phrases shall have the following meanings when used in this chapter:

Automotive Service Facility means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. For inspection purposes, Permittees need not inspect facilities with SIC codes 5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to stormwater (Source: Order No. R4-2012-0175).

Basin Plan means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments (Source: Order No. R4-2012-0175).

Best Management Practice (BMP) means practices or physical devices or systems designed to prevent or reduce pollutant loading from stormwater or non-stormwater discharges to receiving waters, or designed to reduce the volume of stormwater or non-stormwater discharged to the receiving water (Source: Order No. R4-2012-0175).

Biofiltration means a LID BMP that reduces stormwater pollutant discharges by intercepting rainfall on vegetative canopy, and through incidental infiltration and/or evapotranspiration, and filtration. Incidental infiltration is an important factor in achieving the required pollutant load reduction. Therefore, the term "biofiltration" as used in this Ordinance is defined to include only systems designed to facilitate incidental infiltration or achieve the equivalent pollutant reduction as biofiltration BMPs with an underdrain (subject to approval by the Regional Board's Executive

Officer). Biofiltration BMPs include bioretention systems with an underdrain and bioswales (Modified from: Order No. R4-2012-0175).

Bioretention means a LID BMP that reduces stormwater runoff by intercepting rainfall on vegetative canopy, and through evapotranspiration and infiltration. The bioretention system typically includes a minimum 2-foot top layer of a specified soil and compost mixture underlain by a gravel-filled temporary storage pit dug into the in-situ soil. As defined in the Municipal NPDES permit, a bioretention BMP may be designed with an overflow drain, but may not include an underdrain. When a bioretention BMP is designed or constructed with an underdrain it is regulated by the Municipal NPDES permit as biofiltration (Modified from: Order No. R4-2012-0175).

Bioswale means a LID BMP consisting of a shallow channel lined with grass or other dense, low-growing vegetation. Bioswales are designed to collect stormwater runoff and to achieve a uniform sheet flow through the dense vegetation for a period of several minutes (Source: Order No. R4-2012-0175).

City means the City of Walnut.

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted in 1972, by Public Law 92-500, and amended by the Water Quality Act of 1987. The Clean Water Act prohibits the discharge of pollutants to Waters of the United States unless the discharge is in accordance with an NPDES permit.

Commercial Malls means any development on private land comprised of one or more buildings forming a complex of stores which sells various merchandise, with interconnecting walkways enabling visitors to easily walk from store to store, along with parking area(s). A commercial mall includes, but is not limited to: mini-malls, strip malls, other retail complexes, and enclosed shopping malls or shopping centers (Source: Order No. R4-2012-0175).

Construction Activity means any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that result in land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain the original line and grade, hydraulic capacity, or original purposes of the facility. See "Routine Maintenance" definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage by the State of California General Permit for Storm Water Discharges Associated with Industrial Activities or for Stormwater Discharges Associated with Construction Activities is required if more than one acre is disturbed or the activities are part of a larger plan (Source: Order No. R4-2012-0175).

Control means to minimize, reduce or eliminate by technological, legal, contractual, or other means, the discharge of pollutants from an activity or activities (Source: Order No. R4-2012-0175).

Development means construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail, and other non-residential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Directly Adjacent means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area (Source: Order No. R4-2012-0175).

Discharge means any release, spill, leak, pump, flow, escape, dumping, or disposal of any liquid, semi-solid, or solid substance.

Disturbed Area means an area that is altered as a result of clearing, grading, and/or excavation (Source: Order No. R4-2012-0175).

Flow-through BMPs means modular, vault type "high flow biotreatment" devices contained within an impervious vault with an underdrain or designed with an impervious liner and an underdrain (Modified from: Order No. R4-2012-0175).

General Construction Activities Storm Water Permit (GCASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from construction activities under certain conditions.

General Industrial Activities Storm Water Permit (GIASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from certain industrial activities under certain conditions.

Green Roof means a LID BMP using planter boxes and vegetation to intercept rainfall on the roof surface. Rainfall is intercepted by vegetation leaves and through evapotranspiration. Green roofs may be designed as either a bioretention BMP or as a biofiltration BMP. To receive credit as a bioretention BMP, the green roof system planting medium shall be of sufficient depth to provide capacity within the pore space volume to contain the design storm depth and may not be designed or constructed with an underdrain (Source: Order No. R4-2012-0175).

Hazardous Material(s) means any material(s) defined as hazardous by Division 20, Chapter 6.95 of the California Health and Safety Code.

Hillside means a property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is 25% or greater and where grading contemplates cut or fill slopes (Source: Order No. R4-2012-0175).

Impervious Surface means any man-made or modified surface that prevents or significantly reduces the entry of water into the underlying soil, resulting in runoff from the surface in greater quantities and/or at an increased rate, when compared to natural conditions prior to development. Examples of places that commonly exhibit impervious surfaces include parking lots, driveways, roadways, storage areas, and rooftops. The imperviousness of these areas commonly results from paving, compacted gravel, compacted earth, and oiled earth.

Industrial Park means land development that is set aside for industrial development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry (Source: Order No. R4-2012-0175).

Infiltration BMP means a LID BMP that reduces stormwater runoff by capturing and infiltrating the runoff into in-situ soils or amended onsite soils. Examples of infiltration BMPs include infiltration basins, dry wells, and pervious pavement (Source: Order No. R4-2012-0175).

LID means Low Impact Development. LID consists of building and landscape features designed to retain or filter stormwater runoff (Source: Order No. R4-2012-0175).

MS4 means Municipal Separate Storm Sewer System (MS4). The MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
(ii) Designed or used for collecting or conveying stormwater;
(iii) Which is not a combined sewer; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

(40 CFR § 122.26(b)(8)) (Source: Order No. R4-2012-0175)

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA §307, 402, 318, and 405. The term includes an "approved program" (Source: Order No. R4-2012-0175).

Natural Drainage System means a drainage system that has not been improved (e.g., channelized or armored). The clearing or dredging of a natural drainage system does not cause the system to be classified as an improved drainage system (Source: Order No. R4-2012-0175).

New Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision (Source: Order No. R4-2012-0175).

Non-Stormwater Discharge means any discharge to a municipal storm drain system that is not composed entirely of stormwater (Source: Order No. R4-2012-0175).

Parking Lot means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use, with a lot size of 5,000 square feet or more of surface area, or with 25 or more parking spaces (Source: Order No. R4-2012-0175).

Person means any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, state, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine and the singular shall include the plural where indicated by the context.

Planning Priority Projects means development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution, prior to completion of the project(s) (Modified from: Order No. R4-2012-0175).

Pollutant means any "pollutant" defined in Section 502(6) of the Federal Clean Water Act or incorporated into the California Water Code Sec. 13373. Pollutants may include, but are not limited to the following:

(1) Commercial and industrial waste (such as fuels, solvents, detergents, plastic pellets, hazardous substances, fertilizers, pesticides, slag, ash, and sludge).

(2) Metals (such as cadmium, lead, zinc, copper, silver, nickel, chromium, and non- metals such as phosphorus and arsenic).

(3) Petroleum hydrocarbons (such as fuels, lubricants, surfactants, waste oils, solvents, coolants, and grease).

(4) Excessive eroded soil, sediment, and particulate materials in amounts that may adversely affect the beneficial use of the receiving waters, flora, or fauna of the State.

(5) Animal wastes (such as discharge from confinement facilities, kennels, pens, recreational facilities, stables, and show facilities).

(6) Substances having characteristics such as pH less than 6 or greater than 9, or unusual coloration or turbidity, or excessive levels of fecal coliform, or fecal streptococcus, or enterococcus.

Project means all development, redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Pub. Resources Code §21065) (Source: Order No. R4-2012-0175).

Rainfall Harvest and Use means a LID BMP system designed to capture runoff, typically from a roof but can also include runoff capture from elsewhere within the site, and to provide for temporary storage until the harvested water can be used for irrigation or non-potable uses. The harvested water may also be used for potable water uses if the system includes disinfection treatment and is approved for such use by the local building department (Source: Order No. R4-2012-0175).

Receiving Water means "water of the United States" into which waste and/or pollutants are or may be discharged (Source: Order No. R4-2012-0175).

Redevelopment means land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of routine maintenance activity; and land disturbing activity related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Regional Board means the California Regional Water Quality Control Board, Los Angeles Region.

Restaurant means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812) (Source: Order No. R4-2012-0175).

Retail Gasoline Outlet means any facility engaged in selling gasoline and lubricating oils (Source: Order No. R4-2012-0175).

Routine Maintenance
Routine maintenance projects include, but are not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.
4. Update existing lines* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
5. Repair leaks

Routine maintenance does not include construction of new** lines or facilities resulting from compliance with applicable codes, standards and regulations.

* Update existing lines includes replacing existing lines with new materials or pipes.
** New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines (Source: Order No. R4-2012-0175).

Significant Ecological Areas (SEAs) means an area that is determined to possess an example of biotic resources that cumulatively represent biological diversity, for the purposes of protecting biotic diversity, as part of the Los Angeles County General Plan. Areas are designated as SEAs, if they possess one or more of the following criteria:

1. The habitat of rare, endangered, and threatened plant and animal species.
2. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis.
3. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind or are restricted in distribution in Los Angeles County.
4. Habitat that at some point in the life cycle of a species or group of species, serves as a concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or within Los Angeles County.
5. Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent an unusual variation in a population or community.
6. Areas important as game species habitat or as fisheries.
7. Areas that would provide for the preservation of relatively undisturbed examples of natural biotic communities in Los Angeles County.
8. Special areas (Source: Order No. R4-2012-0175).

Site means land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity (Source: Order No. R4-2012-0175).

Storm Drain System means any facilities or any part of those facilities, including streets, gutters, conduits, natural or artificial drains, channels, and watercourses that are used for the purpose of collecting, storing, transporting or disposing of stormwater and are located within the City of Walnut.

Storm Water or Stormwater means water that originates from atmospheric moisture (rain or snow) and that falls onto land, water, or other surfaces. Without any change in its meaning, this term may be spelled or written as one word or two separate words.

Stormwater Runoff means that part of precipitation (rainfall or snowmelt) which travels across a surface to the storm drain system or receiving waters.

SUSMP means the Los Angeles Countywide Standard Urban Stormwater Mitigation Plan. The SUSMP was required as part of the previous Municipal NPDES Permit (Order No. 01-182,

NPDES No. CAS004001) and required plans that designate best management practices (BMPs) that must be used in specified categories of development projects.

Urban Runoff means surface water flow produced by storm and non-storm events. Non-storm events include flow from residential, commercial, or industrial activities involving the use of potable and non-potable water.

CHAPTER 21 ARTICLE IV SECTION 21-80 IS AMENDED TO READ AS FOLLOWS: TITLE V PUBLIC WORKS, CHAPTER 21, ARTICLE IV SECTION 21-80 IS AMENDED IN ITS ENTIRETY TO READ AS FOLLOWS:

SEC. 21-80 STORMWATER POLLUTION CONTROL MEASURES FOR DEVELOPMENT PLANNING AND CONSTRUCTION ACTIVITIES

(A) **Objective.** The provisions of this section contain requirements for construction activities and facility operations of Development and Redevelopment projects to comply with the current "Municipal NPDES permit," lessen the water quality impacts of development by using smart growth practices, and integrate LID design principles to mimic predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use. LID shall be inclusive of SUSMP requirements.

(B) **Scope.** This Section contains requirements for stormwater pollution control measures in Development and Redevelopment projects and authorizes the City of Walnut to further define and adopt stormwater pollution control measures, develop LID principles and requirements, including but not limited to the objectives and specifications for integration of LID strategies, grant waivers from the requirements of the Standard Urban Stormwater Mitigation Plan, and collect funds for projects that are granted waivers. Except as otherwise provided herein, the City of Walnut shall administer, implement and enforce the provisions of this Section.

(C) **Applicability.** The following Development and Redevelopment projects, termed "Planning Priority Projects," shall comply with the requirements of Chapter 21 Article IV Section 21-80.

(1) All development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.

(2) Industrial parks 10,000 square feet or more of surface area.

(3) Commercial malls 10,000 square feet or more of surface area.

(4) Retail gasoline outlets with 5,000 square feet or more of surface area.

(5) Restaurants (Standard Industrial Classification (SIC) of 5812) with 5,000 square feet or more of surface area.

(6) Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.

(7) Streets and roads construction of 10,000 square feet or more of impervious surface area.

(8) Automotive service facilities (Standard Industrial Classification (SIC) of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.

(9) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:

a. Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and

b. Create 2,500 square feet or more of impervious surface area

(10) Single-family hillside homes.

(11) Redevelopment Projects

a. Land disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.

b. Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, the entire project must be mitigated.

c. Where Redevelopment results in an alteration of less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, only the alteration must be mitigated, and not the entire development.

d. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

e. Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

(D) **Effective Date.** The Planning and Land Development requirements contained in Section 7 of Order No. R4-2012-0175 shall become effective 90 days from the adoption of the Order (February 6, 2013). This includes Planning Priority Projects that are discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals within 90 days of adoption of the Order. Projects that have been deemed complete within 90 days of adoption of the Order are not subject to the requirements Section 7.

(E) **Stormwater Pollution Control Requirements.** The Site for every Planning Priority Project shall be designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention and/or rainfall harvest and use.

(1) A new single-family hillside home development shall include mitigation measures to:

a. Conserve natural areas;

b. Protect slopes and channels;

c. Provide storm drain system stenciling and signage;

d. Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability; and

e. Direct surface flow to vegetated areas before discharge, unless the diversion would result in slope instability.

(2) Street and road construction of 10,000 square feet or more of impervious surface shall follow USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets (December 2008 EPA-833-F-08-009) to the maximum extent practicable.

(3) The remainder of Planning Priority Projects shall prepare a LID Plan to comply with the following:

a. Retain stormwater runoff onsite for the Stormwater Quality Design Volume (SWQDv) defined as the runoff from:

i. The 85th percentile 24-hour runoff event as determined from the Los Angeles County 85th percentile precipitation isohyetal map; or

ii. The volume of runoff produced from a 0.75 inch, 24-hour rain event, whichever is greater.

b. Minimize hydromodification impacts to natural drainage systems as defined in the Municipal NPDES Permit. Hydromodification requirements are further specified in County of Los Angeles Department of Public Work Storm Water Best Management Practices Design and Maintenance Manual.

c. When, as determined by the City of Walnut, 100 percent onsite retention of the SWQDv is technically infeasible, partially or fully, the infeasibility shall be demonstrated in the submitted LID Plan. The technical infeasibility may result from conditions that may include, but are not limited to:

i. The infiltration rate of saturated in-situ soils is less than 0.3 inch per hour and it is not technically feasible to amend the in-situ soils to attain an infiltration rate necessary to achieve reliable performance of infiltration or bioretention BMPs in retaining the SWQDv onsite.

ii. Locations where seasonal high groundwater is within five to ten feet of surface grade;

iii. Locations within 100 feet of a groundwater well used for drinking water;

iv. Brownfield development sites or other locations where pollutant mobilization is a documented concern;

v. Locations with potential geotechnical hazards;

vi. Smart growth and infill or redevelopment locations where the density and/ or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.

d. If partial or complete onsite retention is technically infeasible, the project Site may biofiltrate 1.5 times the portion of the remaining SWQDv that is not reliably retained onsite. Biofiltration BMPs must adhere to the design specifications provided in the Municipal NPDES Permit.

i. Additional alternative compliance options such as offsite infiltration may be available to the project Site. The project Site should contact the City of Walnut to determine eligibility. Alternative compliance options are further specified in County of Los Angeles Department of Public Work Storm Water Best Management Practices Design and Maintenance Manual.

e. The remaining SWQDv that cannot be retained or biofiltered onsite must be treated onsite to reduce pollutant loading. BMPs must be selected and designed to meet pollutant-specific benchmarks as required per the Municipal NPDES Permit. Flow-through BMPs may be used to treat the remaining SWQDv and must be sized based on a rainfall intensity of:

i. 0.2 inches per hour, or
ii. The one year, one-hour rainfall intensity as determined from the most recent Los Angeles County isohyetal map, whichever is greater.

f. A Multi-Phased Project may comply with the standards and requirements of this section for all of its phases by: (a) designing a system acceptable to the City of Walnut to satisfy these standards and requirements for the entire Site during the first phase, and (b) implementing these standards and requirements for each phase of Development or Redevelopment of the Site during the first phase or prior to commencement of construction of a later phase, to the extent necessary to treat the stormwater from such later phase. For purposes of this section, "Multi-Phased Project" shall mean any Planning Priority Project implemented over more than one phase and the Site of a Multi-Phased Project shall include any land and water area designed and used to store, treat or manage stormwater runoff in connection with the Development or Redevelopment, including any tracts, lots, or parcels of real property, whether Developed or not, associated with, functionally connected to, or under common ownership or control with such Development or Redevelopment.

(F) **Validity.** If any provision of this Ordinance is found to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect remaining provisions of this Ordinance are declared to be severable.

(G) **Certification.** The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy.

APPROVED AND ADOPTED this 13th day of November, 2013.

Antonio Cartagena, Mayor

ATTEST:

Teresa De Dios, City Clerk

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF WALNUT)

I, Teresa De Dios, City Clerk of the City of Walnut, do hereby certify that the foregoing Ordinance No. 13-13 being:

AN ORDINANCE AMENDING TITLE V, CHAPTER 21, OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING STANDARD URBAN STORM WATER MITIGATION PLAN REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS

Said Ordinance was duly introduced at a regular meeting held on the 23rd day of October, 2013, and was adopted and passed at a regular meeting of the City Council on the 13th day of November 13, 2013 by the following vote, to wit:

AYES:	COUNCILMEMBER(S):	Cartagena, Ching, Pacheco, Su, Tragarz
NOES:	COUNCILMEMBER(S):	None
ABSENT:	COUNCILMEMBER(S):	None
ABSTAIN:	COUNCILMEMBER(S):	None

Teresa De Dios

Teresa De Dios, City Clerk

Attachment C

City of Walnut

Public Education Materials

Storm Water Pollution Prevention

Construction

Sediment, vehicle fluids, dust and debris from construction sites can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Preventing Erosion
Avoid excavation or grading during wet weather. Plant temporary vegetation or add hydromulch on slopes where construction is not immediately planned, and permanent vegetation once excavation and grading are complete. Construct diversion dikes to channel run-off into a detention basin and around the construction site. Channels can be lined with grass or roughened pavement to reduce runoff velocity.

Maintaining Vehicles & Equipment
Maintain and refuel vehicles and equipment at a single location on-site, away from the street, gutter and storm drains. Perform major equipment repairs and washings off-site. Inspect vehicles and equipment frequently for leaks, and prevent leaks from stored vehicles by draining gas, hydraulic oil, transmission, brake and radiator fluids.

Ordering Materials & Recycling Waste
Reduce waste by ordering only the amounts of materials needed for the job. Use recycled or recyclable materials whenever possible. You can recycle broken asphalt, concrete, wood, and cleared vegetation. Non-recyclable materials should be taken to a landfill or disposed of as hazardous waste. For recycling and disposal information, call the City's exclusive franchise waste hauler, Valley Vista Services (800) 442-6454.

Cleaning & Preventing Spills
Use a drip pan and funnel when draining or pouring fluids. Sweep up dry spills, instead of hosing. Be ready for spills by preparing and using spill containment and cleanup kits that include safety equipment and dry cleanup materials such as kitty litter or sawdust. To report serious spills, call 911.

Store Materials Safely
Keep construction materials and debris away from the street, gutter and storm drains. Cover exposed excavated or stockpiled materials (such as soil, sand or gravel) with plastic sheeting to protect them from rain, wind and runoff.

Recycle Household Hazardous Waste
Household cleaners, paint and other home improvement products like wallpaper and tile adhesives are too toxic to trash. Recycle them instead, at a convenient household hazardous waste collection facility. Call (888) CLEANLA for the facility in your area.

For specific questions on storm water pollution prevention, contact: The City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact: 1 (888) CLEANLA
www.888cleanla.com

RB-AR17239

Storm Water Pollution Prevention

Home Repair

Toxic dust and debris from home repair and remodeling can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Construction Projects
Keep construction debris away from the street, gutter and storm drains. Schedule grading and excavation projects for dry weather. Cover excavated material and stockpiles of material such as soil, sand or gravel, to protect from rain, wind and runoff. Prevent erosion by planting fast-growing annual and perennial grass, which can shield and bind soil.

Landscaping & Gardening
Avoid applying fertilizers or pesticide near curbs and driveways, and store covered, protected from rain, wind and runoff. Try using organic or nontoxic alternatives. Reduce runoff and lower your water bill by using drip irrigation, soaker hoses or micro-spray systems. Recycle leaves instead of blowing, sweeping or raking them into the street, gutter or storm drain.

Concrete and Masonry
Store bags of cement and plaster away from gutters and storm drains, and cover them to protect against rain, wind and runoff. Sweep or scoop up cement washout or concrete dust instead of hosing into driveways, streets, gutters or storm drains.

Paint Removal & Cleanup
Paint stripping residue (such as chips and dust) from paints containing lead or tributyl tin are hazardous wastes. Sweep them up instead of hosing into the street and dispose of them safely at a household hazardous waste collection facility. Avoid cleaning brushes or rinsing paint containers in the street, gutter or near a storm drain. Clean water-based paints in the sink. Oil-based paints may be cleaned with thinner, which you can filter and reuse. Recycle leftover paint at a household hazardous waste collection facility, save it for touch ups or give it to someone who can use it, like a theatre group, school, or community organization.

Recycle Household Hazardous Waste
Household cleaners, paint and other home improvement products like wallpaper and tile adhesives are too toxic to trash. Recycle them instead, at a convenient household hazardous waste collection facility. Call (888) CLEANLA for the facility in your area.

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

PAINTING

Improper post-painting cleanup or disposal can lead to chemicals being picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect your health.

Water-Based Paints
When considering paint, use water-based paints whenever possible. They are less toxic than oil-based paints and easier to clean up. Look for products labeled "latex" or "cleans with water."

Paint Removal
Sweep up paint stripping residue (such as chips and dust) instead of hosing into the street. Dispose of them safely at a household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.

Painting Cleanup
Never clean brushes or rinse paint containers in the street, gutter or near a storm drain. Clean water-based paints in the sink. Clean oil-based paints with thinner, which can be reused by putting it in a jar to settle out the paint particles and then pouring off the clear liquid for future use. Wrap dried paint residue in newspaper and dispose of it in the trash.

Exterior Paint Removal
When stripping or cleaning building exteriors with high pressure water, block nearby storm drains and divert wash-water onto a designated dirt area. Ask your local wastewater treatment authority if you can collect building cleaning wastewater and discharge it to the sewer.

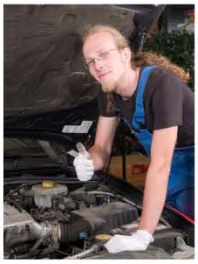
Recycling Paint
Recycle leftover paint at a household hazardous waste collection facility, save it for touch ups or give it to someone who can use it, like a theatre group, school, or community organization. Call (800) CLEANUP for the facility in your area.

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

Auto Maintenance



Oil, grease, anti-freeze and other toxic automotive fluids can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Cleaning Auto Parts
Scrape parts with a wire brush or use a bake oven rather than liquid cleaners. Arrange drip pans, drying racks and drain boards so that fluids are directed back into the parts washer or the fluid holding tank. Do not wash parts or equipment in a shop sink, parking lot, driveway or street.

Metal Grinding and Polishing
Keep a bin under your lathe or grinder to capture metal filings. Send uncontaminated filings to a scrap metal recycler for reclamation. Store metal filings in a covered container or indoors.

Cleaning Spills
Use dry methods for spill cleanup (sweeping, absorbent materials). Follow your hazardous materials response plan, as filed with your local fire department or other hazardous materials authority. Be sure that all employees are aware of the plan and are capable of implementing each phase. To report serious toxic spills, call 911.

Storing Hazardous Waste
Keep your liquid waste segregated. Many fluids can be recycled via hazardous waste disposal companies if they are not mixed. Store all materials under cover with spill containment or inside to prevent contamination of rainwater runoff.

Preventing Leaks and Spills
Place drip pans underneath vehicles to capture any leaking fluids. Use absorbent cleaning agents instead of water to clean work areas.

Proper Disposal of Hazardous Waste
Recycle used motor oil and oil filters, anti-freeze and other hazardous automotive fluids, batteries, tires and metal filings collected from grinding or polishing auto parts. Contact a licensed hazardous waste hauler. For more recycling information, call (888) CLEANLA. Use non-toxic cleaning products whenever possible.

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

Kitchen: Fats, Oil & Grease

Fats, oil and grease (FOG) from cooking poured into kitchen sinks can build up in sewer pipes causing a sewage spill into the storm drain system which flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Pipes Are For Water Only:
FOG that enters the sewer system from kitchen sinks and drains eventually hardens and coats the inside of sewer pipes. Over a short period of time FOG residues build up in the sewer pipes and begin to restrict flows until the FOG build-up completely blocks the normal flow of sewage.

The blockage causes the flow of sewage to exit from the sanitary sewer system at the nearest outlet that is most commonly a manhole, cleanout, or broken pipe, and flow into the storm drainage system.

A sewage spill due to blocked pipe from a build-up of FOG is costly to both you and the environment. However, with the proper care and attention, it may be avoidable. So do your part for yourself and your community.

To Protect Your Pipes:

1. Do not put oil, grease or greasy foods down the sink, drain or toilet.
2. Solidify cooking oil with an absorbent material such as cat litter or coffee grounds; place it in a sealed container and dispose of it in a trash receptacle.
3. Grease must be hardened in a can or container with a lid before disposing in the trash. If you soak a greasy pan, place a paper towel over the drain basket to catch grease and food particles as you pour the water down the drain.

For large amounts of household oil and grease, place in a sealed container and take it to a local Household Hazardous Waste Collection Center for proper disposal. Call (888) CLEANLA for a collection facility or mobile collection event near your area.

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www.888cleanla.com

Storm Water Pollution Prevention

Food and Restaurant

Restaurant food waste, grease, cleaning fluids, and trash can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Recycle Oil & Grease
Oil and grease wastes can be recycled. Look in the yellow pages for rendering companies, or call (888) CLEANLA for disposal information. Don't pour oil or grease into sinks, floor drains, or onto a parking lot or street. Keep grease bins covered and stored securely. Keep your grease interceptor well maintained to prevent sewer overflows or backups and keep records of grease waste hauling.

Cleaning & Maintenance
Clean your equipment, floor mats, filters and garbage cans in a mop sink, wash rack or floor drain that is connected to the sewer through a grease trap. Don't wash them, or pour wash water, on a parking lot, alley, sidewalk or street. Sweep outside areas and put the debris into a garbage bin, instead of sweeping or hosing them into the parking lot or street.

Managing Spills
Clean food spills in loading and trash areas by first using absorbent materials, followed by sweeping and then mopping (discharge mop water into the sewer through a grease interceptor). Have spill containment and cleanup kits available. To report serious toxic spills, call 911.

Dumpster Areas
Keep dumpster lids closed and the areas around them clean. Do not fill with liquid waste or hose them out. Call your trash hauler to replace any dumpsters that are damaged or leak.

Handling Toxic Chemicals
Dispose of all unwanted toxics materials like cleaners, solvents and detergents through a hazardous waste hauler. These items are not trash. For information on hazardous waste pickup, call (888) CLEANLA. Use non-toxic cleaning products

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21201 La Puente Rd.
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909-595-7543

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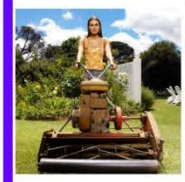
www.888cleanla.com

Storm Water Pollution Prevention

Garden

Yard waste, fertilizers and garden toxics (pesticides) can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.



Yard Waste Disposal
Don't blow, sweep, or hose leaves, grass clippings and other yard waste into the street or gutter. Place all yard waste in your green waste refuse barrel or try grasscycling (leaving grass clippings on your lawn). Grass clippings can act as a natural fertilizer, and because grass is mostly water, it also irrigates your lawn, conserving water.

Use Fertilizers & Pesticides Safely
Fertilizers and pesticides are often carried into the storm drain system by sprinkler runoff. Try using organic or non-toxic alternatives. If you use chemical fertilizers or pesticides, avoid applying near curbs and drive-ways and never apply just before it rains.

Use Water Wisely
Cut your water costs and prevent runoff by controlling the amount of water and direction of sprinklers. The average lawn needs about an inch of water a week, including rainfall, or 10 to 20 minutes of watering. A half-inch per week is enough for fall and spring. Sprinklers should be on long enough to allow water to soak into the ground but not so long as to cause runoff.

There are three water providers serving the residents of Walnut. For links to these water providers and updates on water conservation requirements, visit the City of Walnut's "Go Green With Walnut" webpage at www.ci.walnut.ca.us (Keyword: "Go Green").

Planting in the Yard
Produce less yard waste and save water by planting low maintenance, drought-tolerant trees and shrubs. Use drip irrigation, soaker hoses or micro-spray systems for your landscaping to help reduce your water bill and prevent runoff.

Recycle Household Hazardous Waste
Household products like paint, pesticides, solvents & cleaners are too dangerous to dump and too toxic to trash. Take them to a convenient household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.

For specific questions on storm water pollution prevention, contact:
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www.888cleanla.com

Storm Water Pollution Prevention

Pet Waste

Pet waste left on lawns, sidewalks and parks can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

What is Wrong With Pet Waste?
Pet waste, especially dog waste, is a major pollutant and contaminant of water supplies. The Federal Environmental Protection Agency views pet waste a serious source pollution and has placed it in the same category of "nonpoint source pollution" as oil and toxic chemicals.

Pet waste left on the streets, lawns and parks is a serious community health concern. A single gram of dog waste can contain 23 million fecal coliform bacteria, which are known to cause a variety of illnesses and disorders in humans.

Some sources estimate that 1/3 of all water contamination is a result of dog waste entering streams and leaching into underground well water. The average dog can produce 274 pounds of waste each year. Disease from dog waste may spread to other dogs, children, and adults.

Disposing of Pet Waste
All pet waste should be placed in your regular trash/refuse container, preferable in a bag.

Never put dog or animal waste into the green waste container. This will contaminate the entre container, and possible the entire truck load of green waste, which then cannot be reused and must go into a landfill.

Help Keep Our Parks Clean
It is for your health as well as for entire community.

Walking Your Dog: Pet Waste Pick Up Ordinance
The City would like remind pet owners to be courteous and pick up after your pet while walking your dog or animal on City sidewalks, trails, parks or other open spaces. There is an Animal Nuisance Ordinance in Los Angeles County Code (Title 10 Animals, Chapter 10.40.060, B.) which requires that owners pick up and properly dispose of their pet's waste from all public spaces and walking areas for sanitary and health reasons.

To help promote clean up, the City has installed pet waste stations at City parks. These stations provide not only Zero-Waste biodegradable bags with which to pick up your pet's waste, they also provide a sealed container in which to dispose of the waste.

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City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

Used Motor Oil

Used motor oil dripped onto driveways and lawns can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

RECYCLE USED OIL

Why Recycle Used Motor Oil and Oil Filters?
Did you know that used motor oil never wears out? It just gets dirty and can be recycled, cleaned, and used again. Recycling used motor oil conserves a natural resource (oil) and is good for the environment too! Motor oil poured onto the ground or into storm drains, or tossed into trash cans (even in a sealed container) can contaminate and pollute the soil, groundwater, streams, and rivers. Recycling your used motor oil reduces this pollution threat.

Where Can I Recycle My Used Motor Oil and Oil Filters?
Walnut residents can take up to five gallons of uncontaminated used oil and oil filters in secured, non-leaking containers to one of the following five certified Used Oil Collection Centers in Walnut (*Please call ahead for hours of operation. Used oil can only be dropped off during working hours):*

- MasterLube, 308 N. Lemon Avenue, 909.598.3881
- Firestone Tires 860 N. Nogales Street, 626.965.2224
- The Oilmen, 856 N. Nogales Street, 626.965.4798
- Kraken Auto Parts, 18724 Amir Road, 626.965.6012
- Mobil Xpress Lube, 762 N. Nogales St., 626.965.6032

Illegal Oil Dumping:
Please do not dispose of your used oil by pouring it into the gutter or onto the ground. It is not only illegal; it is a major source of water contamination. Street gutters drain directly into our local rivers and ocean; and fluid dumped on the ground can seep into rivers and ground water. So if wouldn't want you or your children to drink it, eat it or swim in it; don't pour it out!

RECYCLE USED OIL FILTERS

How to Store/Transport Used Oil: Used motor oil must be stored, transported and delivered to the Collection Centers in secured, non-leaking containers. Used oil may only be dropped off during normal hours of operation. It is not permitted to leave used oil at any Collection Center if the facility is closed. Do not risk contaminating the oil by storing it in a container formerly used for other products such as anti-freeze or paint. Walnut residents may pick up free used oil containers and used oil filter containers at the City's Maintenance and Recreation Facility at 21701 E. Valley Blvd. (proof of residency required).

What About Contaminated Oil? Certified Collection Centers will not accept used motor oil that has been contaminated with other fluids such as antifreeze, solvents, gasoline, or water. So please, don't mix your used oil with anything. Contaminated oil must be taken to a household hazardous waste collection facility. Call (888) CLEANLA for a collection facility or mobile collection event near your area.

For specific questions on storm water pollution prevention, contact:
City of Walnut
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Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Attachment D

City of Walnut

Legal Authority

December 11, 2013

Mr. Samuel Unger
Executive Officer
Los Angeles Regional Quality Control Board
320 W. 4th Street, Suite 200
Los Angeles, CA 90013
sunger@waterboards.ca.gov

Re: Legal Authority of the City of Walnut to Implement and Enforce the Requirements of 40 CFR 122.26(d)(2)(i)(A-F) and RWQCB Order R4-2012-0175, NPDES Permit CAS004001

Dear Mr. Unger:

The City of Walnut (the "City"), by and through its City Attorney, hereby submits the following certification ("Statement"), pursuant to Section VI.A.2.b of Order R4-2012-0175 (NPDES Permit CAS004001), issued by the California Regional Water Quality Control Board, Los Angeles Region ("RWQCB") on November 8, 2012 and entitled "Waste Discharge Requirements for Municipal Separate Storm Sewer System ("MS4") Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4" (the "Permit").

The City is one of the Permittees under the Permit. Section VI.A.2.b of the Permit requires the City to provide the RWQCB with a statement by its chief legal counsel, certifying that the City has the legal authority to implement and enforce each of the current requirements set forth in 40 C.F.R. § 122.26(d)(2)(i)(A-F) and the Permit. The purpose of this Statement is to describe the City's compliance with Section VI.A.2.b of the Permit. As discussed in further detail herein, it is our opinion that the City has the necessary legal authority to implement the Permit and to control and prohibit discharges of pollutants into the Municipal Separate Storm Sewer System ("MS4"). However, this Statement is not, nor should it be construed as, a waiver of any rights that the City may have relating to the Permit.

1. Legal Authority Statement

In our opinion, the City has the necessary legal authority to comply with the legal requirements imposed upon it under the Permit, consistent with the requirements set forth in the U.S. Environmental Protection Agency's regulations promulgated under the Clean Water Act, and, specifically, 40 C.F.R. § 122.26(d)(2)(i)(A-F), and to the extent permitted by state and federal law and subject to the limitations on municipal action under the California and United States Constitutions, except as noted herein.

The City, as a general law city, has broad general police powers under the California Constitution to enact legislation for health and public welfare of the community to the extent not preempted by federal or state law. In addition, the City adopted ordinances for the purpose of ensuring that it has adequate legal authority to implement and enforce its storm water control program. The City has the authority under the California Constitution and state law to enact and enforce these ordinances, and these ordinances were duly enacted.

2. Ordinances

The City has adopted ordinances related to the regulation of urban runoff to control and prohibit discharges of pollutants into the MS4 and to comply with the requirements of the Permit applicable to it, as well as, to the extent applicable, 40 C.F.R. § 122.26 (d)(2)(i)(A)-(F). The City's Storm Water Management and Discharge Control Ordinance (Ord. No. 593) is the principal City ordinance addressing the control of urban runoff. Under this ordinance and Walnut Municipal Code (WMC) Title V, Chapter 21, Article III, the City has the necessary legal authority to do the following:

i. Control the contribution of pollutants to its MS4 from storm water discharges associated with industrial and construction activity and control the quality of storm water discharged from industrial and construction sites. This requirement applies both to industrial and construction sites with coverage under an NPDES permit, as well as to those sites that do not have coverage under an NPDES permit (WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities);

ii. Prohibit all non-storm water discharges through the MS4 to receiving waters not otherwise authorized or conditionally exempt pursuant to Part III.A (WMC Title V, Chapter 21, Article III, 21-65: Prohibited Activities);

iii. Prohibit and eliminate illicit discharges and illicit connections to the MS4 (WMC Title V, Chapter 21, Article III, 21-65: Prohibited Activities);

iv. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4 (WMC Title V, Chapter 21, Article III, 21-65: Prohibited Activities);

v. Require compliance with conditions in Permittee ordinances, permits, contracts or orders (*i.e.*, hold dischargers to its MS4 accountable for their contributions of pollutants and flows) (WMC Title V, Chapter 21, Article III, 21-69: Enforcement);

vi. Utilize enforcement mechanisms to require compliance with applicable ordinances, permits, contracts, or orders (WMC Title V, Chapter 21, Article III, 21-69: Enforcement);

vii. Carry out all inspections, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with applicable municipal ordinances,

permits, contracts and orders, and with the provisions of this Order, including the prohibition of non-storm water discharges into the MS4 and receiving waters. This means the Permittee must have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from entities discharging into its MS4 (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities);

viii. Require the use of control measures to prevent or reduce the discharge of pollutants to achieve water quality standards/receiving water limitations (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Chapter 21-68: Requirements for Industrial/Commercial and Construction Activities; WMC Title V, Chapter 21, Article III, 21-69: Enforcement; WMC Title V, Chapter 21, Article IV, 21-82: SUSMP Enforcement);

ix. Require that structural BMPs are properly operated and maintained (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities); and

x. Require documentation on the operation and maintenance of structural BMPs and their effectiveness in reducing the discharge of pollutants to the MS4 (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities).

3. Implementation

Some of the City's ordinances are implemented through permit programs and others are implemented as regulatory programs. Under each ordinance, one or more City departments or department directors are authorized and directed in each ordinance to take the actions contemplated by the ordinance (*e.g.*, to consider evidence and make findings, to issue or deny permits, to impose conditions on projects, to inspect, to take enforcement action, etc.).

The City's Storm Water Management and Discharge Control Ordinance (WMC Title V, Chapter 21, Article III) is the principal City ordinance addressing the control of urban runoff. This ordinance is regulatory, and applies to specified new and existing residential and business communities and associated facilities and activities, as well as new development and redevelopment, and all other specified new and existing facilities and activities that threaten to discharge pollutants within the boundaries of the City and within its regulatory jurisdiction, whether or not a City permit or approval is required. The City's Storm Water Management and Discharge Control Ordinance also contains discharge prohibitions and requirements for the implementation of BMPs and other requirements necessary to implement the Permit.

Other City departments require compliance with the City's Storm Water Management and Discharge Control Ordinance as a condition for issuance of relevant City permits. City departments may also impose specific conditions of approval consistent with the City's Storm Water Management and Discharge Control Ordinance. All City environmental ordinances are also implemented, in part, through the application of the CEQA process to proposed projects.

4. Administrative and Judicial/Legal Procedures

In addition to the above authority, the City has in place various legal and administrative procedures to assist in enforcing the various urban runoff related Ordinances, including Administrative, Nuisance, Criminal, Equitable and Other Civil Remedies.

a. Title V, Chapter 21, Article III, 21-69 (Enforcement)
b. Title I, Chapter 3, Article I, 3-2 (General Penalties; Continuing Violations)
c. Title III, Chapter 16A, Article III, 16A-6.17 (Collection of costs - Special assessment)
d. Title III, Chapter 16A, Article II, 16A-6.19 (Cumulative Remedies)
e. Injunctive relief under State law and the Municipal Code (WMC Title V, Chapter 21, Article III, 21-69 (Enforcement).
f. Declaratory relief under State law.
g. Federal law claims (*e.g.*, Clean Water Act and Resource Conservation and Recovery Act Citizen Suits).
h. Remedies under the California Government Code.

Violations of the City's Storm Water Ordinance are deemed a "public nuisance", in which case enforcement actions can be completed administratively, or judicially when necessary.

Please contact me if you have any questions or if you need any additional information regarding the City's legal authority to enforce the Permit.

Very truly yours,

Michael Montgomery
City Attorney

Integrated Monitoring Plan

City of Walnut

Submitted to:

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Submitted by:

The City of Walnut
21201 La Puente Road
Walnut, CA 91789

June 28, 2014

RB-AR17253

Table of Contents

Attachment A: Table E-2

Attachment B: Aquatic Toxicity Monitoring Methods

Attachment C: Stream Bioassessment Procedure

1.0- Municipal Separate Storm Sewer System Permit

On November 8, 2012 the Los Angeles Regional Water Quality Control Board adopted Order R4-2012-0175 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4. Order R4-2012-0175 became effective 50 days later on December 28, 2013. Order R4-2012-0175 serves as the National Pollution Discharge Elimination System (NPDES) permit for Coastal Watershed storm water and non-storm water discharges originating from the Los Angeles County Region, excluding the City of Long Beach. The permit covers the land areas of the Los Angeles County Flood Control, unincorporated areas of Los Angeles County and 84 Cities within the County of Los Angeles. Permittees are subject to the requirements set forth in the MS4 permit for all storm water and non- storm water discharges into the MS4. The City of Walnut is located in the Los Angeles Region and is identified in the MS4 Permit as a permittee under Order R4-2012-0175.

The MS4 permit regulates municipal discharges of storm water and non-storm water from the MS4s of the permittees. Storm water and non-storm water discharges have been identified as a transport mechanism for pollutants into the receiving waters of the Los Angeles Region. Pollutants originating from various land uses are mobilized by surface flow of water which is then directed into the MS4 and eventually deposited into receiving water bodies. In many cases pollutant deposition into receiving water bodies has a noticeable impact on the local ecological system of the water body and recreational uses. It is the intent of the MS4 Permit to protect water quality and mitigate existing and potential sources of pollutants that are cause for impairment of receiving water bodies.

Conditions of the MS4 Permit require that all permittees develop a monitoring plan on an individual or joint basis that will address water quality issues with in the permittee's jurisdictional area. The monitoring program option selected will be utilized in conjunction with the City's watershed management plan to provide real water quality data for use in the assessment of program effectiveness and compliance with applicable water quality standards.

Attachment E of the MS4 Permit is the Monitoring and Reporting Program (MRP) which outlines the requirements that shall be included in a permittee's MRP. The MRP is a critical portion of the City of Walnut's overall approach for maintaining water quality and/or mitigating water quality issues.

1.1- Integrated Monitoring Plan

The objectives of the MRP are to assess the water quality of receiving water and discharges from the municipal separate storm water sewer system (MS4). The monitoring plan developed based on the MRP requirements will monitor chemical, physical, and biological impacts of discharges originating from the MS4. The data gathered from monitoring will be used to assess compliance with applicable TMDLs and WQBELs as established for wet weather or dry weather conditions. The program will also be used to characterize pollutant loads, identify pollutant sources and to measure and improve the effectiveness of pollutant control implementation practices. The MRP allows Permittees flexibility in how a monitoring program is implemented. The customizable monitoring programs allow the permittee to devote resources to areas that will result in the most effective use of available funds. Due to the configuration of the City of Walnut's MS4 and topography of the City, there is limited comingling of storm water prior

to its discharge into receiving water bodies. As a result, the City of Walnut has selected the individual Integrated Monitoring Report (IMP) option for compliance with the MRP section of the MS4 Permit. The City's IMP will be synchronized with its Watershed Management Plan (WMP) to provide an effective NPDES program in compliance with Order R4-2012-0175. This IMP was developed by RKA Consulting Group for the City of Walnut.

1.2- Purpose and Scope

The IMP will be utilized to assess the impact from MS4 discharges to receiving water bodies. Results from the IMP will be the basis for determining compliance with water quality based effluent limitations for pollutants causing impairment to a receiving water body. The objectives of the IMP as identified in the MRP portion of the MS4 Permit are outlined below:

- Assess the chemical, physical and biological impacts of discharges from the municipal storm water sewer system (MS4) on receiving waters.
- Assess compliance with receiving water limitations and water quality-based effluent limitations (WQBELs) established to implement Total Maximum Daily Load (TMDL) wet weather and dry weather waste load allocations (WLAs).
- Characterization pollutant loads in MS4 discharges.
- Identify sources of pollutants in MS4 discharges.
- Measure and improve the effectiveness of pollutant controls implemented under this order.

The IMP is organized into five subsections. Each of the sub sections focuses on an individual monitoring requirement set forth in the MS4 Permit.

- Receiving water monitoring
- Storm water outfall monitoring
- Non-storm water outfall monitoring
- New development/re-development effectiveness tracking
- Regional studies

1.3- City of Walnut

The City of Walnut is a General Law city that was incorporated on January 19, 1959. The City's has a jurisdictional area of 8.9 square miles and an approximate population of 30,000. The City has a rural charm which is preserved by a well-defined general plan. The City is located in the San Gabriel Valley region of Los Angeles County north of State Route 60 and west of State Route 57. The City's location with respect to the San Gabriel River Watershed is highlighted in Los Angeles County's map of the watershed (Figure 1-1).

Land use in the City is primarily devoted to residential development consisting of 3,760 acres or 65% of the City. The remaining land use in the City is composed of 1,680 acres of open space or 29% of the jurisdictional area, 255 acres of commercial use or 4.5% of the jurisdictional area, and 86 acres of agricultural use or 1.5% of the jurisdictional area. Figure 1-2 is a map of the City of Walnut's land use.

Figure 1-1: San Gabriel River Watershed Management Area

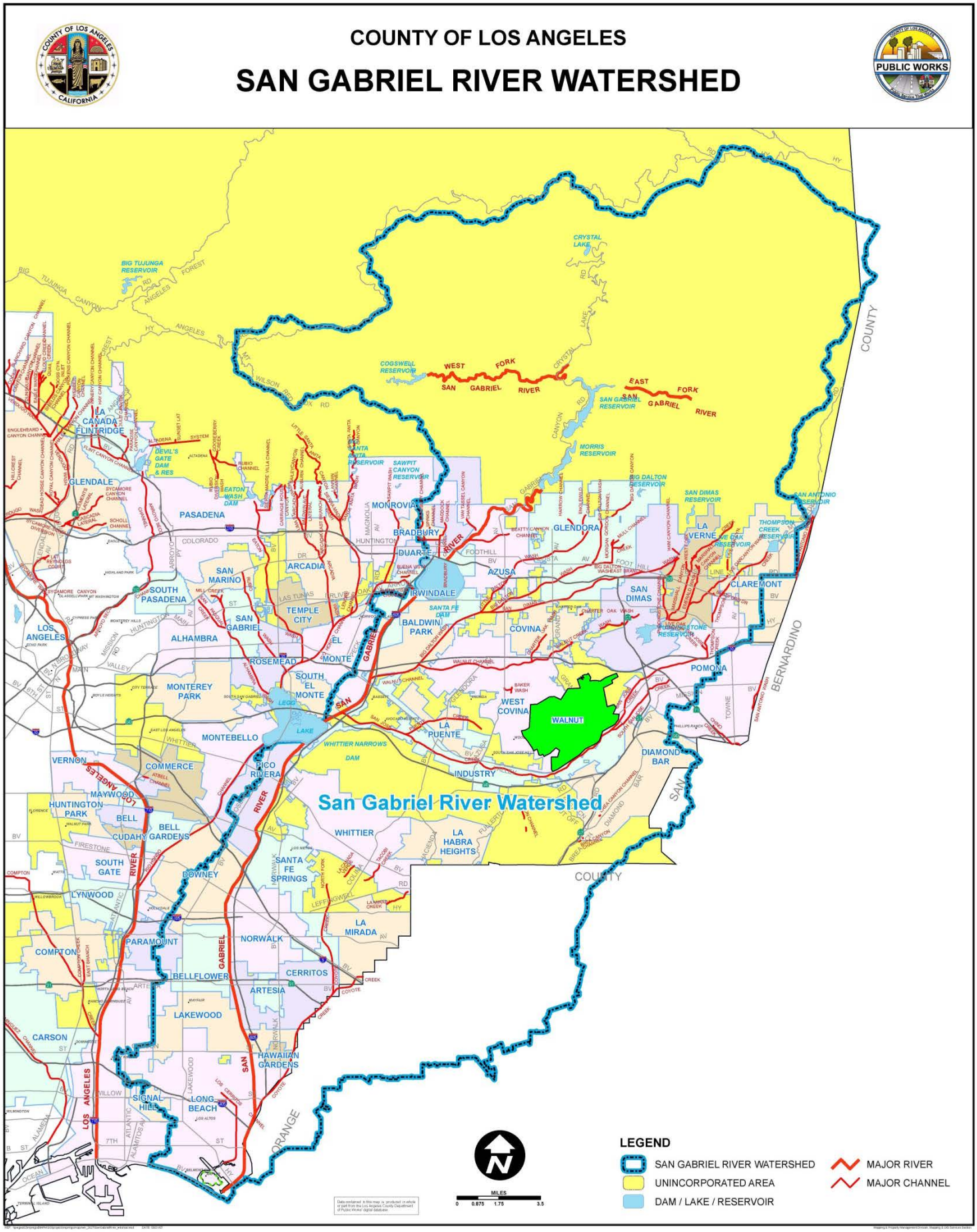


Figure 1-2: City of Walnut Land Use Map

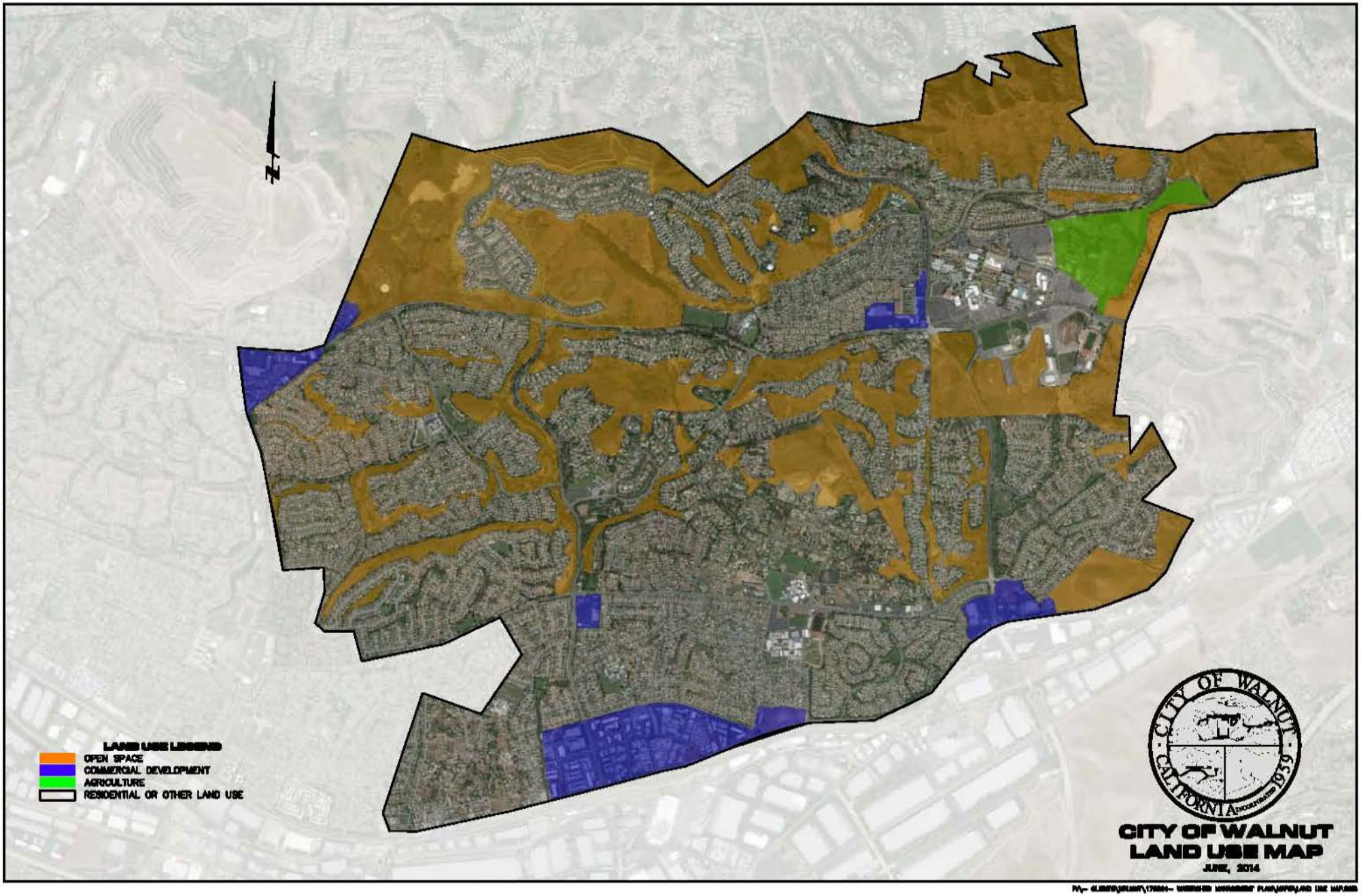


Table 1-1 compares the land uses of the City of Walnut with those of the entire San Gabriel River Watershed.

Table 1-1

Watershed Land Use		
Land Use	City of Walnut	San Gabriel River Watershed
Residential	65%	26%
Open Space	29%	50%
Agriculture/Other	1.5%	9%
Commercial/Industrial	4.5%*	15%

**There are no current industrial land uses in the City of Walnut.*

The City boundary extends from the San Jose Hills to the north to Valley Boulevard in the south, and from Nogales Street to the west to the easterly boarder of the City with unincorporated areas of Los Angeles County and the City of Pomona. Other cities identified as MS4 Permittees bordering or in close proximity to the City of Walnut include: City of La Puente, City of Industry, City of West Covina, City of Diamond Bar, City of Pomona, and unincorporated areas of Los Angeles County (see Figure 1-1 for San Gabriel River Watershed Map).

1.4- Walnut Watershed Characteristics

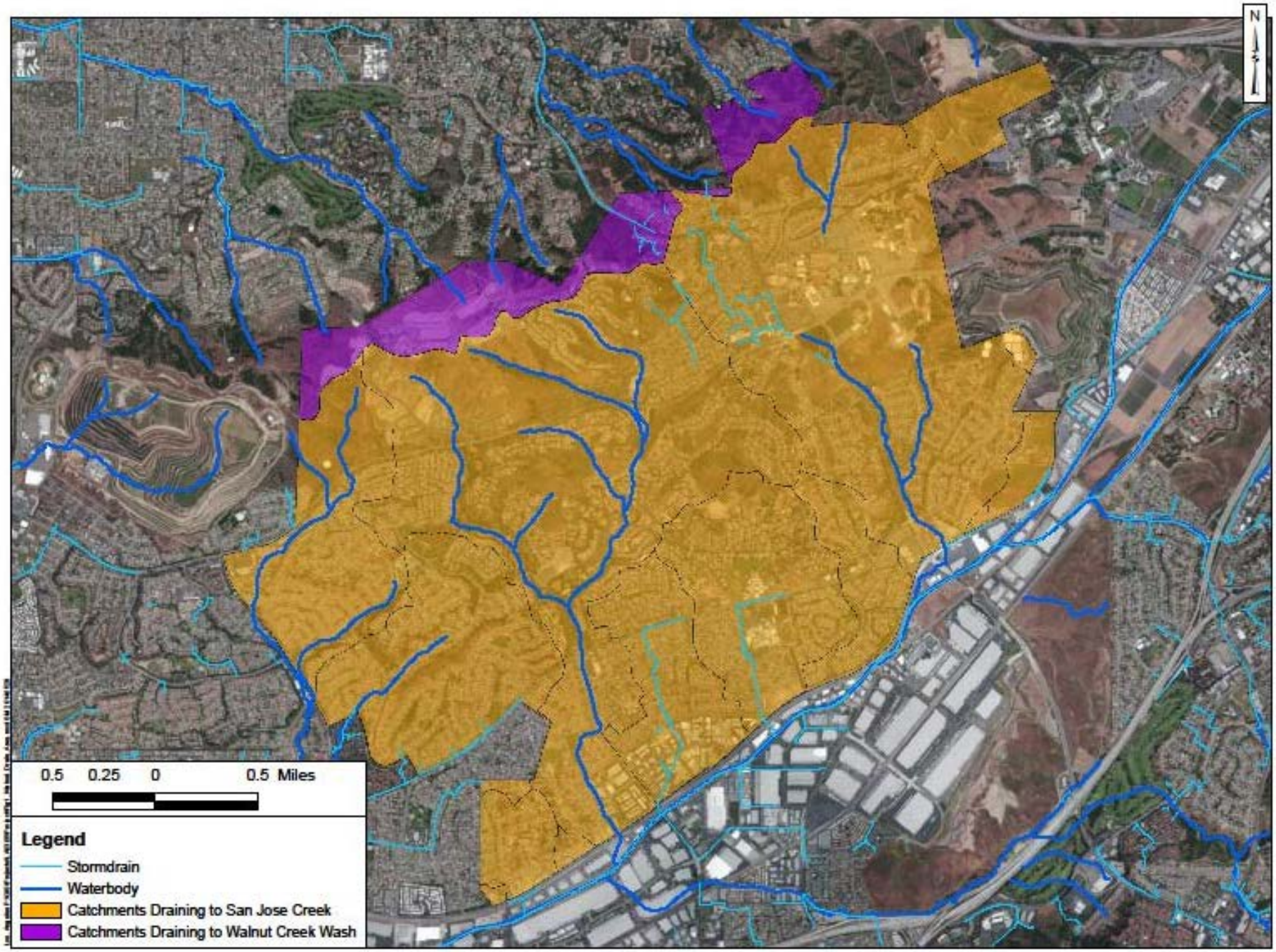
The City of Walnut drains to the San Gabriel River Watershed and is part of the San Gabriel River Watershed Management Area (SGRWMA). The City drains to the San Gabriel River through two sub-watersheds in the SGRWMA. Reach 1 of the San Jose Creek is located to the south of the City and Walnut Creek Wash is located to the north. Both water bodies connect to Reach 3 of the San Gabriel River which runs parallel with State Route 605 and eventually drains directly to the Pacific Ocean. Figure 1-3 shows the two respective watersheds, storm drains, and water bodies in the general vicinity of the City.

1.4.1- San Jose Creek Reach 1

Due to the topography and location of the San Jose Hills formation, approximately 93% of the City drains to the South and is tributary to Reach 1 of the San Jose Creek. Storm water and non-storm water flows are captured by catch basins and then carried through a network of storm drains and open channels to multiple outfalls located in San Jose Creek Reach 1.

The San Jose Creek transports runoff for the City of Walnut's outfalls approximately 12 miles to its confluence with San Gabriel River Reach 3 just north of the interchange of State Route 60 and State Route 605. The San Jose Creek is channelized from the area adjacent to the City of Walnut to approximately three quarters of a mile east of Workman Mill Road where the Creek is transitioned to soft bottomed. A number of other upstream and downstream permittees contribute runoff that reaches Reach 1 of the San Jose Creek in addition to the City of Walnut. The Creek extends north east to connect with Thomson Wash which originates at easterly limits of Los Angeles County. Thompson Creek Dam is located at the very top of Thomson Wash.

Figure 1-3: City of Walnut Drainage Areas



1.4.2- Walnut Creek Wash

The remaining 7% of the City of Walnut's jurisdictional area drains to the Walnut Creek Wash. A majority of the City's tributary area to Walnut Creek Wash watershed is open space with a small portion of residential development. With a majority of the tributary area land use categorized as open space, MS4 discharges originating from this area are minimal. The existing MS4 flows drain to the north of the City into unincorporated Los Angeles County and eventually into Walnut Creek Wash.

Walnut Creek Wash originates at the Puddingstone Dam, and is soft bottom up to a quarter mile east of Covina Hills Road where it transitions to a channelized wash. The channelized wash returns to a soft bottom channel at Baldwin Park Boulevard and continues as such to confluence with the San Gabriel River. The confluence of Walnut Creek Wash and the San Gabriel River is located south west of the interchange of State Route 10 and State Route 605. The City of Walnut contributes a very small portion of flow to the Walnut Creek Wash which is primarily composed of flow from a number of other permittees in the SGRWMA.

1.4.3- City of Walnut MS4 System

The City of Walnut's storm drain system consists of 644 City owned catch basins and 142 Los Angeles County Flood Control owned catch basins. A majority of the City's storm drain system outlets connect directly to Reach 1 of the San Jose Creek.

There is one storm drain outfall that contains flows originating from the Walnut Creek Wash watershed area of the City of Walnut. This singular outfall is an underground storm drain that drains to the north of the City into unincorporated Los Angeles County and eventually into Walnut Creek Wash. The referenced storm drain carries a relatively small amount of the total City run off and has 13 catch basins connected the line from the City of Walnut.

There are two open soft bottom creeks in the City which for much of their extents run in or adjacent to parks. Lemon Creek drains portions of the western side of the city and begins in the San Jose hills in the Vicinity of the Three Oaks Development and extends south to its confluence with Reach 1 of the San Jose Creek. Snow Creek begins near the intersection of Grand Avenue and Temple Avenue at Mount. San Antonio Community College located in the north eastern section of the City. Snow Creek travels south along Grand Boulevard to just south of Snow Creek Park where it connects to an underground reinforced concrete box (RCB). The RCB eventually connects directly with Reach 1 of San Jose Creek in the City of Industry near the intersection of Somerset Drive and Valley Boulevard.

1.5- Established Water Quality Targets

It is the intent of the IMP to provide assessable water quality monitoring data for use in determining the effectiveness of the WMP and for determining compliance with effluent limitations, WQBELS or other numeric targets as established by TMDLs or the Los Angeles Region Basin Plan.

Table 1-1 identifies all applicable water bodies and their respective pollutant water quality targets that have been established. These pollutants will be the central focus of the monitoring program in addition to the standard base line water quality related parameters required under the MS4 Permit and the first year monitoring program required pollutants identified in Table E-2 of Attachment E in the MS4 Permit (See Attachment A).

Table 1-1

Watershed Specific Pollutants with Established Numeric Targets			
Water Body	**TMDL**	**303(d) List**	**Other Pollutants of Concern**
San Gabriel River Reach 2	• Lead	• Coliform Bacteria • Cyanide	• None Identified
San Jose Creek Reach 1	• Selenium	• Ammonia • Coliform Bacteria • pH • Total Dissolved Solids • Toxicity	• None Identified
Walnut Creek Wash	N/A	• Benthic-Micro invertebrate Bio-assessments • Indicator Bacteria • pH	• None Identified

The City of Walnut is subject to one TMDL. The San Gabriel River and Impaired Tributaries Metals and Selenium TMDL was established by the USEPA on March 26, 2007 and is focused on metals and selenium that have been identified as exceeding allowable concentrations in the San Gabriel River and Tributaries. Table 1-2 identifies the TMDL established water body specific pollutant and the allowable WLA for wet and/or dry weather conditions.

Table 1-2

San Gabriel River and Impaired Tributaries Metals and Selenium TMDL			
Water Body	**Pollutant**	**Weather Conditions**	**WLA**
San Gabriel River Reach 2	Lead	Wet	81.34 µg/L x Daily Storm Volume (L)
San Jose Creek Reach 1	Selenium	Dry	5 µg/L

The San Gabriel River and impaired Tributaries Metals and Selenium TMDL was established by the USEPA and does not include a timeline for compliance with the WLAs nor does it have any interim milestones established. The City of Walnut proposed BMP implementation schedule and Compliance is identified in the WMP. The proposed compliance schedule is based on the implementation schedule of the BMP program.

Other pollutants required to be included in the monitoring program have been identified by the CWA 303(d) list as creating impairment on the identified receiving water bodies. WLAs for the 303(d) list pollutants are based on the limits identified in the Basin Plan for the Los Angeles Region with the intent of preserving beneficial uses of the specific water body listed.

The City of Walnut drains directly to Reach 1 of the San Jose Creek and the Walnut Creek Wash. Both water bodies have been identified on the 303(d) list as having pollutants found during water quality investigations. Table 1-3 identifies all of the applicable numeric targets for 303(d) listed pollutants that will be monitored under this plan. Numeric targets are established by the Los Angeles Region Basin Plan.

Table 1-3

Numeric Targets for 303(d) Listed Pollutants		
Water Body	**303(d) Listed Pollutant**	**WQBEL**
San Jose Creek Reach 1	Ammonia	LA Region Basin Plan Table 3-2, 3-4
San Jose Creek Reach 1	Coliform Bacteria	See Table 1-4
San Jose Creek Reach 1	pH	6.5-8.5
San Jose Creek Reach 1	TDS	750mg/L
San Jose Creek Reach 1	Toxicity	See Section XIII of MS4 Permit Attachment E, Attachment B of this document
Walnut Creek Wash	Benthic-Miro Invertebrate Bio-assessment	See Attachment C
Walnut Creek Wash	Indicator Bacteria	See Table 1-4
Walnut Creek Wash	pH	6.5-8.5

Table 1-4

Coliform Bacteria WQBEL		
Water Body	Recreational Use	Bacteria WQBEL
San Jose Creek Reach 1	REC1(P),High Flow Suspension	4000/100ml Not more than 10% allowed to exceed in 30 days
Walnut Creek Wash	REC1 (I), REC2(I)	400/100ml Not more than 10% allowed to exceed in 30 days

Other potential pollutants of concern have not been identified due to a lack of conclusive monitoring data. It is anticipated that if other pollutants of concern exist, the inclusion of Table E-2 of Attachment E in the MS4 permit with first year monitoring requirements will serve as an adequate process for screening and identifying the other unidentified pollutants of concern should they exist in MS4 discharges from the City of Walnut.

2.0- Receiving Water Monitoring

The primary goal of receiving water monitoring is to determine whether the applicable receiving water quality goals are being achieved. MS4 discharges can impact the receiving water quality and potentially contribute pollutants mobilized by storm water or non-storm water flows captured the MS4. Over time, results of the monitoring will be analyzed for trends in pollutant concentrations in the receiving water body. As a result of MS4 discharges exceeding allowable pollutant limits, beneficial uses identified in the Los Angeles Region Basin Plan may be impacted. Results from the receiving water monitoring program will also be used to determine if beneficial uses are fully supported as determined by water chemistry as well as aquatic toxicity and bio-assessment monitoring.

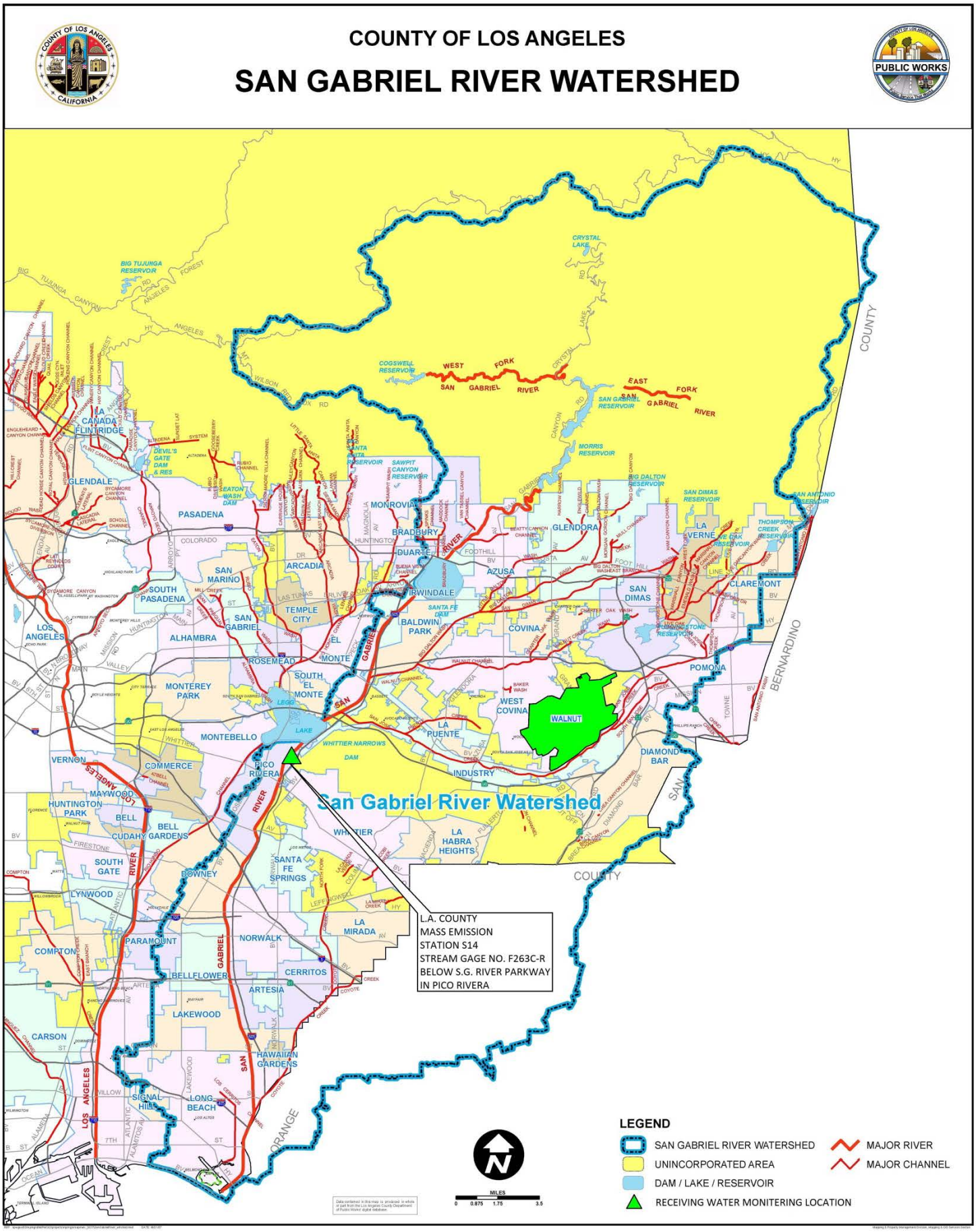
The City of Walnut is located in the San Gabriel River Watershed Management Area. The City primarily drains to Reach 1 of the San Jose Creek with a relatively small portion of the City draining to Walnut Creek. Both the San Jose Creek and Walnut Creek are tributary to Reach 3 of the San Gabriel River which eventually flows into the Pacific Ocean.

Permittees have been directed to utilize previously designated mass emission stations for receiving water sampling. The closest station with respect to the City of Walnut is located in Reach 2 of the San Gabriel River. Los Angeles County monitoring station S14 is located below San Gabriel River Parkway in Pico Rivera. The upstream tributary area is 450 square miles at this location. The City of Walnut is directly tributary to San Jose Creek Reach 1 which is located upstream of monitoring station S14. Figure 2-1 notes the approximate location of station S14 in on a map of the San Gabriel River Watershed Map developed by Los Angeles County. Receiving water monitoring data from station S14 will be utilized in this IMP, however due to vast size of area that drains to the station, all data will be supplemental to results of outfall monitoring from the City. The City of Walnut reserves the right to change the receiving water monitoring location should a more representative alternative location be identified at a later date. Changes to the proposed receiving water monitoring location will be at the discretion of the City.

2.1- TMDL Monitoring

TMDL monitoring and tracking is a critical component of the IMP. The City of Walnut is named in Table K-9 of the MS4 Permit as being subject to the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL. The San Gabriel River Metals TMDL is a USEPA established TMDL and does not have an implementation schedule for complying with the recommended Waste Load Allocations. Table 1-2 highlights the applicable TMDL Waste Load Allocations (WLAs) established for the City of Walnut. TMDL WLAs have been established for San Jose Creek Reach 1 and San Gabriel River Reach 2. As previously mentioned, the City plans to utilize the monitoring data from mass emissions station S14 identified in Figure 2-1 as a supplement to the data that is gathered directly from the City's major outfalls. This arrangement will allow the City to better establish its direct contribution to water quality in the watershed.

Figure 2-1: Mass Emission Monitoring Station Location



2.2- Wet Weather Receiving Water Monitoring Requirements

Minimum required receiving water monitoring frequencies are defined in section VI.C of Attachment E in the MS4 Permit. Wet weather is defined as when the flow with the receiving water is at least 20% greater that the base flow or as defined in an approved IMP, CIMP or TMDL. In an effort to simplify the wet weather definition the City of Walnut will utilize the definition in Attachment A of the MS4 Permit, which defines the wet season as the time period between October 1st and April 15th unless a storm event that is qualified to be targeted as the first event of the year is forecasted within a reasonable amount of time prior to October 1st.

Wet weather monitoring will occur at least three times per year for all applicable parameters with the exception for aquatic toxicity. Aquatic toxicity monitoring will be conducted at a minimum of twice per year. The first wet weather event with a predicted rainfall of .25 inches with a 70% probability 24 hours prior to rain fall will be targeted for monitoring. At a minimum two additional rainfall events with a minimum separation of three dry days (less than .1 inch of rain per day) between monitoring will be monitored to meet the minimum requirement of three storm events per year. Receiving water monitoring shall be coordinated to start as soon as possible following storm water outfall monitoring to better reflect the potential impact from MS4 discharges.

2.3- Dry weather Receiving Water Monitoring Requirements

Dry weather monitoring requirements are defined in section VI.D of Attachment E in the MS4 Permit. Monitoring shall take place a minimum of two times per year for all parameters, or more if required by a TMDL monitoring plan. At least one of the monitoring events shall take place during the historically driest month of the year. Typically the driest month of the year is in August, which will be utilized for the time period of which at least one of the monitoring events occurs. Receiving Water Monitoring Parameters for monitoring San Gabriel River Reach 2 are identified in Table 2-1.

Table 2-2

Receiving Water Monitoring Parameters		
Water Body	**Monitoring Parameter**	**Source of Monitoring Requirement**
San Gabriel River Reach 2	Flow	Minimum Parameter
	Lead	TMDL
	Selenium	TMDL
	Coliform Bacteria	303(d)
	pH	Minimum Parameter
	*Toxicity	Minimum Parameter
	Cyanide	303(d)
	Total Suspended Solids	Minimum Parameter
	Hardness	Minimum Parameter
	Dissolved Oxygen (DO)	Minimum Parameter
	Temperature	Minimum Parameter
	Specific Conductivity	Minimum Parameter
	**Additional Screening Parameters	Minimum Parameter

** Per section VI.C.d.vi of attachment E of the MS4 Permit, aquatic toxicity is only required to be monitored twice per year*

*** Additional Screening Parameters are included in Appendix A of this document. Per section VI.C.e of attachment E of the MS4 Permit, these parameters are only required to be monitored in the first year. If not detected no further monitoring is required.*

Table 2-3

Receiving Water Beneficial Uses		
Beneficial Use	**Water Body**	
	San Gabriel River Reach 2	**San Jose Creek Reach 1**
MUN	P(1)	P(1)
GWR	I	I
REC1	E(2)	P(2)
REC2	E	I
WILD	E	E
WARM	I	I
COLD		
RARE	E	
WET		

P: Potential beneficial use

I: Intermittent beneficial use

E: Existing beneficial use

(1) Use may be reviewed by SWRCB

(2) Access restricted by LACDPW

3.0- Outfall Monitoring

Outfall monitoring will play a key role in determining the water quality of both storm water and non-storm water discharges from the City of Walnut's MS4. Similarly to the receiving water monitoring program, the outfall monitoring program will be utilized to determine whether the applicable water quality goals are being achieved. MS4 discharges can impact the receiving water quality and potentially contribute pollutants mobilized by storm water or non-storm water flows deposited to the receiving water body. Over time, results of the monitoring will be analyzed for trends in pollutant concentrations. The program will also be utilized in the elimination of prohibited non –storm water discharges.

The City of Walnut has conducted an inventory of its MS4 outfalls based on storm drain as-built records from the City's files and the Los Angeles County Storm Drain Records. The findings from the MS4 outfall inventory process are outlined in Table 3-1.

3.1- Storm Water Outfall Based Monitoring

Storm water outfall monitoring will be utilized to determine compliance with wet weather TMDL and WQBEL requirements. The outfalls chosen for monitoring have representative drainage areas for the land uses found within the City of Walnut.

3.1.1- Outfall Monitoring Site Selection

Outfall locations selected for storm water monitoring were considered based on a number of criteria. Per the MRP section of the MS4 Permit, the City of Walnut must monitor at least one location per sub watershed drainage area (HUC-12). Within the jurisdictional boundaries of the City of Walnut there are three HUC-12 areas as shown in igure 3-1. The County of Los Angeles developed HUC-12 equivalent areas which are based on more detailed information of the existing topography and storm drain systems. When comparing both sub-watershed boundaries it is apparent that some differences exist, however in regards to the monitoring requirement of one outfall per sub-water shed, there effectively is no difference in the number of HUC-12 boundaries in the City's jurisdiction. To simplify the outfall location selection, the City of Walnut will utilize the USGS established HUC-12 boundaries per the requirements of the MS4 Permit for determining locations.

Other parameters that were taken into account when selecting the storm water outfall monitoring locations includes correlation between the outfall drainage area land use and the land uses within the City's jurisdiction. A majority of the City is devoted to signal family residential development and open space. Figure 3-3 is a map of the land uses with in the City. Establishing an outfall that accurately reflects the City's land use limits the available monitoring sites to a few key points. Land uses within individual HUC-12 sub watersheds with in the City's boundaries do not reflect the City's land use in all cases. Due to the limited commercial and agricultural land uses in the City and the centralized concentration of open space, not all of the potential HUC-12 based outfall monitoring locations will reflect the City's overall land use.

Table 3-1

City of Walnut Outfall Inventory					
ID No.	**Outlet Coordinates**	**Outlet Location Description**	**Plan Reference No.**	**Size (in)**	**Outlet Material**
1	34°00'12.04"N117°52'15.01"W	250' E/Int. of E Valley Blvd and Fairway Dr	RDD 0127	48	RCP
2	34°00'41.63"N 117°52'25.06"W	80' E/Int. of E Calle Baja Dr and Camino De Teodoro	MTD 0199	21	RCP
3	34°00'42.16"N 117°52'45.61"W	W/Int. of La Puente Rd and Paseo Del Caballo	MTD 0201	60	RCP
4	34°00'47.46"N 117°52'48.96"W	S/Int. of Avenida Del Sol and Acaso Dr	MTD 0829	≤36	RCP
5	34°00'59.23''N 117°53'03.07''W	150' S/Int. of Bel Air Dr and Mandeville Dr	MTD 907-1	-	-
6	34°00'59.33''N 117°53'03.76''W	150' S/Int. of Bel Air Dr and Mandeville Dr	MTD 907-1	72	RCP
7	34°01'04.22''N 117°53'17.69''W	150' N/Int. of Shakespeare Dr and S Nogales St	MTD 404	24	RCP
8	34°01'12.87''N 117°53'24.73''W	Int. of Shadow Oak Dr and S Nogales St	MTD 404	60	RCP
9	34°01'15.19''N 117°53'26.40''W	225'N/Int. of Shadow Oak Dr and S Nogales St	MTD 404	18	RCP
10	34°01'22.37''N 117°53'32.12''W	200' S/Int. of Sutter Creek Dr and Nogales Ave	MTD 404	18	RCP
11	34°01'23.71''N 117°53'34.39''W	Int. of Sutter Creek Dr and Nogales Ave	MTD 918	27	RCP
12	34°14'18.60''N 117°53'33.87''W	250' N/Int. of Sutter Creek Dr and Nogales Ave	MTD 404	78	RCP
13	34°01'40.20''N 117°53'37.36''W	100' W/Int. of Amar Rd and S. Manu Ln	MTD 0657	18	RCP
14	34°01'40.20''N 117°53'37.36''W	Int. of Amar Rd and S Manu Ln	MTD 0657	30	RCP
15	34°01'45.87''N 117°53'22.89''W	Int. of Amar Rd and E Magdalena Rd	MTD 0685	36	RCP
16	34°03'06.60''N 117°51'45.75''W	N Grand Ave at N City Limit	RDD 0058	33	RCP
17	34°01'56.51''N 117°49'33.24''W	1,350' E/Int. of E Valley Blvd and Faure Ave	RDD 0251	30	RCP
18	34°01'41.16''N 117°50'03.36''W	Snow Creek connection; 500' E/Int. of E Valley Blvd and N Grand Ave	RDD 0251	30	RCP
19	34°01'32.71''N 117°50'12.92''W	Snow Creek connection; 650' W/Int. of E Valley Blvd and N Grand Ave	MTD 1675	30	RCP
20	34°01'23.69''N 117°50'16.68''W	Int. of Somerset Dr and Valley Blvd	MTD 1146	48	RCP
21	34°01'21.48''N 117°50'17.55''W	San Jose Creek; 280' S/Int. of Valley Blvd and Somerset Dr	San Jose Creek	18	RCP
22	34°01'10.97''N 117°50'27.96''W	400' S/W/Int. of Valley Blvd and Brea Cyn Rd	MTD 1146	24	RCB
23	34°01'05.99''N 117°50'38.95''W	550' E/Int. of Valley Blvd and Morningside Dr	MTD 1146	60	RCP
24	34°00'56.41''N 117°50'59.82''W	Int. of Valley Blvd and Pierre Rd	BI 8301 - Line A	102	RCP
25	34°00'35.12''N 117°51'30.68''W	Int. of Valley Blvd S Lemon Ave	RDD 0127	96	RCP
26	34°00'28.29''N 117°51'44.1''W	Lemon Creek culvert; W/Valley Blvd and Lemon Creek Dr	-	168	RCB

See Figure 3-2 for a map of these locations

Prospective storm water monitoring outfall locations were first selected based on HUC-12 boundaries. The list of outfalls was further refined on the basis of having a similar representative land use in the drainage area as the land use in the city. The best available outfall of each HUC-12 area was then selected for further investigation.

Storm water outfall monitoring locations selected by the City ideally do not include drainage from adjacent jurisdictions. However, the intermingling design of the MS4 system does not always allow this to be possible. Due to the topography of the City, there are only a few locations that drain into the City from other jurisdictions. Conditions in the City of Walnut yielded only one of the potential storm water monitoring locations as being identified to include storm water from jurisdictions.

The final parameters reviewed in selecting the proposed storm water outfall location were the location conditions and potential safety concerns. Ideal outfall monitoring sites would allow for safe access and accurate sampling practices with little impact to surrounding communities and traffic.

Outfall monitoring locations selected to be included in this portion of the IMP are at manmade structures, and are relatively accessible. None of the selected monitoring locations are located in the path of traffic, however to allow for safe access, adequate safety practices and traffic control measures must be utilized when field crews are conducting sampling or maintenance. The proposed storm water outfall monitoring locations are listed in Table 3-2 below. Figure 3-2 illustrates the geographical locations on a map of the City.

Table 3-2

Storm Water Outfall Monitoring Locations

Outfall Number	Receiving Water Body	Location Description	Latitude Longitude	HUC-12	Size	Shape
M1	San Jose Creek Reach 1	N/E Corner of Grand Ave and La Puente Rd.	34°01'53.82" N 117°50'15.35" W	18071060502	9'2"x11'	RCB
M2	San Jose Creek Reach 1	S/W Corner of Nogales St. and Shakespeare Dr.	34°01'00.52" N 117°53'17.41" W	18071060501	108"	RCP
M3	Walnut Creek Reach1	Center median of Grand Ave and N'ly City Limits	34°03'06.32" N 117°51'45.23" W	18071060402	33"	RCP

Storm water outfall monitoring site M1 will serve as a primary monitoring location for a majority of the City of Walnut. M1 is the largest of the selected monitoring site and has a drainage area of approximately 1,315 Acres (23% of the City). M1 is located approximately 325' north of La Puente Rd. on the east side of Grand Ave. in Snow Creek Park. The point where monitoring will take place is a manhole to the 9'2" X 11' reinforced concrete box. The point of monitoring is located approximately 1,500' north of the City limits. Further upstream of the selected location is an open earthen channel commonly referred to as Snow Creek. Further downstream from the monitoring location, the RCB merges with Reach 1 of the San Jose Creek. Table 3-3 demonstrates that the drainage area to monitoring site M1 is relatively similar to the land use in the City of Walnut.

Figure 3-1: City of Walnut HUC-12 Boundaries

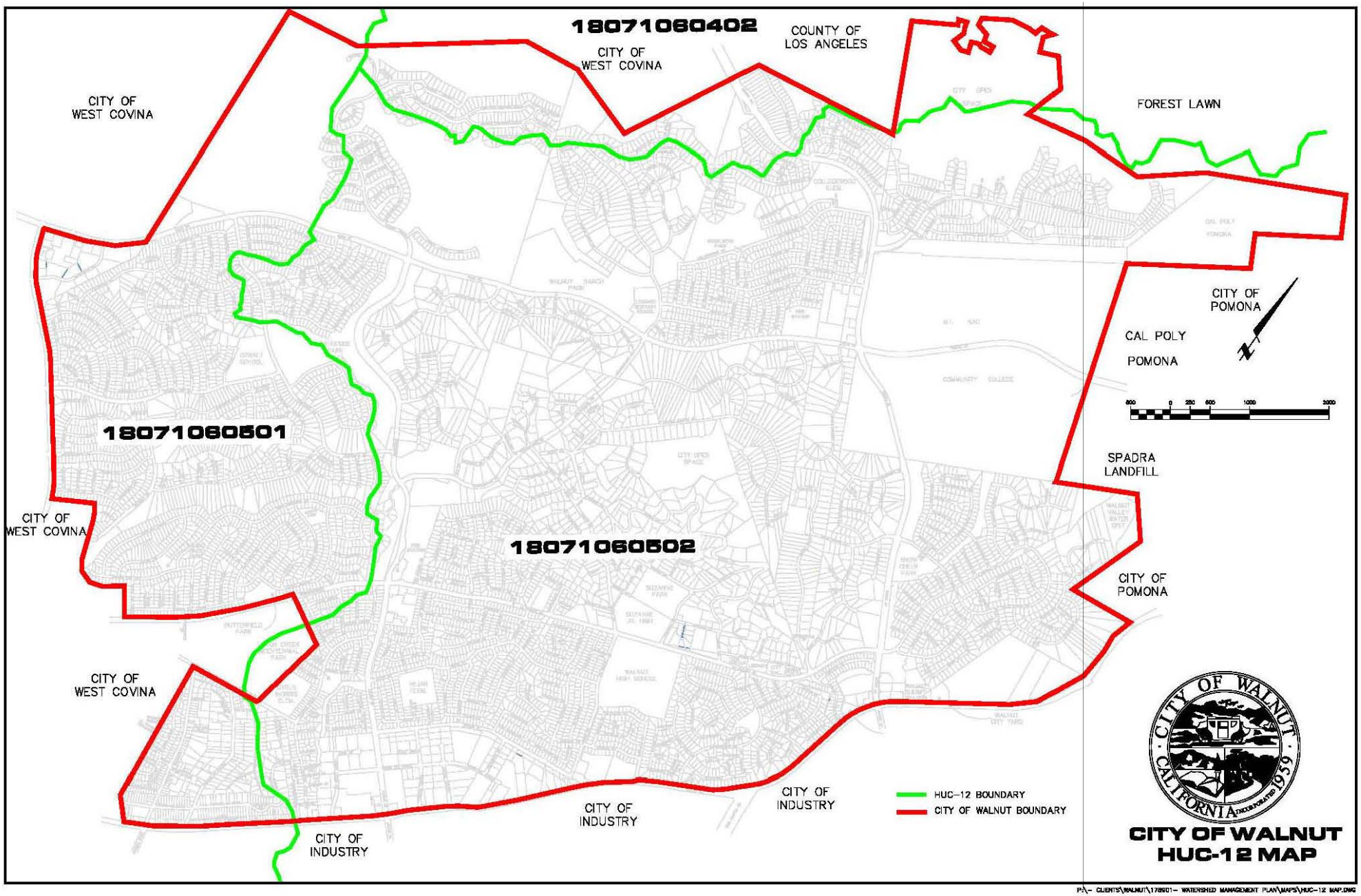


Figure 3-2: Outfall Inventory Map

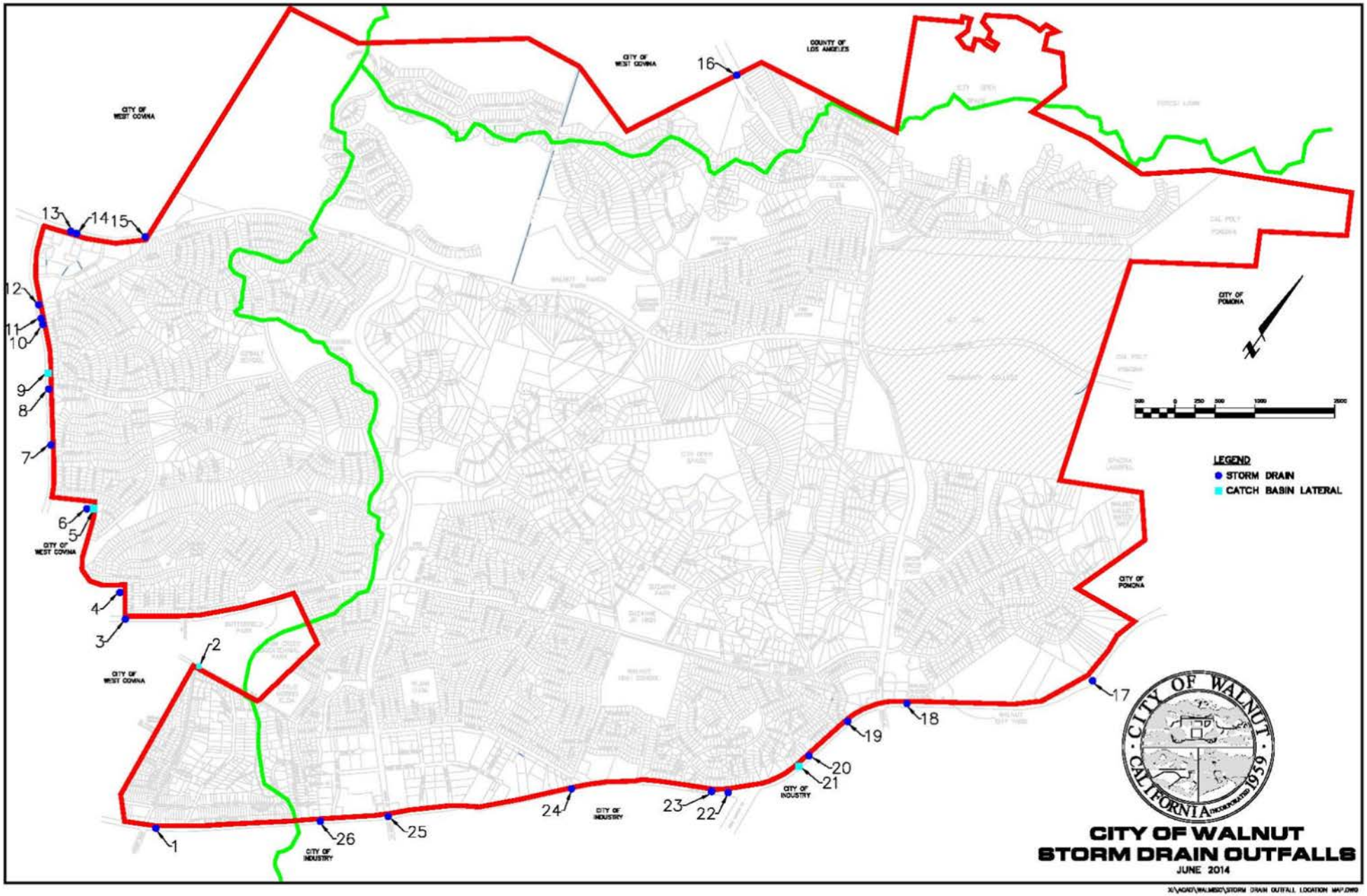


Table 3-3

Land Use in Drainage Area for Monitoring Location M1		
Land Use Type	**M1 Drainage Area Land Use**	**City of Walnut Drainage Area**
Commercial	4.5%	4.5%
Agriculture	6.5%	1.5%
Open Space	26%	29%
Residential/Other	63%	65%

Storm water outfall monitoring location M2 may serve as an alternative monitoring site for the City. M2 is the second largest of the selected storm water monitoring sites and has a drainage area of 855 Acres (15% of the City). M2 is located at the south western corner of Nogales Street and Shakespeare Drive at an outlet structure to a 108" RCP storm drain. The outlet site may also be identified as the starting point for the Giano Channel. The monitoring location is located approximately 200' outside of the City limits. This particular location transports storm water from both the City of Walnut and the City of West Covina. Should the mixed storm water sources cause issue with other sites are available for this HUC-12, however the alternative sites have a drainage area that is less reflective of the City's land use. The table below demonstrates the similarities of the respective land use for the drainage area of monitoring site M2 and the land use in the City of Walnut.

Table 3-4

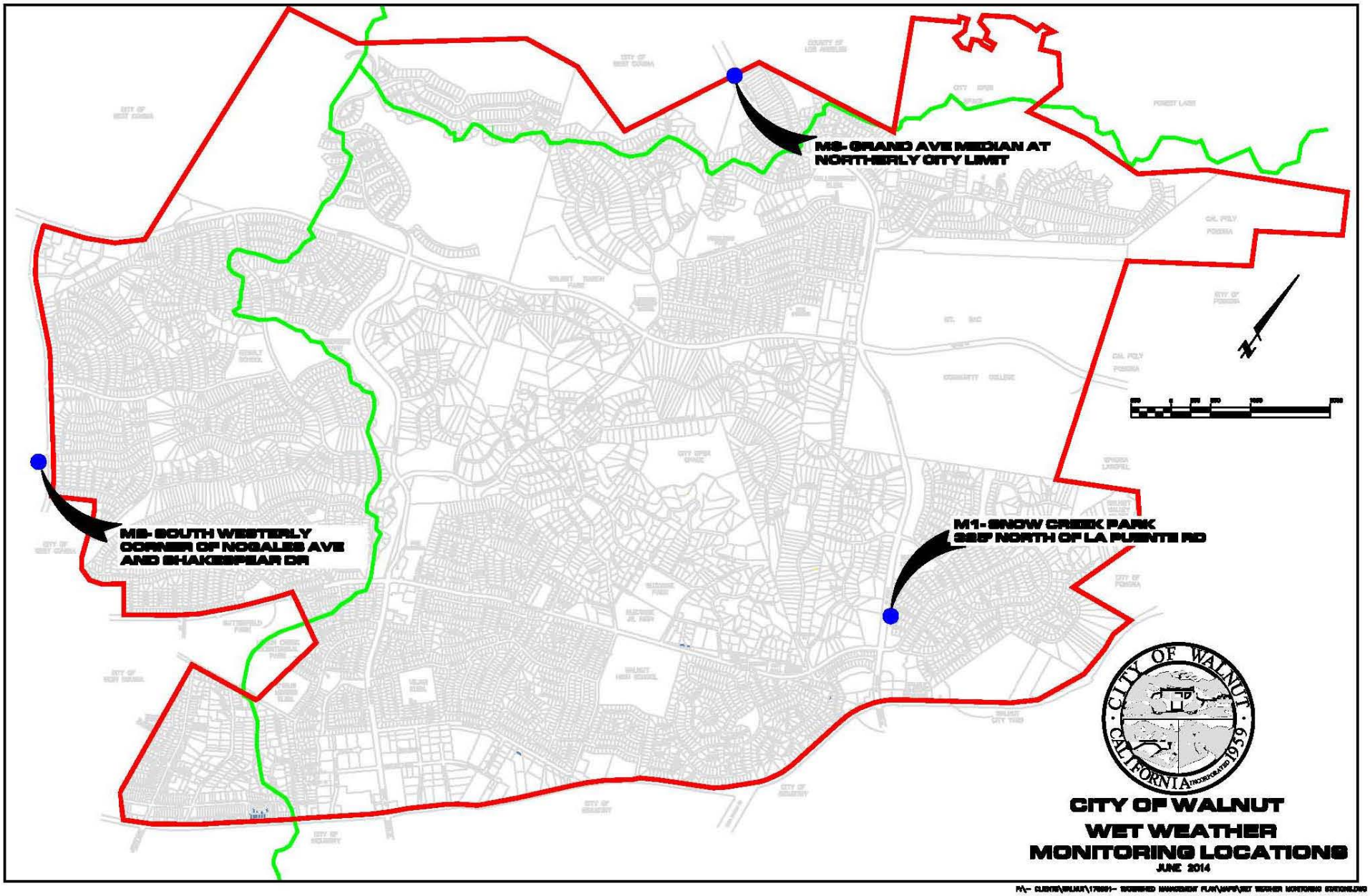
Land Use in Drainage Area for Monitoring Location M2		
Land Use Type	**M2 Drainage Area Land Use**	**City of Walnut Drainage Area**
Commercial	9.5%	4.5%
Agriculture	0.0%	1.5%
Open Space	22.5%	29%
Residential/Other	68%	65%

Storm water outfall location M3 will serve as the storm water monitoring location for the northerly portion of the City. This drainage area is the only are in the City of Walnuts jurisdictional area that drains to the Walnut Creek. The approximate drainage area for M3 is 56 Acres (.9% of the City). The scale of storm water flow that is transported by the storm drain at M3 is much lower than the other two sites, however this site is proposed because it is the only location where flow is draining from the City of Walnut to the Walnut Creek watershed. The monitoring site is located in the center median of Grand Avenue approximately 20' away from the City limit in the jurisdictional area of the City of Walnut. The outfall is a manhole to a 30" RCP. Table 3-5 demonstrates the land use differences between the City of Walnut and the drainage area of M3. The land use is not representative of the City of Walnut, but M3 is the only site for monitoring that exists for the Walnut Creek watershed.

Table 3-5

Land Use in Drainage Area for Monitoring Location M3		
Land Use Type	**M1 Drainage Area Land Use**	**City of Walnut Drainage Area**
Commercial	0.0%	4.5%
Agriculture	0.0%	1.5%
Open Space	26%	29%
Residential/Other	54%	65%

Figure 3-4: Monitoring Locations



The City of Walnut proposes to monitor one outfall location for each of the sub watersheds that it is tributary to instead of the HUC-12 based requirement. The locations proposed to be monitored by the City of Walnut only include M1 and M3. It is anticipated that the results from M1 would be similar to those found at M2 and both drain to Reach 1 of the San Jose River. Monitoring site M1 offers a better representation of land use and larger drainage area than M2. The City may consider monitoring at all three wet weather outfall monitoring locations at a later date during the permit term, however for the first year and foreseeable future of the monitoring program the City will only monitor outfalls M1 and M3 for storm water flows as an attempt to maximize available funds for monitoring an minimize redundant data collection.

3.1.2 Monitoring Requirements for Storm Water Outfall Monitoring

Section VIII.B of Attachment E in the MS4 Permit outlines the minimum requirements for Storm water outfall monitoring. Storm water discharges shall be monitored a minimum of three times per year for all parameters except for aquatic toxicity. Storm water monitoring shall take place during wet weather conditions. Wet weather conditions are defined as when the receiving water is flowing at least 20% greater than the base flow or as otherwise defined by a TMDL monitoring plan or this document. Monitoring events shall target the first qualifying wet weather event of the season and at least two additional events in the same season. The first wet weather event to be targeted shall be forecasted at least 24 hours in advance with 70% probability of rainfall of at least .25- inches. The two additional events to be monitored shall be separated by a minimum of three dry condition days between events. Monitoring Parameters are identified in Table 3-6.

Table 3-6

Outfall Monitoring Parameters	
Monitoring Parameter	**Source of Monitoring Requirement**
Flow	Minimum Parameter
Lead	TMDL
Selenium	TMDL
Coliform Bacteria	303(d)
pH	Minimum Parameter
*Toxicity	Minimum Parameter
Cyanide	303(d)
Total Suspended Solids	Minimum Parameter
Hardness	Minimum Parameter
Dissolved Oxygen (DO)	Minimum Parameter
Temperature	Minimum Parameter
Specific Conductivity	Minimum Parameter
**Additional Screening Parameters	Minimum Parameter

** Per section VI.C.d.vi of attachment E of the MS4 Permit, aquatic toxicity is only required to be monitored twice per year, Aquatic Toxicity Monitoring Methods shall conform to section XII of Attachment E of the MS4 Permit.*

*** Additional Screening Parameters are included in Appendix A of this document. Per section VI.C.e of attachment E of the MS4 Permit, these parameters are only required to be monitored in the first year. If not detected no further monitoring is required.*

3.1.3- Storm Water Outfall Monitoring Sampling Methods

Sampling of storm water at outfalls will take place during the first 24 hours of an event or before the event ends if less than 24 hours. A minimum of three grab samples separated by 15 minutes of each hour for a 24 hour event or for the duration of the storm if less than 24 hours, will be taken to create a flow weighted composite sample of the discharge from an outfall. Continuous sampler equipment may be selected for use in this monitoring plan. Grab samples may be utilized for specific pollutants at the discretion of the sampling lab/consultant.

Sampling and analysis will be conducted by a contracted water sampling consultant. Tasks conducted by the consultant will conform to the following requirements which will be verified by the City:

- Consultants shall demonstrate that required pollution detection limits can be met with reasonable accuracy and precision.
- All equipment utilized in gathering and analyzing samples shall be cleaned and maintained in a manner that prevents sample contamination.
- Sample analysis shall be conducted in accordance with EPA established or Regional Board accepted methods and procedures applicable to pollutant(s) being analyzed.
- An adequate QA/QC program shall be in place to ensure precise and accurate results.

3.2- Non- Storm Water Outfall Based Monitoring

Non-storm water outfall monitoring will be utilized to determine compliance with dry weather TMDL and WQBEL requirements. Outfalls will be screened to determine the presence of dry weather flows. Dry weather monitoring will also be utilized to aid in the elimination of illicit discharges. Outfalls determined to have dry weather flows will be prioritized and investigated to determine the source of the flows and if the flows are categorized as a prohibited discharge.

3.2.1- Outfall Screening Procedure

Upon approval of the IMP, the City of Walnut will commence the screening process of outfalls for dry weather flows. Outfalls found to have consistent significant dry weather flows will be prioritized based on the receiving water, observed dry weather flow volume, observed water quality and the size of the outfall.

The initial stage of screening will be comprised of a visual assessment of all outfalls. This will take place during the first dry season that this IMP is in effect. Each outfall will be visited and inspected at least once for flow during dry weather conditions. If flow is present, pictures and general notes will be taken of the flow characteristics. Outfalls where dry weather flow is considered to be substantial will be visited at least two additional times to confirm initially observed flow characteristics are consistent.

Each outfall found to have significant dry weather flows shall be recorded and tracked over the duration of the MS4 Permit. Field inspection reports shall be kept on file in an electronic format for future reference. Field reports shall include the following information at a minimum.

- Date and Time of Visual inspection
- Outfall ID Number (Reference Outfall inventory)
- Outfall Structure Description
- Receiving Water Description at Discharge Point
- Latitude/Longitude
- Nearest Street Address
- Parking, Access, and Safety Considerations
- Photographs of Outfall
- Photographs of Non-storm Water Discharge
- Estimated Discharge Rate
- All Diversions Upstream or Downstream of the outfall
- Observed Characteristics of Discharge

Following the initial visual screening process, the field reports of outfalls with non-storm water discharges will be compiled and reviewed for the purpose of prioritizing source investigations. The MS4 Permit requires that prioritization be determined by the classification parameters below. The prioritization levels have been classified in to tiers in ascending numeric values with Tier 1 being the first outfalls to be monitored.

Tier 1 Prioritization – Outfalls discharging directly to receiving waters with WQBELS or receiving water limitations in the TMDL provisions for which final compliance has passed.

Tier 2 Prioritization – All major outfalls and other outfalls that discharge to a receiving water subject to a TMDL shall be prioritized according to TMDL compliance schedules.

Tier 3 Prioritization – Outfalls to which monitoring data exists and indicate recurring exceedances of one or more of the Action Levels identified in Attachment G of the MS4 permit.

Tier 4 Prioritization - All other major outfalls identified to have significant non-storm water discharges.

Prioritization of outfall investigations within each Tier will be based on best professional judgment with flow volume, outfall drainage area, and observed discharge water quality among other parameters taken into account.

3.2.2- Source Investigation

Non-storm water outfall source investigations will be scheduled to ensure that at least 25% of the outfalls with non-storm water discharges will undergo a source investigation within three years of the effective date of the MS4 Permit (Effective Date December 28, 2013), and 100% complete within 5 years of the effective date of the permit.

Source investigations shall include both desktop level analysis of potential sources and field investigations to trace sources of dry weather flows. Based on the source investigation results the City of Walnut will proceed with actions described in Table 3-7.

Table 3-7

Dry Weather Flow Monitoring	
Dry Weather Flow Source	**Action**
Illicit Discharge	The City of Walnut will proceed with implementing proceedures to eliminate the discharge consistent with IC/ID requirements. Actions shall be documented and reported in the next Annual Report.
NPDES Permitted Discharge	If the source is determined to be a NPDES permitted discharge, a discharge subject to Record of Decision approved by the USEPA pursuant section 121 of CERCLA, a conditionally exempt essential non-storm water discharge, or entirely comprised of natural flows as defined in Part III.A.d of the MS4 Permit, then document the source and report to the Regional Board in the next Annual Report.
The Source is Unknown or a Conditionally Exempt, but Non-Essential, Non-Storm Water Discharge	The City of Walnut Shall conduct monitoring as required by the MS4 permit and further described in this document.
Discharge is Comprised of more than one source	The City of Walnut will attempt to quantify the relative contribution from the City's jurisdictional boundary and classify the contributions as authorized, conditionally exempt essential, natural, illicit discharge, conditional exempt non-essential, or unknown
Source is Identified as Originating from Up-Stream Jurisdiction	The City shall inform the up-stream jurisdiction and the Regional Water Board within 30 days of determination of the presence of the discharge, all available characterization data, contribution determination efforts, and efforts taken to identify its source.

Before a source of non-storm water discharge is classified as unknown, it shall be investigated to a reasonable extent. Investigation procedures shall include field inspections and desktop studies. Monitoring for indicator parameters shall be conducted if initial investigations yield no results. Video inspection of the storm drain may be utilized by the City in the source investigation. Other means determined to be potentially effective in locating the source of unknown flows will also be evaluated. A description of all efforts to identify a source of dry weather flows will be included in the next Annual Report for sources to be classified as unknown. All MS4 outfalls requiring no further action shall be maintained in the Storm Drains, Channels and Outfalls map and associated database.

3.2.3- Monitoring Non-Storm Water Discharges Exceeding Criteria

Within 90 days after completing the source identification or after the Executive Officer of the Regional Water Board approves the IMP, whichever is later, the City of Walnut will move forward with implementing monitoring activities. Dry weather monitoring activities will be limited to two outfalls that have been determined to convey significant discharges comprised of either unknown or conditionally exempt non-storm water discharges, or containing discharges attributed to illicit discharges per dry season. The following parameters shall be monitored:

- Flow
- Pollutants assigned a WQBEL or RWL to implement TMDL Provisions applicable to the receiving water body
- Other Pollutants identified on the CWA 303(d) list for receiving water
- Pollutants identified in a TIE conducted in response to observed aquatic toxicity during dry weather at the nearest downstream receiving water monitoring station during the last sample event or, where the TIE conducted on the receiving water sample was inconclusive, aquatic toxicity. If the discharge exhibits aquatic toxicity, then a TIE shall be conducted.
- Other parameters in Table E-2 identified as exceeding the lowest applicable water quality objective in the nearest downstream receiving water monitoring station per Part VI.D.1.d. of the MS4 Permit.

The frequency of monitoring during the first year shall be at least four times per outfall in the first year for outfalls that have been identified as having non-storm water discharges of unknown origin. Monitoring will then be reduced to at least twice per year for the second year. Dry weather outfall monitoring frequency will continue at a minimum of two sampling events for the remainder of the MS4 Permit cycle. Dry weather monitoring frequency may be increased from two times per year should the City deem it necessary to further trace flow source, BMP effectiveness or any other reason that would aid the City in improving water quality.

The City will evaluate the results of the first year of dry weather monitoring and consider submitting a request to the Executive Officer of the Regional Water Quality Board to eliminate the monitoring requirements for specific pollutants found to not be a threat to the receiving waters.

3.2.4- Sampling Methods

Non storm water discharges shall be monitored during days when precipitation is less than 0.1 –inch and those not less than three days after a rain event of greater than 0.1-inch. A minimum of three grab samples separated by 15 minutes for each hour during a 24 hour period, will be taken to create a flow weighted composite sample of the discharge from an outfall. Continuous sampler equipment may also be selected for use in this monitoring plan. Samples will then be taken from the site to a City selected lab for analysis.

Sampling and analysis will be conducted by a contracted water sampling consultant. Tasks conducted by the consultant will conform to the following requirements which will be verified by the City:

- Consultants shall demonstrate that required pollution detection limits can be met with reasonable accuracy and precision.
- All equipment utilized in gathering and analyzing samples shall be cleaned and maintained in a manner that prevents sample contamination.
- Sample analysis shall be conducted in accordance with EPA established or Regional Board accepted methods and procedures applicable to pollutant(s) being analyzed.
- An adequate QA/QC program shall be in place to ensure precise and accurate results.

4.0- New Development/Redevelopment Effectiveness Tracking

The objective of the new development/re-development tracking system is to track BMP effectiveness. This program will be utilized to adjust and hone BMP implementation and design with the intent to improve the effectiveness of BMPs. The City of Walnut will keep a database of the information outlined below for use in evaluating the effectiveness of the new development and re-development in the City.

New Development Re-development Tracking Parameters

- Name of project developer and project
- Project Location & Map
- Date of Certificate of Occupancy
- 85th Percentile Storm Event (inches/24 hours)
- Other Design Criteria required to meet hydromodification requirements for drainages to natural water bodies
- Project Design Storm (inches/ 24 Hours)
- Project Design Storm Volume (MGD)
- Percent of Design Storm volume to be retained on site
- Flow Through BMPs provide one year, one hour Isohyetal map published by Los Angeles County
- Percent of design Storm to be infiltrated at an offsite mitigation or ground water replenishment site
- Percent of Design Storm to Volume to be retained or treated with Biofiltration at an offsite retrofit project
- Location Maps of Offsite Mitigation, groundwater replenishment, or retrofit sites,
- Documentation of issuance of requirements to the developer

As the City's database of new development and re-development effectiveness builds, the City will evaluate the effectiveness of certain BMPs and re-evaluate what BMPs will be allowed for consideration in new development or re-development projects.

5.0- Regional Studies

Regional Studies are required to further characterize the impact on beneficial uses of receiving waters from discharges originating at the MS4 outlets. These studies will include the Southern California Storm water Monitoring Coalition (SMC) Regional Watershed Monitoring Program and special studies as specified in approved TMDLs. The City is not named as a member of the SMC, but the County of Los Angeles is. The City of Walnut will meet the Permit requirement of participating in the SMC via the County of Los Angeles's participation.

6.0- Special Studies

Per the MS4 Permit each permittee shall be responsible for conducting special studies required in an effective TDML or an approved TMDL Monitoring Plan. The City of Walnut is subject to one TMDL which is the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL. No special studies were classified as required in the final TMDL. A number of potential special studies are identified in the TMDL, but at this time no special studies have been considered for further development by the City of Walnut. In the event that monitoring data would suggest that a special study would benefit the City, further investigation of potential study(ies) will be reviewed pending available budget to do so.

7.0- Annual Reporting

On an annual basis, the City of Walnut will submit an annual report to the Regional Water Quality Control Board on or before December 15th. The report will document and present key NPDES information that was gathered for previous fiscal year (June 1 to July 30). The report shall include information that will allow the Regional Board to assess the results of the pervious years NPDES program. The report topics discussed shall include:

- Participation in one or more Watershed Management Plan
- The Impact of storm water and non-storm water discharges on the receiving water
- Compliance with receiving water limitations, numeric water quality based effluent limitations and non-storm water action levels
- Effectiveness of control measures in reducing discharges of pollutants from the MS4 to receiving waters
- Whether the quality of MS4 discharges and the health of receiving waters is improving, staying the same, or declining as a result of watershed management program efforts, an/or TMDL implementation measures or other minimum control measures
- Whether changes in water quality can be attributed to pollutant controls imposed on new development, re-development or retrofit projects.

Other key information will be presented will provide the Regional Board a clear and representative view of how the Watershed Management Plan and Integrated Monitoring Plan are being implemented. Section XVI through XVIII of Attachment E to the MS4 Permit discusses in detail the required annual reporting requirements.

8.0- Adaptive Management Process

The City of Walnut will utilize the MS4 Permit required adaptive management process to review and potentially modify the IMP in an effort to improve the effectiveness of the plan. The adaptive management process will take place every two years from the date of approval by the Regional Water Quality Control Board. The review process of the plan will include consideration of the following items:

- Progress toward achieving interim and/or final water quality-based effluent limitations and/or receiving water limitations in Part VI.E and Attachment L through R, according to established compliance schedules.
- Progress toward achieving improved water quality in MS4 discharges and achieving receiving water limitations through implementation of the watershed control measures based on an evaluation of outfall-based monitoring data and receiving water monitoring data.
- Achievement of interim milestones.
- Re-evaluation of water quality priorities identified for the WMA based on more recent water quality data for discharges from the MS4 and the receiving water(s) and a reassessment of sources of pollutants in MS4 discharges.
- Availability of new information and data from sources other than the monitoring program with in the WMA that informs the effectiveness of the actions implemented by the IMP.
- Regional Water Board recommendations.
- Recommendations for modifications to the Watershed Management Program solicited through a public participation process.

The findings of the adaptive management review process can result in modifications to the IMP including changes to compliance deadlines, interim milestones necessary to improve the effectiveness of the program. Modifications to compliance deadlines established by TMDLs will not be allowed through the adaptive management process. Proposed modifications to the IMP shall be reported by the City of Walnut in the Annual Report. Proposed modifications identified through the adaptive management process shall be implemented upon approval by the Regional Board Executive Officer within 60 days of their submittal if the Regional Board Executive has not expressed any objections to the modifications.

9.0- References

Los Angeles Regional Water Quality Control Board (Regional Board), 2012. Order No. R4-2012-0175 NPDES Permit No. CAS004001 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, except those Discharges Originating from the City of Long Beach MS4. November 8. http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/la_ms4/2012/Order%20R4-2012-0175%20-%20A%20Final%20Order%20revised.pdf

Los Angeles Regional Water Quality Control Board (Regional Board), 1994. "Water Quality Control Plan Los Angeles Region." June. http://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/electronics_documents/bp1_introduction.pdf

Los Angeles Regional Water Quality Control Board (Regional Board), 2007. "Total Maximum Daily Loads for Metals and Selenium San Gabriel River and Impaired Tributaries." March. http://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/Established/San%20Gabriel%20River%20Metals%20TMDL/final_sangabriel_metalstmdl_3-27-07.pdf

Los Angeles County Department of Public Works, 2014. "San Gabriel River Watershed." June. http://ladpw. org/wmd/watershed/sg/

Attachment A

MS4 Permit Table E-2

CONSTITUENTS	MLs
CONVENTIONAL POLLUTANTS	**mg/L**
Oil and Grease	5
Total Phenols	0.1
Cyanide	0.005
pH	0 – 14
Temperature	N/A
Dissolved Oxygen	Sensitivity to 5 mg/L
BACTERIA (single sample limits)	MPN/100ml
Total conform (marine waters)	10,000
Enterococcus (marine waters)	104
Fecal coliform (marine & fresh waters)	400
E. coli (fresh waters)	235
GENERAL	**mg/L**
Dissolved Phosphorus	0.05
Total Phosphorus	0.05
Turbidity	0.1 NTU
Total Suspended Solids	2
Total Dissolved Solids	2
Volatile Suspended Solids	2
Total Organic Carbon	1
Total Petroleum Hydrocarbon	5
Biochemical Oxygen Demand	2
Chemical Oxygen Demand	20-900
Total Ammonia Nitrogen	0.1
Total Kjeldahl Nitrogen	0.1
Nitrate-Nitrite	0.1
Alkalinity	2
Specific Conductance	1umho/cm
Total Hardness	2
MBAS	0.5
Chloride	2
Fluoride	0.1
Methyl tertiary butyl ether (MTBE)	1
Perchlorate	4 µg/L
METALS (Dissolved & Total)	**µg/L**
Aluminum	100
Antimony	0.5
Arsenic	1
Beryllium	0.5
Cadmium	0.25
Chromium (total)	0.5
Chromium (Hexavalent)	5
Copper	0.5
Iron	100
Lead	0.5
Mercury	0.5
Nickel	1
Selenium	1
Silver	0.25
Thallium	1
Zinc	1

SEMIVOLATILE ORGANIC COMPOUNDS	
ACIDS	**µg/L**
2-Chlorophenol	2
4-Chloro-3-methylphenol	1
2,4-Dichlorophenol	1
2,4-Dimethylphenol	2
2,4-Dinitrophenol	5
2-Nitrophenol	10
ACIDS	**µg/L**
4-Nitrophenol	5
Pentachlorophenol	2
Phenol	1
2,4,6-Trichlorophenol	10
BASE/NEUTRAL	**µg/L**
Acenaphthene	1
Acenaphthylene	2
Anthracene	2
Benzidine	5
1,2 Benzathracene	5
Benzo(a)pyrene	2
Benzo(g,h,i)perylene	5
3,4 Benzoflouranthene	10
Benzo(k)flouranthene	2
Bis(2-Chloroethoxy) methane	5
Bis(2-Chloroispropyl) ether	2
Bis(2-Chloroethyl) ether	1
Bis(2-Ethylhexl) phthalate	5
4-Bromophenyl phenyl ether	5
Butyl benzyl phthalate	10
2-Chloroethyl vinyl ether	1
2-Chloronaphthalene	10
4-Chlorophenyl phenyl ether	5
Chrysene	5
Dibenzo(a,h)atnthracene	0.1
1,3-Dichlorobenzene	1
1,4-Dichlorobenzene	1
1,2-Dichlorobenzene	1
3,3-Dichlorobenzidine	5
Diethyl phthalate	2
Dimethyl phthalate	2
di-n-Butyl Phthalate	10
2,4-Dinotrotoluene	5
2,6-Dinotrotoluene	5
4,6 Dinitro-2-methylphenol	5
1,2 Diphenylhydrazine	1
di-n-Octyl phthalate	10
Fluoranthene	0.05
Fluorene	0.1
Hexachlorobenzene	1
Hexachlorobutadiene	1
Hexachloro-cyclopentadiene	5
Hexachloroethane	1

Indeno(1,2,3-cd)pyrene	0.05
Isophorone	1
Naphthalene	0.2
Nitrobenzene	1
N-Nitroso-dimethyl amine	5
N-Nitroso-diphenyl amine	1
N-Nitroso-di-n-propyl amine	5
Phenanthrene	0.05
BASE/NUETRAL	**µg/L**
Pyrene	0.05
1,2,4-Trichlorobenzene	1
CHLORINATED PESTICIDES	**µg/L**
Aldrin	0.005
alpha-BHC	0.01
beta-BHC	0.005
delta-BHC	0.005
gamma-BHC (lindane)	0.02
alpha-chlordane	0.1
gamma-chlordane	0.1
4,4'-DDD	0.05
4,4'-DDA	0.05
4,4'-DDT	0.01
Dieldrin	0.01
alpha-Endosulfan	0.02
beta-Endosulfan	0.01
Endosulfan sulfate	0.05
Endrin	0.01
Endrin aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Toxaphene	0.05
POLYCHLORINATED BIPHENYLS	**µg/L**
Aroclor-1016	0.5
Aroclor-1221	0.5
Aroclor-1232	0.5
Aroclor-1242	0.5
Aroclor-1248	0.5
Aroclor-1454	0.5
Aroclor-1260	0.5
ORGANOPHOSPHATE PESTICIDES	**µg/L**
Altrazine	2
Chlorpyrifos	0.05
Cyanazine	2
Diazinon	0.01
Malathion	1
Prometryn	2
Simazine	2
HERBICIDES	**µg/L**
2,4-D	10
Glyphosate	5
2,4,5-TP-SILVEX	0.5

Attachment B

Aquatic Toxicity Monitoring Methods

Aquatic Toxicity Monitoring Methods

The following requirements related to monitoring methods for aquatic toxicity are from section XII of Attachment E of the MS4 Permit.

A. Aquatic Toxicity Monitoring as required in Parts VI (Receiving water Monitoring), VIII (Storm Water Outfall Based Monitoring), and IX (Non-storm Water Outfall Based Monitoring) of this MRP, shall be conducted according to the procedures described in this Part. When the State Water Board's *Policy for Toxicity Assessment and Control* is fully approved and in effect, the Regional Water Board Executive Officer may direct the Permittiee(s) to replace current toxicity program elements with standardized procedures in the policy.

B. The Permittee(s) shall collect and analyze samples taken from receiving water monitoring locations to evaluate the extent and causes of toxicity in receiving waters.

C. Toxicity samples may be flow-weighted composite samples, or grab samples, for wet and dry event sampling.

D. The total sample volume shall be determined both by the specific toxicity test method used and the additional volume necessary for TIE studies. Sufficient sample volume shall be collected to perform both the required toxicity tests and TIE studies.

E. Holding Times. Al toxicity tests shall be conducted as soon as possible following sample collection. The 36-hour sample holding time for the test initiation shall be targeted. However, no more than72 hours shall elapse before the conclusion of sample collection and test initiation.

F. Definition of Chronic Toxicity. Chronic toxicity measures a subleathal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or receiving waters compared to that of the control organisms.

G. Chronic Toxicity Monitoring Programs

1. Freshwater Test Species and Methods**.**

   If samples are collected in receiving waters with salinity <1 ppt, or from outfalls discharging to receiving waters with salinity <1 ppt, then the Permittee(s) shall conduct the following critical life stage chronic toxicity tests on undiluted samples in accordance with species and short-term test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136). In no case shall the following test species be substituted with another organism unless written authorization from the Regional Water Board Executive Officer is received.

   i. A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0[4]).

   ii. A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test method 1002.0[5]).

   iii. A static renewal toxicity test with the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).

2. Marine and Estuarine Test Species and Methods.

If samples are collected in receiving waters with salinity ≥1 ppt, or from outfalls discharging to receiving waters with salinity ≥1 ppt, then the Permittee(s) shall conduct the following critical life stage chronic toxicity tests on undiluted samples in accordance with species and short-term test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). Artificial sea salts shall be used to increase sample salinity. In no case shall the following test species be substituted with another organism unless written authorization from the Regional Water Board Executive Officer is received.

a. A static renewal toxicity test with the topsmelt, *Antherinops affinis* (Larval Survival and growth Test Method 1006.01[5]);
b. A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus* (Fertilization Test Method 1008.0; and
c. A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).

3. Test Species Sensitivity Screening.
   To determine the most sensitive test species, the Permittee(s) shall conduct two wet weather and two dry weather toxicity tests with a vertebrate , an invertebrate, and a plant. After this screening period, subsequent monitoring shall be conducted using the most sensitive test species is sensitive to such toxicant(s) and a test species is sensitive to such toxican(s), then monitoring shall be conducted using only that test species. Sensitive test species determinations shall also consider the most sensitive test species used for proximal receiving water monitoring. After the screening period, subsequent monitoring shall be conducted using the most sensitive test species. Rescreening shall occur in the fourth year of the permit term.
4. Chronic toxicity test biological endpoint data shall be analyzed using the Test of Significant Toxicity t-test approach specified in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (U.S. Environmental protection Agency, Office of Wastewater Management, Washington D.C. EPA 833-R-10-003). For this monitoring program, the critical chronic in stream waste concentration (IWC) is set at 100% receiving water for receiving water samples and 100% effluent for wet- and dry-weather outfall samples. A 100% receiving water/outfall effluent sample and a control shall be tested.

H. Quality Assurance
1. If the receiving water or outfall effluent test does not meet all test acceptability criteria (TAC) specified in the test methods manuals (*Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms* (EPA/821/R-02/013, 2002) and *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995)), then the Permittee(s) must re-sample and re-test at the earliest time possible.
2. Control water, including brine controls, shall be laboratory water prepared and used as specified in the test methods manuals.

3. If organisms are not cultured in-house, then concurrent testing with a reference toxicant shall be conducted. If organisms are cultured in-house, then monthly reference toxicant testing is sufficient. Reference toxicant tests and effluent toxicity tests shall be conducted using the same tests conditions (e.g., same test duration, etc.).

I. Toxicity Identification Evaluation (TIE).

1. A toxicity test sample is immediately subject to TIE procedures to identify the toxic chemical(s), if either the survival or sublethal endpoint demonstrates a Percent Effect value equal to or greater than 50% at the IWC. Percent Effect is defined as the effect value-denoted as the difference between the mean control response and the mean IWC response, divided by the mean control response-multiplied by 100.
2. A TIE shall be performed to identify the causes of toxicity using the same species and test method and, as guidance, U.S. EPA manuals: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, 1992); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).
3. The TIE should be conducted on the test species demonstrating the most sensitive toxicity response at a sampling station. A TIE may be conducted on a different test species demonstrating a toxicity response with the caveat that once the toxicant(s) are identified, the most sensitive test species triggering the TIE shall be further tested to verify that the toxicant has been identified and addressed.
4. A TIE Prioritization Metric (see Appendix 5 in SMC Model Monitoring Program) may be utilized to rank sites for TIEs.

J. Toxicity Reduction Evaluation (TRE)

1. When a toxicant or class of toxicants is identified through a TIE conducted at a receiving water monitoring station, Permittees shall analyze for the toxicant(s)during the next scheduled sampling event in the discharge from the outfall(s) upstream of the receiving water location.
2. If the toxicant is present in the discharge from the outfall at levels above the applicable receiving water limitation, a TRE shall be performed for that toxicant.
3. The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs are identified, the Permittee(s) shall submit a TRE Corrective Action Plan to the Regional Water Board Executive Officer for approval. At minimum, the plan shall include a discussion of the following:
    a. The potential sources of pollutant(s) causing toxicity.
    b. A list of municipalities and agencies that may have jurisdiction over sources of pollutant(s) causing toxicity.
    c. Recommended BMPs to reduce the pollutants(s) causing toxicity.
    d. Proposed post-construction control measures to reduce the pollutant(s) causing toxicity.

e. Follow-up monitoring to demonstrate that the toxicants have been reduced or eliminated.

K. Chronic Toxicity Reporting

1. Aquatic toxicity monitoring results submitted to the Regional Water Board shall be consistent with the requirements identified in Part XIV.L and M and Part XVIII.A.5 and A.7 of the MRP.
2. The Annual Report in Part XVIII of the MRP shall include:
    a. A full laboratory report for each chronic toxicity test prepared according to the appropriate test methods manual chapter on Report Preparation including.
        i. The chronic toxicity test results for the t-test, reported as “Pass” of “Fail”, and the “Percent Effect”.
        ii. The dates of sample collection and initiation of each toxicity test.
        iii. Test Species with biological endpoint values for each concentration tested.
        iv. Reference toxicant test results.
        v. Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).
        vi. TRE/TIE testing results.
        vii. A printout of CETIS (Comprehensive Environmental Toxicity Information System) program results.
    b. All results for receiving water or outfall effluent parameters monitored concurrently with the toxicity test.
    c. TIEs (Phases I, II, and III) that have been completed or are being conducted, by monitoring station.
    d. The development, implementation, and results for each TRE Corrective Action Plan, beginning the year following the identification of each pollutant or pollutant or pollutant class causing chronic toxicity.

Attachment C

Stream Bioassessment Proceedure

CALIFORNIA STREAM BIOASSESSMENT PROCEDURE

(Protocol Brief for Biological and Physical/Habitat Assessment in Wadeable Streams)

The California Stream Bioassessment Procedure (CSBP) is a standardized protocol for assessing biological and physical/habitat conditions of wadeable streams in California. The CSBP is a regional adaptation of the national Rapid Bioassessment Protocols outlined by the U.S. Environmental Protection Agency in "Rapid Bioassessment Protocols for use in Streams and Rivers" (**EPA/841-B-99-002**). The CSBP is a cost-effective tool that utilizes measures of the stream's benthic macroinvertebrate (BMI) community and its physical/habitat characteristics to determine the stream's biological and physical integrity. The purpose of this Protocol Brief is to introduce the techniques of bioassessment to aquatic resource professionals and help standardize data for statewide bioassessment efforts. The Protocol Brief is only a summary and does not contain all the necessary information that may be required to understand the concepts of bioassessment and to implement a successful monitoring program. Additional information and updates on bioassessment can be obtained by visiting the **DFG Aquatic Bioassessment Laboratory website at** www.dfg.ca.gov/cabw/cabwhome.html.

History of the CSBP

The CSBP was originally developed in 1993 to measure biological response from point-source discharges of chemical contaminants, inorganic sediment and elements of organic enrichment. The method was based on sampling the single richest habitat in a stream reach; this was the most common technique at the time (Rosenberg and Resh 1993, Loeb and Spacie 1994, Lenat and Barbour 1994) and consistent with the U.S. EPA's Rapid Bioassessment Protocols (RBP) (Plafkin et al. 1989). In 1995, the CSBP was adapted for use in ambient and non-point source pollution monitoring programs and this version was reviewed by a Technical Advisory Committee assembled by DFG and the U.S. EPA. The 1996 edition of the CSBP was widely distributed in California and accepted as the state's standardized RBP protocol (Davis et al. 1996 U.S. EPA 2002). A 1999 revision added quality assurance and control (QA/QC) techniques to ensure high quality field collections, laboratory analysis and taxonomic consistency.

As of 2003, the CSBP is the most often used RBP protocol in California (Barbour and Hill, 2003). This unique protocol allows the user to produce biological and physical/habitat data that can be used to measure differences between sites, compare to a regional Index of Biological Integrity (IBI) (Ode *et al.* 2003) and help diagnose response to individual stressors. In addition to the high gradient riffle based procedure, the 2003 edition of the CSBP describes techniques for use in unique channels and a technique for low gradient channels that blends elements of the CSBP with those of a multi-habitat technique recommended by the U.S. EPA (Barbour et al. 1999).

The CSBP 2003 has four notable changes to the existing protocol; 1) the stream reach for the assessment is no longer defined by a set of five pool-riffle sequences, but rather by a discreet length of 100 m (300 ft); 2) the area of benthos sampled has been reduced from 1.6 m^2 (18 ft^2) to 0.8 m^2 (9 ft^2); 3) although 3 independent samples will be collected at each reach, there is now an option to composite the 3 samples in the laboratory and reduce the total number of BMIs identified at each reach from 900 to 500; and 4) there is a new QA/QC procedure to collect a set of duplicate samples

at 10% of the reaches for projects with more than 20 sites. These changes were based on experiences gained from several years of field testing, changes in the national RBP (Barbour et al. 1999), recommendations from Barbour and Hill (2003) and methods comparison studies conducted by DFG. **Data collected with these modifications can easily be made compatible with previous CSBP data and these changes make the CSBP more consistent with other BMI protocols used in the western US.**

OVERVIEW OF THE CSBP

The CSBP can be used to measure biological and physical/habitat condition in all freshwater lotic environments (streams and rivers) shallow enough to allow safe wading (≤1.5 m). The CSBP samples benthic macroinvertebrates with a 0.5mm mesh net from the richest habitat along 3 randomly selected transects within a 100 m (300 ft) reach of stream or river. The 3 transects are placed within shallow-fast water habitat (usually riffle) for high gradient channels and throughout the entire reach for low gradient channels. At each transect, three 0.09 m^2 (1 ft^2) areas of stream benthos are sampled and composited into a single sample. In low gradient channels, the 3 collections along the transect are selected to represent the relative proportions of the different richest habitat categories present (submerged vegetation, hard substrate of natural rock or concrete, soft substrate of sand or mud, stream bank vegetation and woody debris). Physical/habitat is measured using a qualitative U.S. EPA procedure throughout the entire reach and additional quantitative measures within the vicinity of the BMI samples. Taxonomic identification of the BMI samples is performed on a fixed count of 300 organisms from the 3 samples (total of 900 for the entire reach) or 500 from the composite of the 3 samples. There are two standard levels of taxonomic identification: one standardized for the state by the California Bioassessment Laboratory Network (CAMLnet; www.dfg.ca.gov/cabw/camlnetste.pdf) and a more precise level based on the U.S. EPA's Environmental Monitoring and Assessment Program (EMAP).

CALIFORNIA DEPARTMENT OF FISH AND GAME SCIENTIFIC COLLECTING PERMIT

Anyone who collects fish, amphibians, or invertebrates from the waters of the state must have a DFG Scientific Collecting Permit in their possession. The permit can be obtained from the DFG License and Revenue Branch in Sacramento (916-227-2225). Those conducting bioassessment in California should specify on the permit application that they will take freshwater invertebrates (authorization 5), incidental fish (authorization 6) and amphibians (authorization 8). It is also advisable to contact the local Game Warden and District Fisheries Biologist at the closest Regional Office prior to collecting.

FIELD PROCEDURES FOR COLLECTING BMI SAMPLES

The CSBP can be used to sample BMIs from all streams and rivers where the access and depth (≤1.5 m) do not require the use of a boat. The step-by-step procedures described in this document have been divided into three sections: high gradient channels, low gradient channels and considerations for unusual channel conditions. **Contact DFG or visit the DFG Aquatic Bioassessment Laboratory website for more information on Rapid Bioassessment procedures for boatable streams and rivers and lentic or still water environments.**

CSBP for High Gradient Channels

High gradient channels usually have greater than a 1% slope and will always contain pool-riffle sequences with a ratio high enough to contain at least 3 riffles per 100 m (300 ft) reach. Riffle substrate could be rock, sand or mud, but must be at least 1 m (3 ft) wide with flow velocities greater than 0.3 m/sec (1 ft/sec).

Biological and Physical/Habitat Equipment List

Measuring tape (300 ft or 100 m)
D-shaped kick net (0.5 mm mesh)
Standard size 35 sieve (0.5 mm)
Wide-mouth 500 ml plastic jars
White enameled pan and forceps
95% ethanol
California Bioassessment Worksheet (CBW)
Physical/Habitat Quality Form
Chain of Custody Form (COC)
Random Number Table
pH, temp, DO and conductivity meter
Stadia rod and hand level or clinometer
Densiometer

Step 1. Measure a 100 m (300 ft) reach of channel and count the number of riffles greater than 1 m (3 ft) wide and 1 m (3 ft) long. Randomly choose 3 of the riffles within the stream reach.

Step 2. Starting with the downstream riffle, place the measuring tape along the bank of the entire riffle while being careful not to walk in the stream. Select one transect from all possible 1/3 m (1 ft) marks using a random number table. For riffles longer than 10 m (30 ft), randomly place the transect within the top third of the riffle.

Step 3. Inspect the transect before collecting BMIs by imagining a line going from one bank to the other, perpendicular to the flow. Choose 3 locations along that line where you will place your net to collect BMIs. If the substrate is fairly similar and there is no structure along the transect, the 3 locations will be on the side margins and the center of the stream. If the substrate is structurally complex along the transect, then place the 3 collections to reflect it.

Step 4. Collect BMIs at the 3 locations along the transect by placing the D-shaped net on the substrate and disturbing an area as wide as the net and 1 ft upstream. Excavate the 0.09 m^2 ($1ft^2$) area to an approximate depth of 10-15 cm (4-6 in) by kicking or by using a tool to loosen the substrate. Pick-up and scrub large rocks by hand under water in front of the net. If the substrate is sand or mud, a hand rake can be used to prevent substrate from filling the net. Maintain a consistent sampling effort (approximately 1-3 minutes) at each area. Combine the 3 collections within the net to make one "composite" sample.

Step 5. Place the contents of the net in a standard size 35 sieve (0.5 mm mesh) or white enameled tray. Remove the larger twigs, leaves and rocks by hand after carefully inspecting for clinging organisms. If the pan is used, place the material through the sieve to remove excess water before placing the material in the jar. Place the sampled material in a jar and completely fill with 95% ethanol. Never fill a jar more than 2/3 full with course sampled material or 1/2 full with sand or mud. **Gently** agitate jars that contain primarily mud or sand to help mix the alcohol, taking care to not damage any organisms present.

Step 6. Place a label containing descriptive information about the sites (see box) in each jar. An additional label can be taped to the outside of the jar to help with the sample log-in process at the laboratory. A Chain of Custody (COC) should accompany the samples during transportation to the laboratory.

Bioassessment Sample Label
Project Name:
Site Name/Code:
County:
Riffle/Reach Number:
Transect Number:
Date/Time:
Sampled by:

Step 7. Proceeding upstream, Repeat Steps 2 through 5 for the next two riffles within the stream reach.

Step 8. **QA/QC Repeat Sampling Procedure. For projects with 20 or more sites, duplicate samples must be collected at 10% of the reaches.** For reaches containing more than six riffles, randomly choose 3 riffles for the primary set of samples and randomly choose 3 more riffles for the duplicate set of samples. For reaches that contain 6 or less riffles, measure the entire length of all riffle habitat and randomly select 3 transects from the total length for the primary samples and randomly select 3 for the duplicate samples. For both methods, start at the downstream riffle or transect, proceeding upstream collecting the 6 samples designating them as primary or duplicate.

CSBP for Low Gradient Channels

Low gradient channels usually have less than a 1% grade and will never have more than two riffles. These channels can be as deep as 1.5 m, but with low enough water velocity to allow safe wading. **Channels greater than 1.5 m deep, with swift water velocities and/or which can not be accessed on at least one bank will require a boat**.

Step 1. Measure a 100 m (300 ft) section of channel trying to avoid large human-made structures such as bridges or dams. The stream reach can be less than 100 m (300 ft) if access or obstacles are a problem, especially if the channel is morphologically homogeneous.

Step 2. Without entering the water, survey the entire reach for approximate percentages of 5 generalized habitat categories: a. submerged vegetation, b. hard substrate of natural rock or concrete, c. soft substrate of sand or mud, d. stream bank vegetation and e. woody debris. Record the proportions and make note if it was difficult to determine depth and habitat type (e.g. water was highly turbid).

Step 3. Determine how many 2 m (6 ft) intervals can be established along the entire length of the reach. Randomly select 3 of the intervals and using a range finder or measuring tape, locate the three points on the bank of the reach.

Step 4. Starting with the downstream point, establish a transect across the channel perpendicular to the flow. Sample BMIs at 3 locations along that transect, choosing areas representing the generalized habitats identified in Step 2. Collect BMIs by placing the D-shaped kick-net on the substrate or vegetation and disturb a 0.09 m^2 (1 ft^2) portion of habitat upstream of the kick-net. Maintain a consistent sampling effort (approximately 1-3 minutes) at each site. Combine the 3 collections within the kick-net to make one "composite" sample. Note the 3 generalized habitats that were sampled along the transect on the field form.

Step 5. Place the contents of the kick-net in a standard size 35 sieve (0.5 mm mesh) or white enameled tray. Remove the larger twigs, leaves and rocks by hand after carefully inspecting for clinging organisms. If the pan is used, place the material through the sieve to remove excess water before placing the material in the jar. Place the sampled material and label (see box) in a jar and completely fill with 95% ethanol. Never fill a jar more than 2/3 full with course sampled material or 1/2 full with sand or mud. **Gently** agitate jars that contain primarily mud or sand to help mix the alcohol, taking care to not damage any organisms present.

Step 6. Place a label containing descriptive information about the sites (see page 4 box) in each jar. An additional label can be taped to the outside of the jar to help with the sample log-in process at the laboratory. A Chain of Custody (COC) should accompany the samples during transportation to the laboratory.

Step 7. Proceeding upstream, Repeat Steps 4 and 5 for the next two transects within the reach. Try to choose generalized habitats for the 9 collections (3 areas along 3 transects) in proportion to what was determined in Step 2.

Step 8. **QA/QC Repeat Sampling Procedure. For projects with 20 or more sites, duplicate samples must be collected at 10% of the reaches.** After determining how many 2 m (6 ft) intervals can be established along the entire length of the reach, randomly select 3 of the intervals for collecting the primary samples and randomly select 3 more intervals for the duplicate samples. Starting with the downstream transect, proceed upstream collecting the 6 samples and designating them as primary or duplicate.

PROTOCOL CONSIDERATIONS FOR UNUSUAL CHANNEL CONDITIONS

CSBP for Intermittent or Ephemeral Channels: Intermittent or ephemeral channels will have flowing water during the rainy season and be dry during mid to late summer. These channels can be sampled using the CSBP for high or low gradient streams, but must be sampled in a spring (March through May) index period or at the end of the wet period.

CSBP for No Flow Conditions in High and Low Gradient Channels: Although this is very problematic for sampling BMIs, sometimes sampling areas in high gradient streams have pocket water with little or no flow. In this case, put the net at the downstream portion of the sampling area, disturb the substrate and push the water into the net with vigorous hand motions. Strained water from the surface of a nearby pool with a bucket can be used to move organisms into the net by pouring the water into the pocket area in front of the net. In low gradient channels, low flow or no flow conditions can be quite common. In this case, put the net downstream of the sampling area, get in front of the net and agitate the substrate with a twisting foot motion for 30 seconds. At 5-10 second intervals throughout the agitation, step aside and swiftly move the net in a "figure eight" motion through the cloud of suspended substrate.

CSBP for Bifurcated or Braided Channels: Low gradient channels can have two or more channels flowing through a typically wide riparian corridor. There is no need to extend the transect through islands or sand bars separating these bifurcated or braided high gradient channels. Use the

standard procedure for sampling the dominant channel or randomly selected one channel if there are more than 2 similar channels >1 m (>3 ft) wide.

CSBP for Channels <1 M (3 ft) Wide (the "Spot-Sampling" modification): High gradient channels <1 m (<3 ft) wide can not be sampled using the 1/3 m (1 ft) wide D-frame net at three places along the transect. In this case, divide the channel into an upper, middle and lower section, relative to the flow. Each section should be approximately 30 m long, but could be divided by natural breaks in the morphology of the channel. Survey each section, without stepping into the channel for all 0.09 m^2 (1 ft^2) areas where the substrate and flow resemble a riffle. Randomly select 3 of these "sampleable areas" in the lower section and composite them into one sample. Proceed upstream and repeat for each section.

CSBP for Large Boulder Channels: High gradient channels that are dominated by boulder substrates too large to move, but with enough gravel substrate in patches between the boulder can be sampled similarly to the previous modification. After dividing the channel into three sections, count the patches of substrate small enough to sample and randomly select three patches. Composite the three samples and proceed upstream to sample the next two sections.

CSBP for Channels Immediately Below Water Impoundments: High gradient channels immediately below a water impoundment structure that prevents gravels and fines from moving downstream will often not contain shallow-fast water habitats with gravel or cobble substrates. These channels can be sampled either using the modification for large boulder channels or by using the low gradient procedure where 3 transects are chosen randomly from the entire reach.

CSBP for Cement Channels: Cement channels in urban areas will typically have uniform shape and depth with no natural habitat. These channels should be sampled using the low gradient protocol of 3 randomly selected transects along 100 m (300 ft) of channel. The 3 collections can be simply taken from the left margin, center and right margin of the channel. Try to avoid human made habitats such as shopping carts and other transient debris.

CSBP for Channels with Gradient Controls: Some low gradient urban streams will have low level dams to control the gradient. The channel will be transformed into small impoundments separated by extremely high gradient sections of large boulders to dissipate the energy. Do not sample the high gradient sections. Sample the impounded areas using the low gradient protocol or if the impoundments are too deep to wade, sample along the littoral zone of one bank. Divide the bank into upper, middle and lower sections, randomly pick three points at 1 m (3 ft) intervals and at each point, take a 0.09 m^2 (1ft^2) sweep through the vegetation trying to disturb the sediment if present. Composite the 3 collections and repeat for each section.

CSBP for Channels with Three or Fewer Riffles: High gradient channels that are wider than 1 m (3 ft), but have 3 or fewer riffles within the 100 m (300 ft) reach will not allow for an independent sample from several riffles. In these cases, measure the entire length of all riffle habitat and select the 3 transects randomly from the total length.

CSBP for Channels with Continuous Riffle Habitat: Stream reaches (usually very high gradient) that have continuous riffle habitat should be sampled using the low gradient procedure where 3 transects are chosen randomly from the entire reach.

CSBP for Channels with Transitional Gradient: Large watersheds can have wide channels where the gradient transitions from high to low. Riffle pool sequences can be present, but further apart than in higher gradient channels. In these cases, expand the reach length to 40 times the average width to allow for an adequate number of riffles to sample. If riffle habitat is limited to one or two riffles in a greater than 100 m (300 ft) transitional gradient reach, then consider the riffle to be hard substrate and use the low gradient procedures.

FIELD PROCEDURES FOR MEASURING CHEMICAL AND PHYSICAL/HABITAT QUALITY

The EPA's physical/habitat scoring criteria is a nationally standardized method (Barbour et al. 1999). It is used to measure the physical integrity of a stream and can provide a stand alone evaluation or used in conjunction with a bioassessment sampling event. DFG recommends that this procedure be conducted on every 100 m (300 ft) reach as part of a bioassessment program. A detailed description of the scoring criteria is available through the DFG Aquatic Bioassessment Laboratory website. **This procedure is an effective measure of a stream's physical/habitat quality, but can produce inconsistent measures if QA/QC measures are not regularly implemented. This procedure requires field training prior to its use and field audits throughout the program.**

The following list of quantitative measures of chemical and physical/habitat characteristics are considered minimal and should be measured when rapid bioassessments are not part of an existing chemical or fisheries habitat program where a more extensive list of parameters are measured. The information produced from measuring chemical and physical/habitat characteristics can be used to classify stream reaches and to help explain data anomalies.

Reach-Wide Parameters:

- GPS coordinates at the top and bottom of the reach
- Water temperature, specific conductance, pH, alkalinity and dissolved oxygen at the center of the reach using approved standardized procedures and instruments
- Reach length, average width and gradient
- Visually estimated substrate composition using the following categories: fines (<0.25 cm) (<0.1in.), gravel (0.25-0.8 cm) (0.1-2 in.), cobble (0.8-25 cm) (2-10 in.), boulder (>25 cm) (>10 in.) and bedrock (solid)

Sample Site Specific Parameters:

- Average length, width and depth for each of the 3 randomly chosen riffles (for unmodified high gradient protocol only)

- Water velocity immediately upstream of the three composite samples along each of the 3 transects

- Percent cover upstream of the three composite samples along each of the 3 transects. Measure this parameter using a densiometer 1/3 m (1 ft) above the water surface and averaged for each transect

- Substrate consolidation at the three sample excavations along the 3 transects. Estimates are obtained while collecting the BMI sample by noting whether the substrate is loosely, moderately or tightly cemented

- Pebble count and percent embeddedness immediately upstream of the 3 transects where BMI samples were collected. Measure this parameter by establishing a transect approximately 1/3 m (1 ft) upstream of the sample transect, randomly choosing 10 points along the transect, reaching down to the point at the end of a wooden dowel or tip of the boot and measure the width of the particle. For every third particle (3 on each transect), estimate percent embeddedness by noting how much of the particle was surrounded by fine substrate.

LABORATORY PROCEDURES FOR ANALYZING BMI SAMPLES

DFG recommends that taxonomic identification of BMI samples collected using the CSBP is performed by a professional or permanent university laboratory with extensive experience with California taxa. **These bioassessment laboratories should participate in the California Bioassessment Laboratories Network (CAMLnet) to ensure that they are aware of the standardized level of taxonomy and QA/QC procedures recommended for bioassessments conducted in California.** To ensure a high quality product, all contracts to a bioassessment laboratory should require:

1. A Laboratory Standard Operation Procedure (SOP) document and Quality Assurance Protection Plan (QAPP)

2. A list of all taxonomists that will work on the samples including their education, years of experience and any specialized training they have received.

3. Internal QA/QC documentation for sub-sampling and taxonomic validation (can be specified to provide this information upon request);

4. Be able and willing to perform taxonomy consistent with the CAMLnet Taxonomic Effort Standards (www.dfg.ca.gov/cabw/camlnetste.pdf).

Project managers are encouraged to subject all laboratory data to an external review by an independent laboratory at the rate of 10% to 20% (depending on experience and nature of the project) of the project samples. The DFG Aquatic Bioassessment Laboratory performs this QC procedure and can be contacted about information on the procedure requirements and costs.

Taxonomic Level of BMI Identification

There are two levels of taxonomic identification for samples collected using the CSBP. It is the ultimate responsibly of the contractor or project manager to guarantee that the level of taxonomy reported is consistent with the CSBP standards.

CSBP Level 1 is used for most state-wide rapid bioassessment projects and it is imperative when comparing data to the Southern California IBI. In general, Level 1 taxonomic effort is to genera where possible for most taxonomic groups, order for oligochaetes and family for chironomids.

CSBP Level 2 is based on the taxonomic effort levels established by the U.S. EPA for the Western Pilot EMAP. In general, Level 2 taxonomic effort identifies insects to species level where possible and the Dipteran Family: Chironomidae to genus.

Compositing Samples or Data

There will always be 3 samples collected at each sampling reach when using the CSBP. Depending on the objectives of the project, the samples can be processed as individual samples and subsampled for 300 organisms/sample (900 organisms total per site) or **composited at the laboratory** and subsampled for 500 organisms.

Subsampling

The CSBP requires fixed count subsampling with a +/- 10% accuracy. The total count of BMIs must come from at least 3 randomly selected grids within a subsampling tray. The last grid must be fully counted to get an estimate of relative abundance. The debris from processed grids should be put in a clean "remnant" jar and the remaining contents of the tray should be placed back into the original sample jar. If a "large and rare" survey is preformed on the sample, it should be conducted after the subsampling procedure and counted separately.

Data Production, Storage and Analysis

DFG has developed a Microsoft Access® database based loosely on the U.S. EPA's Environmental Data Analysis System (EDAS). The structure of the CalEDAS database is available through the DFG Aquatic Bioassessment Laboratory website, but it does not currently come with end-user support. Whether using the DFG database or other software, the laboratory analysis should produce a BMI taxa list that is consistent with CAMLnet (see above) for all samples and a list of common or project specific biological metrics. Many common biological metrics are listed in the U.S. EPA's RBP document (Barbour et al 1999) and several other sources of bioassessment literature. When BMI samples are processed independently, there are two options for calculating metrics depending on the needs of the project:

1. Calculate metrics for all three samples independently and calculate metric averages at each site

2. The three samples can be composited in the analysis stage, and a 500 count subsample of the 900 organisms can be used to generate one set of **cumulative** metrics for each site.

QA/QC CONSIDERATIONS FOR USING THE CSBP

All private and public entities conducting bioassessment using the CSBP should have a Standard Operating Procedures document (SOP) and a Quality Assurance Protection Plan (QAPP). Large programs and laboratories can have a quality assurance officer and some smaller operations may only have a field or laboratory supervisor. In either case, those individuals responsible for assuring the quality of samples collected in the field and processed in the laboratory should be trained on all aspects of the CSBP. Two 3-day courses on bioassessment concepts and the use of the CSBP are available through the American Fisheries Society (CalNeva AFS) and the Society of Environmental Toxicology and Chemistry (NorCal and SoCal SETAC). Information on these courses can be found at www.slsii.org

The details of a QAPP should be tailored for particular bioassessment operations. Depending on the nature of the project, appropriate boiler plate for QAPPs may be available through Regional Water Quality Control Boards or the State Water Resources Control Board. These agencies should be contacted before developing a QAPP and initiating a bioassessment program.

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October 21, 2014

Ms. Melissa Barcelo
Community Services Division
City of Walnut
21201 La Fuente Road
Walnut, CA 91789

REVIEW OF THE CITY OF WALNUT'S DRAFT WATERSHED MANAGEMENT PROGRAM, PURSUANT TO PART VI.C OF THE LOS ANGELES COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT (NPDES PERMIT NO. CAS004001; ORDER NO. R4-2012-0175)

Dear Ms. Barcelo:

The Regional Water Board has reviewed the draft Watershed Management Program (WMP) submitted on June 28, 2014 by the City of Walnut. This program was submitted pursuant to the provisions of NPDES Permit No. CAS004001 (Order No. R4-2012-0175), which authorizes discharges from the municipal separate storm sewer system (MS4) operated by 86 municipal Permittees within Los Angeles County (hereafter, LA County MS4 Permit). The LA County MS4 Permit allows Permittees the option to develop either a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) to implement permit requirements on a watershed scale through customized strategies, control measures, and best management practices (BMPs). Development of a WMP or EWMP is voluntary and may be developed individually or collaboratively.

The purpose of a WMP or EWMP is for a Permittee to develop and implement a comprehensive and customized program to control pollutants in MS4 discharges of stormwater and non-stormwater to address the highest water quality priorities. These include complying with the required water quality outcomes of Part V.A (Receiving Water Limitations) and Part VI.E and Attachments L through R (Total Maximum Daily Load (TMDL) Provisions) of the LA County MS4 Permit. If a Permittee opts to develop a WMP or EWMP, the WMP or EWMP must meet the requirements, including conducting a Reasonable Assurance Analysis (RAA), of Part VI.C (Watershed Management Programs) of the LA County Permit and must be approved by the Regional Water Board.

As stated above, on June 28, 2014, the City of Walnut submitted a draft Watershed Management Program (WMP) to the Regional Water Board pursuant to Part VI.C.4.c of the LA County MS4 Permit.

The Regional Water Board has reviewed the draft WMP and has determined that, for the most part, the draft WMP includes the elements and analysis required in Part VI.C of the LA County MS4 Permit. However, some revisions to the City's draft WMP are necessary. The Regional

Water Board's comments on the draft WMP, including detailed information concerning necessary revisions to the draft WMP, are found in Enclosure 1 and Enclosure 2, respectively. The specific Permit provisions cited in the enclosures refer to provisions in the LA County MS4 Permit. The LA County MS4 Permit includes a process through which necessary revisions to the draft WMP can be made (Part VI.C.4 in the LA County MS4 Permit). The process requires that a final WMP, revised to address Regional Board comments identified in the enclosures, must be submitted to the Regional Water Board not later than three months after comments are received by the Permittees on the draft program. Please make the necessary revisions to the draft WMP as identified in the enclosures to this letter and submit the revised WMP as soon as possible and no later than **January 21, 2015.**

The revised WMP must be submitted to losangeles@waterboards.ca.gov with the subject line "LA County MS4 Permit – Revised Draft Walnut WMP" with a copy to Ivar.Ridgeway@waterboards.ca.gov and Chris.Lopez@waterboards.ca.gov.

If the necessary revisions are not made, the City will be subject to the baseline requirements in Part VI.D of the Order and shall demonstrate compliance with receiving water limitations pursuant to Part V.A and with applicable interim and final water quality-based effluent limitations (WQBELs) in Part VI.E and Attachment P pursuant to subparts VI.E.2.d.i.(1)-(3) and VI.E.2.e.i.(1)-(3), respectively.

Until the draft Walnut WMP is approved, the City is required to:

(a) Continue to implement all watershed control measures in its existing storm water management programs, including actions within each of the six categories of minimum control measures consistent with Title 40, Code of Federal Regulations, section 122.26(d)(2)(iv);
(b) Continue to implement watershed control measures to eliminate non-storm water discharges through the MS4 that are a source of pollutants to receiving waters consistent with Clean Water Act section 402(p)(3)(B)(ii); and
(c) Target implementation of watershed control measures in (a) and (b) above to address known contributions of pollutants from MS4 discharges to receiving waters.

In addition on June 28, 2014, the City submitted a draft Integrated Monitoring Program (IMP) to the Regional Water Board pursuant to Part IV.C of Attachment E of the LA County MS4 Permit. The Regional Water Board review and comments on the draft IMP will be provided under separate cover.

If you have any questions, please contact Mr. Chris Lopez of the Storm Water Permitting Unit by electronic mail at Chris.Lopez@waterboards.ca.gov or by phone at (213) 576-6674. Alternatively, you may also contact Mr. Ivar Ridgeway, Chief of the Storm Water Permitting Unit, by electronic mail at Ivar.Ridgeway@waterboards.ca.gov or by phone at (213) 620-2150.

Sincerely,

Samuel Unger

Samuel Unger, P.E.
Executive Officer

Enclosures:
Comments and Necessary Revisions to Draft WMP
Comments on Reasonable Assurance Analysis Report for City of Walnut

cc: Cody Howing, Assistant Engineer, RKA Consulting Group

Attachment to October 21, 2014 Letter Regarding the City of Walnut's Draft Watershed Management Program Submittal Pursuant to Part VI.C of the LA County MS4 Permit (Order No. R4-2012-0175)

Comments and Necessary Revisions to Draft WMP

Issue and MS4 Permit Provision	Regional Water Board Staff Comment
Water Quality Characterization Part VI.C.5.a.i	The City's submittal does not include a thorough evaluation of existing water quality conditions, including characterization of storm water and non-storm water discharges from the MS4 and receiving water quality, to support identification and prioritization/sequencing of management actions. The City should evaluate relevant monitoring data for its water quality characterization (e.g. Los Angeles County Sanitation Districts' receiving water monitoring data or mass emissions station and tributary monitoring conducted under the 2001 LA County MS4 Permit may be applicable). The City may be able to find examples of data sources applicable for its water quality characterization in the draft WMPs and EWMP workplans of nearby areas. Conducting representative sampling at the City's MS4 outfalls is another option to support a preliminary water quality characterization of storm water and non-storm water discharges from the City's MS4 if there is a lack of existing water quality data.

Issue and MS4 Permit Provision	Regional Water Board Staff Comment
Category 2 Pollutants – Bacteria Part VI.C.5.a.ii.(2)	The City's submittal correctly identifies coliform and indicator bacteria as 303(d) impairments and correspondingly categorizes coliform bacteria as a category 2 pollutant. However, the City incorrectly uses fecal coliform water quality objectives that no longer apply. The City needs to modify its WMP to be consistent with current freshwater bacteria objectives contained in the *Water Quality Control Plan for the Los Angeles Region* in which *E. coli* is used instead of fecal coliform. These objectives were amended in 2010 through Regional Water Board Resolution No. R10-005. The bacteria limitations listed in Table 2-5 (on page 9) should be revised to include the correct bacteria objectives expressed as *E. coli* density. Additionally, all subsequent sections of the WMP that address this pollutant (e.g. compliance schedules, reasonable assurance analysis, etc.) should address *E. coli* instead of fecal or total coliform.
Category 2 Pollutants – Benthic Macroinvertebrate Bioassessments Part VI.C.5.a.ii.(2)	The City's submittal incorrectly lists "benthic microinvertebrates." This should be listed as "benthic macroinvertebrates."
Category 3 Pollutants Part VI.C.5.a.ii.(3)	The City's submittal does not contain any discussion of Category 3 pollutants nor does it indicate that there was any type of review of existing water quality conditions to identify Category 3 pollutants. As the City completes its water quality characterization, the City must identify if there are any Category 3 pollutants and explicitly report its findings in its WMP and address these pollutants as appropriate in the revised draft WMP, including the City's Reasonable Assurance Analysis (RAA).

Issue and MS4 Permit Provision	Regional Water Board Staff Comment
Source Assessment and Prioritization Part VI.C.5.a.iii-iv	The City's source assessment section does not directly cite the bases for the identification of known and suspected sources of pollutants. For clarity, the City should at least cite the sources for its findings (e.g. TMDL source investigations, findings from 2001 MS4 MCM programs, etc.). Additionally, the City does not appear to prioritize the issues within the watershed based on the findings of its source assessment. The City may simply maintain the priorities from its water body-pollutant classification; however, the WMP should at least discuss and finalize a prioritization of watershed issues based on its source assessment findings.
Minimum Control Measures Part VI.C.5.b.iv.(1)	The City's submittal includes a section on MCMs (pages 12-37) that mostly incorporates and restates Parts VI.D.5 to VI.D.10 of the permit. However, it is not clear if the City did any assessment of the MCMs to identify if there are opportunities for focusing resources on high priority issues in the watershed. Furthermore, it's not clear if the City has made any modifications to MCMs. The City should discuss its evaluation of control measures and explicitly state if there are any modifications as it describes each program.
Public Agency Activities Program Part VI.C.5.b.iv.(1)(a)(iv)	In discussing its Public Agency Activities Program, the City doesn't state whether its public facility inventory will be updated at least once during the 5-year term of the Order per Part VI.D.9.c.iii. With respect to Landscape, Park, and Recreational Facilities Management, the City doesn't specifically state whether its landscaping maintenance program ensures no application of pesticides or fertilizers prior to rain events specified in Part VI.D.9.g.iii.(2). Since the draft WMP does not explicitly state whether any changes are going to be made to MCMs, it is unclear if these are just unintended omissions.

Issue and MS4 Permit Provision	Regional Water Board Staff Comment
Watershed Control Measures – Information on Structural Controls and BMPs Part VI.C.5.b.iv.(4)(b)	The City's submittal does not include sufficient information on the number, type, and location(s) and/or frequency for each structural control and non-structural best management practice. For example, the City does not include the locations of its four proposed Regional BMPs (on page 45), nor is there a thorough description of the type of BMP that will be installed. The City also references "a plan for the implementation of local BMPs," and states that biofilters are the type of local BMP that would be used, but provides no detail on the anticipated number and location(s) of these local BMPs. Regional Water Board staff recommends that the City include a separate section of the WMP to describe all control measures, and corresponding implementation schedules, in detail so that the City's plan and BMP implementation commitments are clear and explicit.

Issue and MS4 Permit Provision	Regional Water Board Staff Comment
Watershed Control Measures – Information on Pollution Prevention Measures Part VI.C.5.b.iv.(4)(c)	The City's submittal does not include sufficient information on the nature, scope, and timing of implementation for pollution prevention measures. For example, on page 45 the City describes that "[s]ource control BMPs proposed by the City include policies, programs, and ordinances that support practices that improve or prevent additional pollution from being deposited into the local rivers and creeks." However, there is no further information on this. While the City states that it will implement "enhanced street sweeping, enhanced catch basin and storm drain cleaning, enhanced commercial and food outlet inspection, enhanced pet waste controls, enhanced education and outreach, septic inspection/enforcement, and enhanced Illicit Discharge Detection Elimination (IDDE) efforts (including microbial source tracking to identify inputs of human fecal contamination into the MS4)," the draft WMP does not include specific, measurable commitments for each of these non-structural BMPs. For example, the revised draft WMP must indicate the nature of the enhancements to street sweeping (e.g., increased frequency from two times per month to four times per month, use of regenerative-air sweepers instead of mechanical [broom & conveyor belt] sweepers) and the schedule for implementing the enhancements. See comment below for more detail. As previously stated, Regional Water Board staff recommends that the City include a separate section of the WMP to describe all control measures in detail so that the City's plan and commitments with regard to pollution prevention measures are clear and explicit.

Issue and MS4 Permit Provision	Regional Water Board Staff Comment
Watershed Control Measures – Milestones Part VI.C.5.b.iv.(4)(d)	The City's submittal does not include sufficient interim milestones and dates for achievement for each structural control and non-structural best management practice to ensure that TMDL compliance deadlines will be met. The City's proposed BMP Implementation Plan (on page 45) should list interim milestones for the structural controls and non-structural BMPs that it plans to implement. Example milestones may include milestones for planning and design, beginning construction, and completing construction. The only interim milestone that is included is for "non-modeled, non-structural BMPs" with a date of December 2017 for their implementation. Greater specificity regarding the City's commitments for each non-modeled, non-structural BMP is necessary, as described above. Regional Water Board staff recommends that this information be included in full detail in a separate section of WMP outside of the Reasonable Assurance Analysis section.
Reasonable Assurance Analysis – Category 1 Pollutants Part VI.C.5.b.iv.(5)	The RAA does not consider dry weather conditions. However, the draft WMP only justifies this omission by stating that the City plans to eliminate 100% of non-exempt dry weather MS4 discharges. If this is the City's goal, the WMP needs to include a detailed plan of what control measures it plans to implement to ensure the elimination of non-exempt non-stormwater discharges. This plan should also include interim milestones. Additionally, the City must also justify in its WMP that these control measures will ensure compliance with the applicable compliance deadlines for selenium. Part of this justification should include an evaluation of whether any of the conditionally exempt, non-stormwater discharges may be a source of selenium that could cause or contribute to an exceedance of the selenium WQBEL. If the City cannot provide a feasible and measureable plan that ensures compliance, then it will need to demonstrate through its RAA that it will comply with the applicable compliance deadlines for selenium.

Issue and MS4 Permit Provision	Regional Water Board Staff Comment
Reasonable Assurance Analysis – Category 2 Pollutants Part VI.C.5.b.iv.(5)	The RAA does not address Category 2 pollutants aside from bacteria. As noted in a previous comment, bacteria should be modeled using *E. coli* instead of fecal coliform. For other Category 2 pollutants (ammonia, cyanide, pH, and TDS) the City must provide additional information to demonstrate that MS4 discharges will meet receiving water limitations.
Compliance Schedules for Category 1 Pollutants Part VI.C.5.c.iii.(1)-(2)	The draft WMP does not incorporate the interim and final implementation deadlines contained in the *Implementation Plan for Metals and Selenium in San Gabriel River and Impaired Tributaries*. The Basin Plan amendment (Regional Water Board Resolution No. R13-004) that incorporated this program of implementation into the Basin Plan was recently approved by the Office of Administrative Law. This plan includes an implementation schedule with interim compliance deadlines of September 30, 2017; September 30, 2020; and September 30, 2023; and a final compliance deadline of September 30, 2026. The City's submittal does not include any compliance deadlines occurring within the permit term for Category 1 pollutants (i.e. lead and selenium). While the City's analysis indicates that no load reductions are required to meet the lead WLA (p. 50), the September 30, 2017 compliance deadline should be included along with the corresponding structural and non-structural BMPs that will be implemented to achieve the dry weather WLA for selenium in 30% of the City's drainage area (or achieve a 30% reduction in the difference between the current loadings and the dry weather WLAs for selenium). Table 4-9 (on pages 50-51) only establishes a final compliance date of 2024.

Issue and MS4 Permit Provision	Regional Water Board Staff Comment
Compliance Schedules for Category 2 Pollutants Part VI.C.5.c.iii.(3)	The City's submittal does not include interim milestones and dates for achieving milestones for Category 2 (High Priority) pollutants—i.e. coliform bacteria, ammonia, pH, TDS, toxicity, cyanide, and benthic macroinvertebrate condition. As it does with Category 1 pollutants, Table 4-9 (on pages 50-51) only establishes a final compliance date of 2024 for bacteria load reductions. Per the LA County MS4 Permit, interim milestones and dates for their achievement must be adequate for measuring progress once every two years. Additionally, the City does not discuss or justify its reasoning for adopting a 10-year compliance schedule for bacteria.

TO: Melissa Barcelo
City of Walnut

FROM: C.P. Lai, Ph.D., P.E. and Thanhloan Nguyen
REGIONAL PROGRAMS SECTION

DATE: October 21, 2014

SUBJECT: COMMENTS ON REASONABLE ASSURANCE ANALYSIS REPORT FOR CITY OF WALNUT

This memorandum contains comments on Section 4.0 "Reasonable Assurance Analysis" of the City's draft Watershed Management Program, dated June 28, 2014, which was submitted by the City of Walnut.

A. General comments on the draft Reasonable Assurance Analysis section of the draft Watershed Management Program.

1. Pursuant to Part VI.C.5.a.iv(1) and VI.C.5.b.iv.(3)-(4), pages 60 and 62-63 of the LA County MS4 Permit, the City is subject to final wasteload allocations (WLAs) pursuant to Attachment P, Part A "San Gabriel River and Impaired Tributaries Metals and Selenium TMDL." The LA County MS4 Permit specifies a WLA for lead during wet weather that applies to Reach 2 of the San Gabriel River and all upstream reaches and tributaries and for selenium during dry weather that applies to San Jose Creek 1 and 2, which are both applicable to the City's MS4 discharges.

   The City's approach to estimate baseline loading for lead was not appropriate pursuant to Section B of the Reasonable Assurance Analysis Guidelines (see comment B.1 below for more detail).

   For selenium, the City does not support its assumption that the source of selenium is natural with any available data or peer-reviewed scientific studies.

   The City did not analyze a strategy to implement pollutant controls necessary to achieve applicable interim and final water quality-based effluent limitations for selenium consistent with the interim and final implementation deadlines in the Basin Plan Amendment, Resolution No. R13-004 - Implementation Plan for the TMDLs for Metals and Selenium in the San Gabriel River and Impaired Tributaries. These include:

   - By September 30, 2017, for WQBELs applicable in wet weather a 10% reduction, and dry weather a 30% reduction in the difference between current pollutant loads and the WQBEL.
   - By September 30, 2020, for WQBELs applicable in wet weather a 35% reduction, and in dry weather a 70% reduction in the difference between current pollutant loads and the WQBEL.

2. Target load reductions for bacteria in San Jose Creek were based on an incorrect water quality objective of 4000 MPN/100 mL. The correct water quality objective is an *E. coli* density of 235 per 100 mL as a single sample maximum, and an *E. coli* density of 126 per 100 mL as a geometric mean. (San Jose Creek has a Potential REC-1 beneficial use designation.) Similarly, target load reductions for Walnut Creek must be based on the current water quality objectives for *E. coli* contained in the Basin Plan.

3. The City's submittal does not provide adequate support or justification from peer-reviewed sources for the fecal coliform load reduction from 22 to 44 10^12 MPN (for 25th and 75th percentile) for San Jose Creek to be achieved by non-modeled non-structural BMPs. In order to take credit for the 8% reduction from baseline loading of bacteria as a result of implementation of non-modeled non-structural BMPs, greater specificity must be provided on the enhanced watershed control measures. The City must provide details regarding how, when and to what extent these measures will be enhanced during this permit term. Additionally, the City must provide measurable milestones for implementing each one of the control measures that will allow an assessment of progress toward the final receiving water limitations every two years.

B. Modeling comments regarding analysis of total lead and bacteria for San Jose Creek and Walnut Creek Wash in San Gabriel River watershed:

1. The model predicted mass contributions of total lead and bacteria from the City shown in Table 4-2 are not consistent with those values directly from the model output. For example, the 90th percentiles of mass loads of lead presented in Figure A of this attachment are 32 lbs/day and 0.37 lbs/day respectively in San Jose Creek and in Walnut Creek Wash. In terms of 90th percentile model year, the total lead loads would be 2464 lbs/year and 28 lbs/year respectively, which are not consistent with the values presented in Table 4-2 of RAA Report. In addition, the predicted results of lead concentration in San Jose Creek obtained directly from the model output file as shown in Figure B. of this attachment are much higher than the EMC values and WQBEL value for lead. As such, the City should re-analyze baseline loading under the critical condition consistent with the expression of the WLA for lead (i.e., daily load) before concluding that the allowable lead load can be set equal to the baseline load (see p. 41). Additionally, the conclusion that no reduction for lead is required should be re-evaluated based on a daily load. Similarly, the model results presented in Table 4-2 and Table 4-3 should be presented in kg/day to be consistent with the expression of the WLA in Attachment P of the LA County MS4 Permit.

   Pursuant to Section B.II.c of the RAA guideline, pollutant event mean concentrations (EMCs) should only be used when water quality data are not available. As soon as sufficient data are collected, the model should be refined/calibrated using updated data to estimate the baseline pollutant loading.

2. The expected reductions in pollutant load from baseline to be achieved by the proposed BMPs identified in Table 4-6 and Table 4-7 for bacteria need the detailed model results to support each BMP performance as shown in Table 4-6 and Table 4-7. For example, the RAA should include the time series of load reduction for bacteria over the simulation

period to demonstrate the variability of load reduction from the baseline condition for each BMP.

The report did not describe how the model was calibrated, including calibration results compared to calibration criteria in Table 3.0 of the RAA Guidelines, and no historical hydrology and water quality monitoring data were used for comparison with the model results for the baseline prediction. According to Part G, pages 12-13 of the RAA Guidelines, model calibration is necessary to ensure that the model can properly assess all the variables and conditions in a watershed system.

3. The report did not evaluate the critical condition for the modeling. For example, the input rainfall should be presented in the report and explain what the modeling periods are that are being simulated for the critical condition. Pursuant to Part B on pages 2-4 of the RAA Guidelines, a description of the process for identifying critical conditions is needed prior to the RAA modeling analysis. A summary of TMDL critical conditions relevant to MS4 discharges was provided in Appendix B of the RAA Guidelines for Permittees' reference. The report presents mass contributions of total lead and bacteria, but does not present concentration of those pollutants under the critical condition.

4. The ID for each of the 18 subwatersheds used in the model simulation must be provided and be shown in the simulation domain to present the geographic relationship of subwatersheds simulated in the LSPC model.

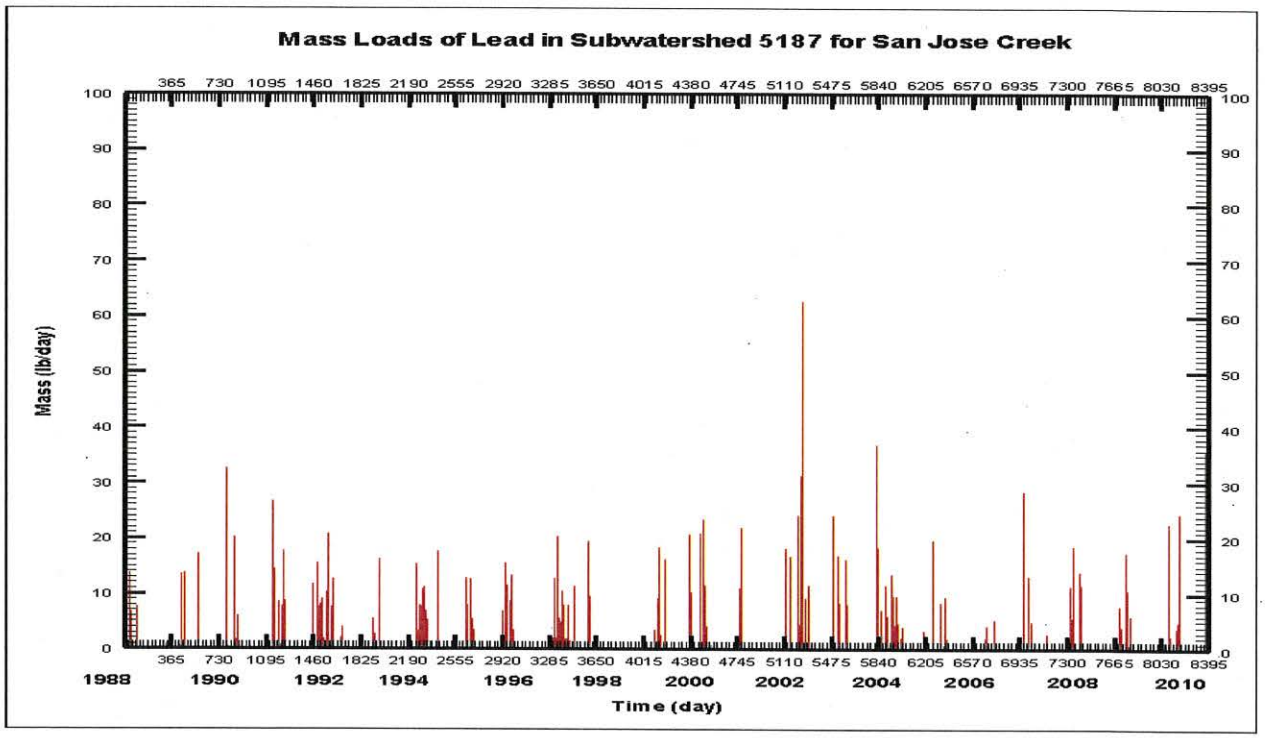
5. The flow and water quality time series output at the watershed outlet must be provided using the 90^{th} percentile of modeled pollutant concentration and mass per day for wet event days consistent with the expression of the WLA over simulation periods to estimate the baseline concentration and mass. In addition, per RAA Guidelines, the model output should include storm water runoff volume at outlet for baseline and each BMP scenario as well (See Table 5. Model Output for Both Process Based BMP Models and Empirically Based BMP Models, pages 20-22 of the RAA Guidelines).

6. Model simulation under the dry weather condition for bacteria for San Jose Creek and Walnut Creek Wash was not included in the Report.

7. Per the RAA Guidelines, the required load reduction should be evaluated at the jurisdictional boundary of each subwatershed for each pollutant to demonstrate that the proposed control measures will ensure that the City's MS4 discharges achieve effluent limitations and do not cause or contribute to exceedances of receiving water limitations. The BMP performance model proposed in the RAA Guidelines should be used to predict the pollutant reduction for the proposed BMPs.

C. Modeling comments regarding lack of analysis for other Category 1 waterbody pollutant combination:

1. Model simulations, baseline loadings, and required reductions for selenium were not included in the Report.



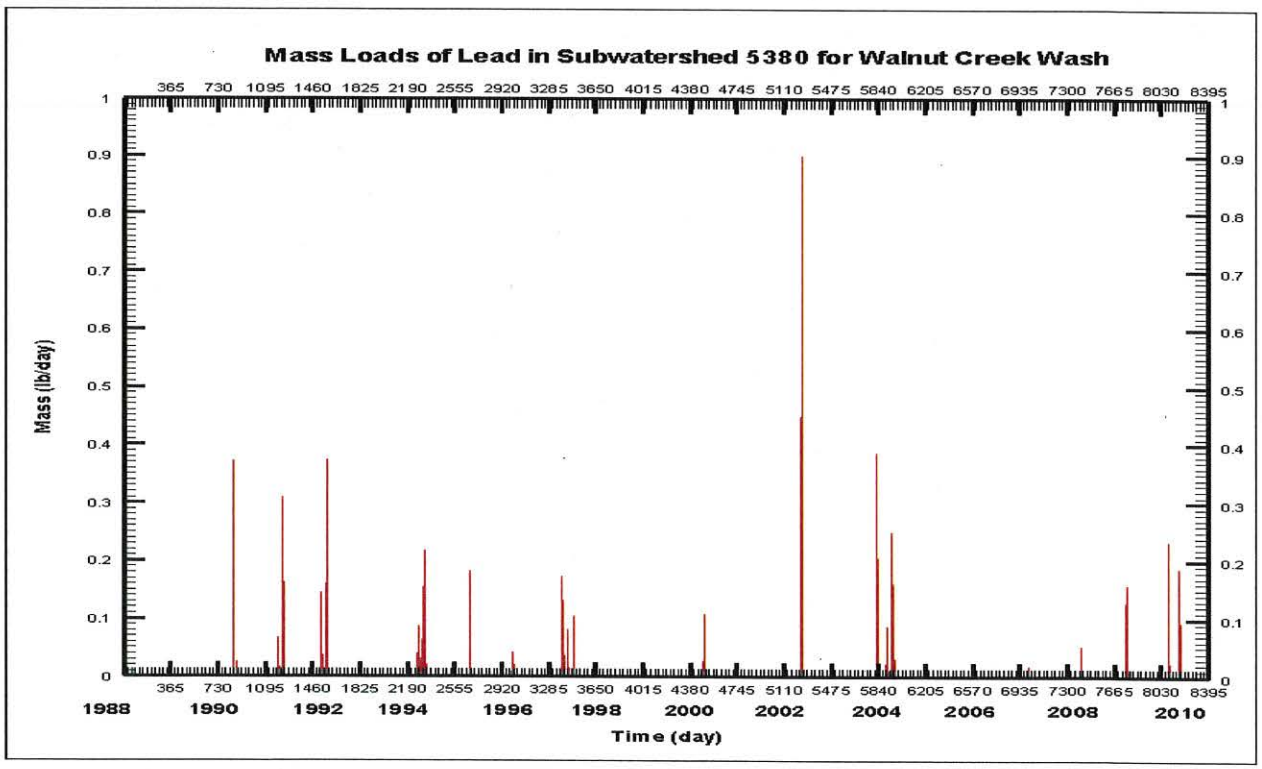


Figure A. Model predicted results for total loads of lead directly from the model output file

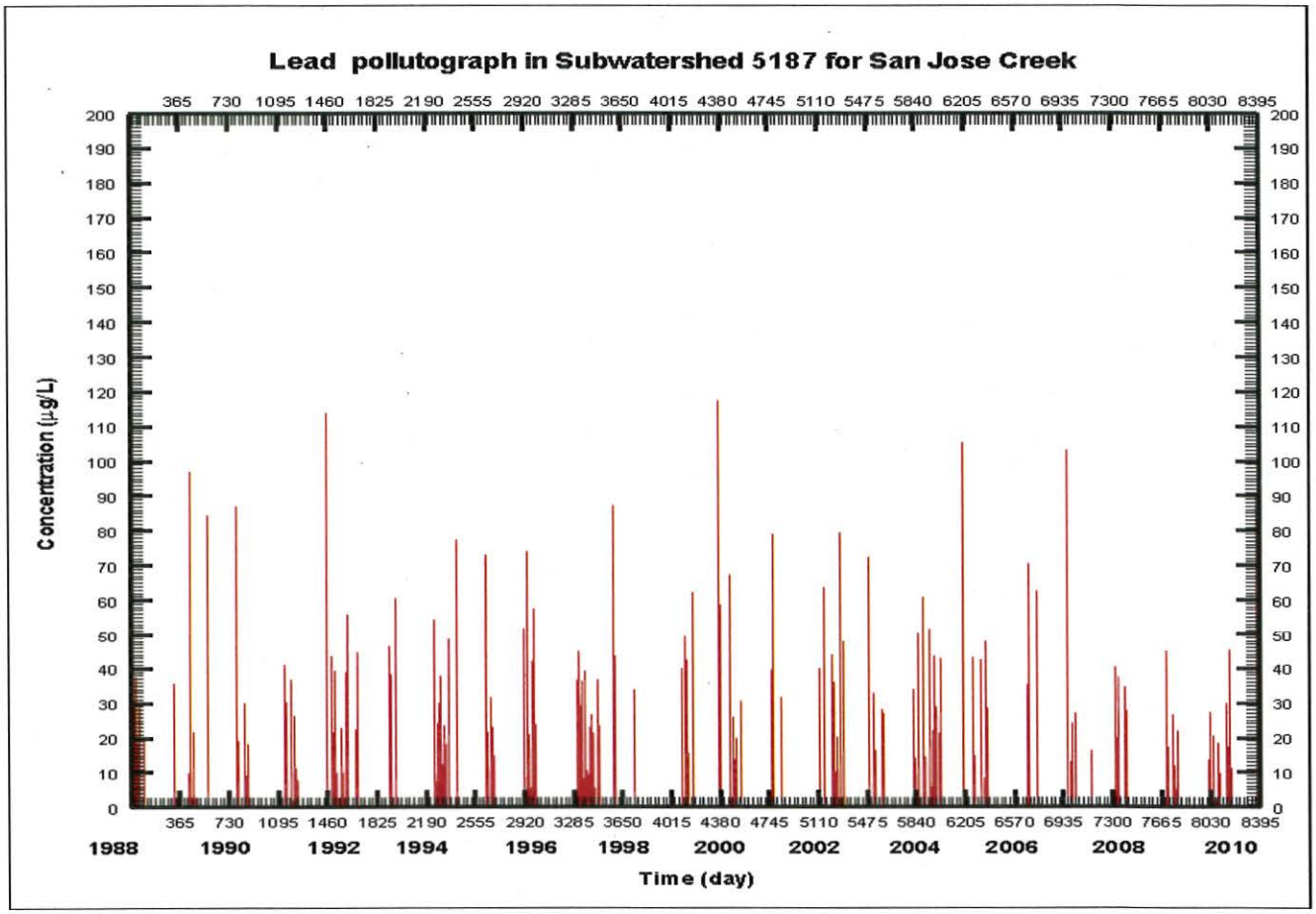


Figure B. Model predicted results of lead concentration in San Jose Creek directly from model output file

December 8, 2014

Ms. Mary Rooney
Community Services Division
City of Walnut
21201 La Fuente Road
Walnut, CA 91789

REVIEW OF THE CITY OF WALNUT'S DRAFT INTEGRATED MONITORING PROGRAM, PURSUANT TO PART VI.B AND ATTACHMENT E PART IV.A OF THE LOS ANGELES COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT (NPDES PERMIT NO. CAS004001; ORDER NO. R4-2012-0175)

Dear Ms. Rooney:

The Regional Water Board has reviewed the draft Integrated Monitoring Program (IMP) submitted on June 28, 2014 by the City of Walnut. This program was submitted pursuant to the provisions of NPDES Permit No. CAS004001 (Order No. R4-2012-0175), which authorizes discharges from the municipal separate storm sewer system (MS4) operated by 86 municipal Permittees within Los Angeles County (hereafter, LA County MS4 Permit).

The LA County MS4 Permit allows Permittees the option to develop and implement, in coordination with an approved Watershed Management Program per Part VI.C, a customized monitoring program that achieves the five Primary Objectives set forth in Part II.A of Attachment E and includes the elements set forth in Part II.E of Attachment E. Customized monitoring programs may be developed on an individual jurisdictional basis, referred to as an Integrated Monitoring Program (IMP), or a on watershed basis, referred to as a CIMP. These programs must be approved by the Executive Officer of the Regional Water Board.

The Regional Water Board has reviewed the draft IMP and has determined that, for the most part, the IMP includes the elements set forth in Part II.E and will achieve the Primary Objectives set forth in Part II.A of Attachment E of the LA County MS4 Permit. However, some additions and revisions to the IMP are necessary. The Regional Water Board's comments on the IMP, including detailed information concerning necessary additions and revisions to the IMP, are found in Enclosure 1.

Please make the necessary additions and revisions to the IMP as identified in the enclosures to this letter and submit the revised IMP as soon as possible and no later than **March 8, 2015.** The revised IMP must be submitted to losangeles@waterboards.ca.gov with the subject line "LA County MS4 Permit – Revised Walnut IMP" with a copy to Ivar.Ridgeway@waterboards.ca.gov and Chris.Lopez@waterboards.ca.gov.

Upon approval of the revised IMP by the Executive Officer, the City must prepare to commence its monitoring program within 30 days. If the necessary revisions are not made, the City must comply with the Monitoring and Reporting Program (MRP) and future revisions thereto, in Attachment E of the LA County MS4 Permit.

Until the Permittee's IMP is approved by the Executive Officer, the monitoring requirements pursuant to Order No. 01-182 and MRP CI 6948, and pursuant to approved TMDL monitoring plans shall remain in effect for the Permittee.

If you have any questions, please contact Mr. Chris Lopez of the Storm Water Permitting Unit by electronic mail at Chris.Lopez@waterboards.ca.gov or by phone at (213) 576-6674. Alternatively, you may also contact Mr. Ivar Ridgeway, Chief of the Storm Water Permitting Unit, by electronic mail at Ivar.Ridgeway@waterboards.ca.gov or by phone at (213) 620-2150.

Sincerely,

Samuel Unger

Samuel Unger, P.E.
Executive Officer

Enclosures:
Enclosure 1 – Summary of Comments and Necessary Revisions to Draft IMP

cc: Robert Wishner, City of Walnut
Melissa Barcelo, City of Walnut
Cody Howing, Assistant Engineer, RKA Consulting Group

Enclosure 1 – Summary of Comments and Necessary Revisions to Draft IMP

City of Walnut

IMP Reference	MRP Element/ Reference (Attachment E)	Comment and Necessary Revision
Receiving Water Monitoring		
Section 2.0 (RW Monitoring Location)	Part VI.A	The City relies upon receiving water monitoring data from mass emission station S14. However, this site is located in San Gabriel River Reach 2, far downstream of the City's MS4 discharges into San Jose Creek Reach 1 and Walnut Creek. The draft IMP does not provide an explanation how and why this location will be representative of MS4 discharges nor how the City is contributing to the monitoring at this station. The City should consider monitoring at a site upstream of S14 that can be used to determine whether receiving water limitations are being met. In particular, the City is subject to a TMDL WLA for selenium in San Jose Creek Reach 1. The City may consider coordinating with other agencies or adjacent WMP and EWMP groups to utilize proposed RW monitoring sites that are located in San Jose Creek and Walnut Creek, closer to the City's MS4 discharges. Potential sites may include Los Angeles County Sanitation Districts' receiving water monitoring sites, tributary monitoring sites established under the 2001 LA County MS4 Permit, or new monitoring sites established by other MS4 Permittees.
Section 2.1 (Metals TMDL Monitoring)	Part VI.C and Part VI.D	The draft IMP indicates on pages 11 and 12 that monitoring for lead and selenium will include monitoring of three wet weather events per year instead of the minimum of four events recommended in the TMDL. The frequency for monitoring applicable parameters under the San Gabriel River Metals TMDL should be increased to four wet weather events to be consistent with the recommendations listed in that TMDL. Wet-weather monitoring results from the first year may be evaluated to determine whether reducing the frequency to three wet-weather events per year would still provide sufficient data. The City may request a reduction in frequency on the basis of

IMP Reference	MRP Element/ Reference (Attachment E)	Comment and Necessary Revision
		this data evaluation. On page 12, the draft IMP cites the wet weather conditions described in the MS4 Permit. The City should note and use the TMDL definition of wet weather conditions included in the San Gabriel River Metals TMDL (260 cfs flow in San Gabriel River Reach 2) and target wet weather events that fit this definition.
Section 2.1 (Harbor Toxics TMDL Monitoring)	Part VI.C and Part VI.D	As a responsible party under the San Gabriel River Metals TMDL, the City is also responsible for conducting water and sediment monitoring at the mouth of the San Gabriel River under the *Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL*. See Table K-13, footnote 2 in the LA County MS4 Permit. The monitoring program requirements can be found in the Basin Plan (Basin Plan, Chapter 7, Section 7-20, Table 7-20.1 "Monitoring") or page 27 of Attachment A to Resolution No. R11-008: - Water Column Monitoring Water samples and total suspended solids samples shall be collected at, at least one site during two wet weather events and one dry weather event each year. The first large storm event of the season shall be included as one of the wet weather monitoring events. Water samples and total suspended solid samples shall be analyzed for metals, DDT, PCBs, and PAHs. Sampling shall be designed to collect sufficient volumes of suspended solids to allow for analysis of the listed pollutants in the bulk sediment. General water chemistry (temperature, dissolved oxygen, pH, and electrical conductivity) and a flow measurement shall be required at each sampling event. General chemistry measurements may be taken in the laboratory immediately following sample collection if auto samplers are used for sample collection or if weather conditions are unsuitable for field measurements. - Sediment Monitoring For sediment chemistry, sediment samples shall be collected at, at least one site every two years for analysis of general sediment quality constituents and the full chemical suite as specified in SQO Part 1. All samples shall be collected in accordance with SWAMP protocols.

IMP Reference	MRP Element/ Reference (Attachment E)	Comment and Necessary Revision
		The details of the monitoring program including sampling locations and all methods shall be specified in the MRP to be approved by the Executive Officer. Section 2.1 of the revised IMP should address how the City will fulfill this requirement individually or in collaboration with other Permittees within the San Gabriel River watershed. It also should be noted that monitoring for PCBs in sediment or water under this TMDL should be reported as the summation of aroclors and a minimum of 40 (and preferably at least 50) congeners. See Table C8 in the state's Surface Water Ambient Monitoring Program's Quality Assurance Program Plan (Page 72 of Appendix C), which can be downloaded at http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/qaprp082209.pdf for guidance. It is preferable samples be analyzed using EPA Methods 8270 or 1668C (as appropriate), and High Resolution Mass Spectrometry.
Sections 2.2 and 2.3 (Receiving Water Monitoring Requirements)	Part VI.C and Part VI.D	For clarity, Table 2-2 (page 12) should incorporate and distinguish between monitoring frequencies for parameters in wet weather and in dry weather and indicate the monitoring location(s). As noted above, mass emissions station S14 is located far downstream of the City. Receiving water monitoring sites located on San Jose Creek and Walnut Creek would be more appropriate. Upon identifying more appropriate receiving water monitoring sites, the City should also re-evaluate the list of monitoring parameters to ensure that all applicable TMDL and 303(d)-listed parameters for that waterbody are included.
Sections 2.2, 2.3, and 3.6 (Bacteria Monitoring)	Part VI.C, Part VI.D, Part VIII.B, and Part IX.G	The draft IMP correctly identifies coliform and indicator bacteria as 303(d) impairments and correspondingly categorizes coliform bacteria as a category 2 pollutant. However, the City should modify its IMP to monitor for *E. coli* to be consistent with current freshwater bacteria objectives contained in the *Water Quality Control Plan for the Los Angeles Region* in which *E. coli* is used instead of fecal coliform. Receiving water and outfall monitoring parameters in Table 2-2 (page 12) and Table 3-6 (page 21) should be revised to include monitoring for *E. coli* where there is a bacteria 303(d) listing.
Outfall Monitoring		

IMP Reference	MRP Element/ Reference (Attachment E)	Comment and Necessary Revision
Section 3.0 (Storm Drains, Channels and Outfalls Map(s) and/or Database	Part VII.A	All completed mapping information as listed in Part VII.A of the MRP should be included and submitted in the revised IMP. Furthermore, the IMP should clearly note where each of these items are located within the IMP. Additionally, the land uses on Figure 1-2 (page 4) are hard to view since "Residential or Other Land Use" is transparent. It is also unclear what constitutes "Other Land Use."
Section 3.1.1 (Outfall Monitoring Locations)	Part VIII.A.2.a	In Section 3.1.1 (page 21) the draft IMP proposes to monitor only two outfall locations, instead of the three needed to monitor each HUC 12 subwatershed within the City's jurisdiction. The City states that this is an "attempt to maximize available funds for monitoring and minimize redundant data collection." The City will consider the third outfall location for potential monitoring at a later date. Given the information provided by the City in its IMP, this approach appears acceptable. The draft IMP justifies each of its proposed outfall monitoring locations by comparing drainage area land uses to land uses for the entire City of Walnut. However, since outfall monitoring establishes monitoring of at least one major outfall per HUC 12 subwatershed, the draft IMP's comparisons could be improved by including a comparison of land uses for each outfall monitoring location to the City's land uses within the corresponding HUC-12 subwatershed. Further, Section 3.1.1 should include pictures of the monitoring locations and map(s) of the corresponding catchment areas.
Section 3.1.1 (Outfall Location M1)	Part VIII.A.2.e	Section 3.1.1 (page 16) of the draft IMP indicates that outfall monitoring location M1 is located 1,500 feet north of City limits, upstream of where the reinforced concrete box merges with San Jose Creek Reach 1. The City needs to include justification for sampling at this location. Per Part VIII.A.2.e (page E-22) of the MRP, "[t]he specific location of sample collection may be within the MS4 upstream of the actual outfall to the receiving water if field safety or accurate flow measurement require it."
Section 3.1.2 (SW Outfall Monitoring Parameters)	Part VIII.B.1.c	For outfall monitoring, Table 3-6 cites section VI.C.d.vi for toxicity. This should instead reference section VIII.B.1.c.vi and indicate that monitoring at outfalls will include pollutants identified in a TIE conducted at the downstream receiving water monitoring station during the most recent sample event, or where the TIE conducted

IMP Reference	MRP Element/ Reference (Attachment E)	Comment and Necessary Revision
		on the receiving water samples was inconclusive, aquatic toxicity. Table 3-6 also does not include all 303(d) listed parameters. Since outfalls M1 and M2 discharge to San Jose Creek Reach 1, the monitoring list should include TDS for those outfall locations. Additionally, for clarity, Table 3-6 should incorporate monitoring frequencies and monitoring locations. On page 21, the draft IMP cites the wet weather conditions described in the MS4 Permit. The City should note and use the TMDL definition of wet weather conditions included in the San Gabriel River Metals TMDL (260 cfs flow in San Gabriel River Reach 2) and target wet weather events that fit this definition.
Section 3.2.1 (Outfall Screening)	Part IX.B and Part IX.C	Section 3.2.1 (pages 22-23) of the draft IMP describes the City's outfall screening procedure and notes that the City will track outfalls with significant dry weather flow. In this section, the City should reference Part IX.C.1.d (page E-25) of the MRP and select appropriate criteria that the City will use to determine significant non-storm water discharges.
Section 3.2.1 (Inventory of MS4 Outfalls with NSW Discharges)	Part IX.D	Section 3.2.1 (page 23) of the draft IMP notes the information included in field inspection reports. This information mirrors the required attributes to be included in the City's inventory of MS4 outfalls. However, based on the limited description, it is unclear whether this is consistent with the MS4 outfall inventory requirements detailed in Part IX.D. The revised IMP should further elaborate on this inventory and ensure consistency with MRP requirements.

Watershed Management Plan

City of Walnut

Submitted to:

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Submitted by:

The City of Walnut
21201 La Puente Road
Walnut, CA 91789

July 21, 2015

Table of Contents

1.0- Municipal Separate Storm Sewer System Permit

On November 8, 2012 the Los Angeles Regional Water Quality Control Board adopted Order R4-2012-0175 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within Coastal Watersheds of Los Angeles County, except those discharges originating from the City of Long Beach MS4. Order R4-2012-0175 became effective 50 days later on December 28, 2013. Order R4-2012-0175 serves as the National Pollution Discharge Elimination System (NPDES) permit for Coastal Watershed storm water and non-storm water discharges originating from the Los Angeles County Region, excluding the City of Long Beach. The permit covers the land areas of the Los Angeles County Flood Control, unincorporated areas of Los Angeles County and 84 Cities within the County of Los Angeles. Permittees are subject to the requirements set forth in the MS4 permit for all storm water and non- storm water discharges into the MS4. The City of Walnut is located in the Los Angeles Region and is identified in the MS4 Permit as a permittee under Order R4-2012-0175.

The MS4 permit regulates municipal discharges of storm water and non-storm water from the MS4s of the permittees. Storm water and non-storm water discharges have been identified as a transport mechanism for pollutants into the receiving waters of the Los Angeles Region. Pollutants originating from various land uses are mobilized by surface flow of water which is then directed into the MS4 and eventually deposited into receiving water bodies. In many cases pollutant deposition into receiving water bodies has a noticeable impact on the local ecological system of the water body and recreational uses. It is the intent of the MS4 Permit to protect water quality and mitigate existing and potential sources of pollutants that are cause for impairment of receiving water bodies.

Conditions of the MS4 Permit require that all permittees develop a watershed management plan on an individual or joint basis that will address water quality issues with in the permittee's jurisdictional area. The City of Walnut submitted a Notice of Intent to the Los Angeles Regional Water Board on June 28, 2013 identifying the City's selected watershed management plan option. Due to the topographic nature and land use of the City of Walnut, the single permittee Watershed Management Plan (WMP) option was selected. A copy of the NOI is included in Attachment A of this document. The intention of the WMP is to provide a viable plan for implementing water quality improving infrastructure, policies and programs. The end result of the WMP is focused on complying with final effluent limitations and numeric targets for known pollutants in the receiving water.

The WMP is paired with an Integrated Monitoring Plan (IMP) to provide a complete program that will assess and address water quality in the City. The IMP will serve as the method for determining the need for pollutant reductions and ultimate compliance with the established water quality goals. The WMP and IMP were developed by RKA Consulting Group with exception to the Reasonable Assurance Analysis which was developed by Geosyntec Consultants.

1.1- The City of Walnut

The City of Walnut is a General Law city that was incorporated on January 19, 1959, and has a jurisdictional area of 8.9 square miles. Based on the 2010 Census, the City of Walnut has an approximate population of 30,000. One defining feature of the City is its rural charm which is preserved by a well-defined general plan. The City is located in the San Gabriel Valley region of Los Angeles County north of State Route 60 and west of State Route 57. Los Angeles County's map of the San Gabriel River Watershed (Figure 1-1) highlights in green, the City's location with respect to the watershed.

Land use in the City is primarily devoted to residential development consisting of 3,760 acres or 65% of the City. The remaining land use in the City is composed of 1,680 acres of open space or 29% of the jurisdictional area, 255 acres of commercial use or 4.5% of the jurisdictional area, and 86 acres of agricultural use or 1.5% of the jurisdictional area. Figure 1-2 is a map of the City of Walnut's land use. Table 1-1 compares the land uses of the City of Walnut with those of the entire San Gabriel River Watershed.

Table 1-1

Watershed Land Use		
Land Use	City of Walnut	San Gabriel River Watershed
Residential	65%	26%
Open Space	29%	50%
Agriculture/Other	1.5%	9%
Commercial/Industrial	4.5%*	15%

**There are no current industrial land uses in the City of Walnut.*

The City boundary extends from the San Jose Hills north of the City to Valley Boulevard to the south, and from Nogales Street to the west to the easterly boarder of the City with unincorporated areas of Los Angeles County and the City of Pomona. Other cities identified as MS4 Permittees bordering or in close proximity to the City of Walnut include: City of La Puente, City of Industry, City of West Covina, City of Diamond Bar, City of Pomona, and unincorporated areas of Los Angeles County (see Figure 1-1 for San Gabriel River Watershed Map).

1.2- Walnut Watershed Characteristics

The City of Walnut drains to the San Gabriel River Watershed and is part of the San Gabriel River Watershed Management Area (SGRWMA). The City's runoff drains to the San Gabriel River through two tributary water bodies in the SGRWMA. Reach 1 of the San Jose Creek is located to the south of the City and Walnut Creek Wash is located to the north. Both water bodies connect to Reach 3 of the San Gabriel River which runs parallel with State Route 605 and eventually drains directly to the Pacific Ocean. Figure 1-3 shows the City of Walnut and the two drainage areas within the City's jurisdiction.

1.2.1- San Jose Creek Reach 1

Due to the topography and location of the San Jose Hills, approximately 93% of the City drains to the South and is tributary to Reach 1 of the San Jose Creek. Storm water and non-storm water runoff is captured by catch basins and then carried through a network of storm drains and open channels to multiple outfalls connected to Reach 1 of the San Jose Creek.

The San Jose Creek transports runoff for the City of Walnut's outfalls approximately 12 miles to its confluence with San Gabriel River Reach 3 just north of the interchange of State Route 60 and State Route 605. The San Jose Creek is channelized from the area adjacent to the City of Walnut to approximately three quarters of a mile east of Workman Mill Road where the Creek is transitioned to soft bottomed. A number of other upstream and downstream permittees contribute runoff to Reach 1 of the San Jose Creek in addition to the City of Walnut. The Creek extends north east to connect with Thomson Wash which originates at easterly limits of Los Angeles County. Thompson Creek Dam is located at the very top of Thomson Wash.

Figure 1-1: San Gabriel River Watershed Management Area

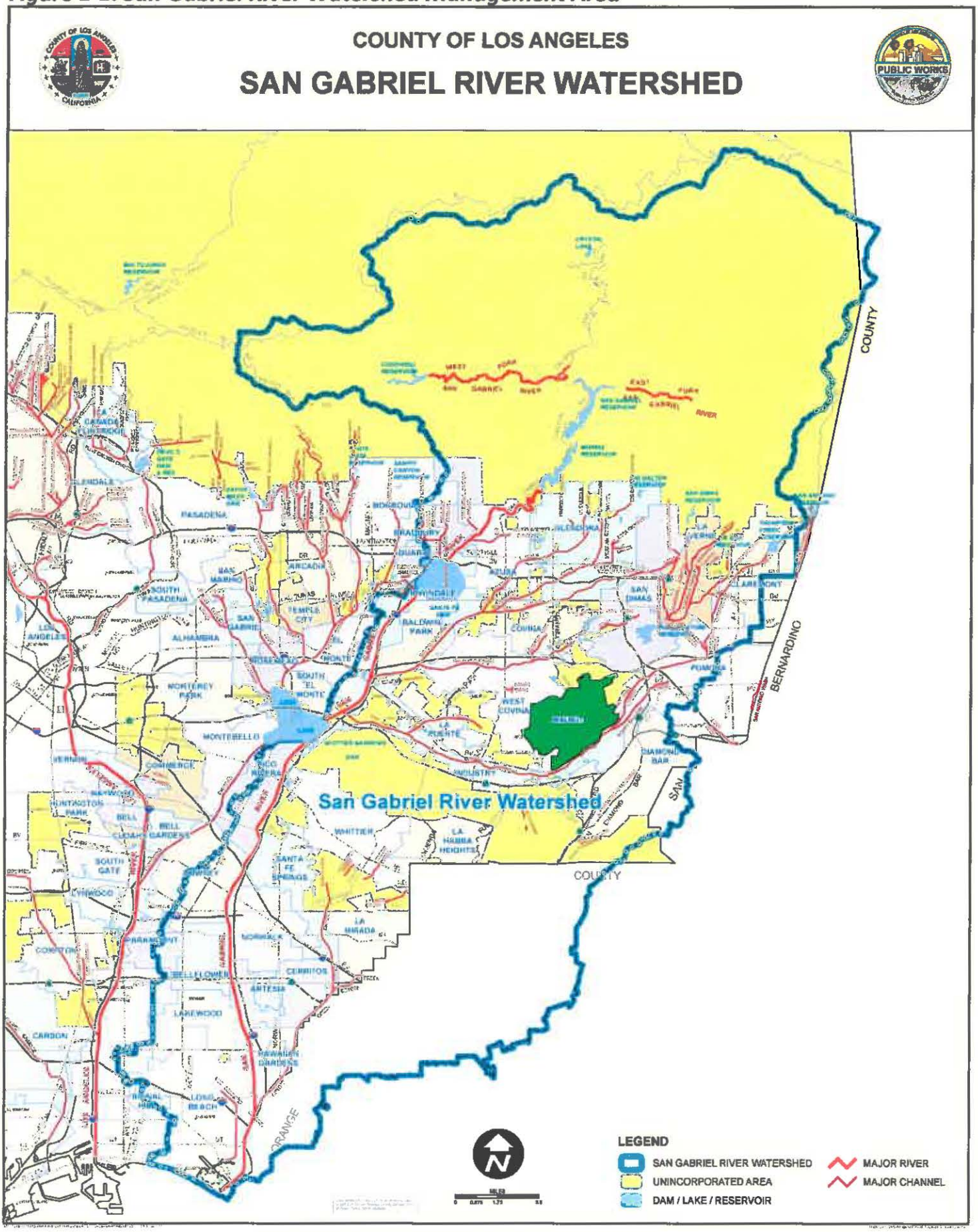
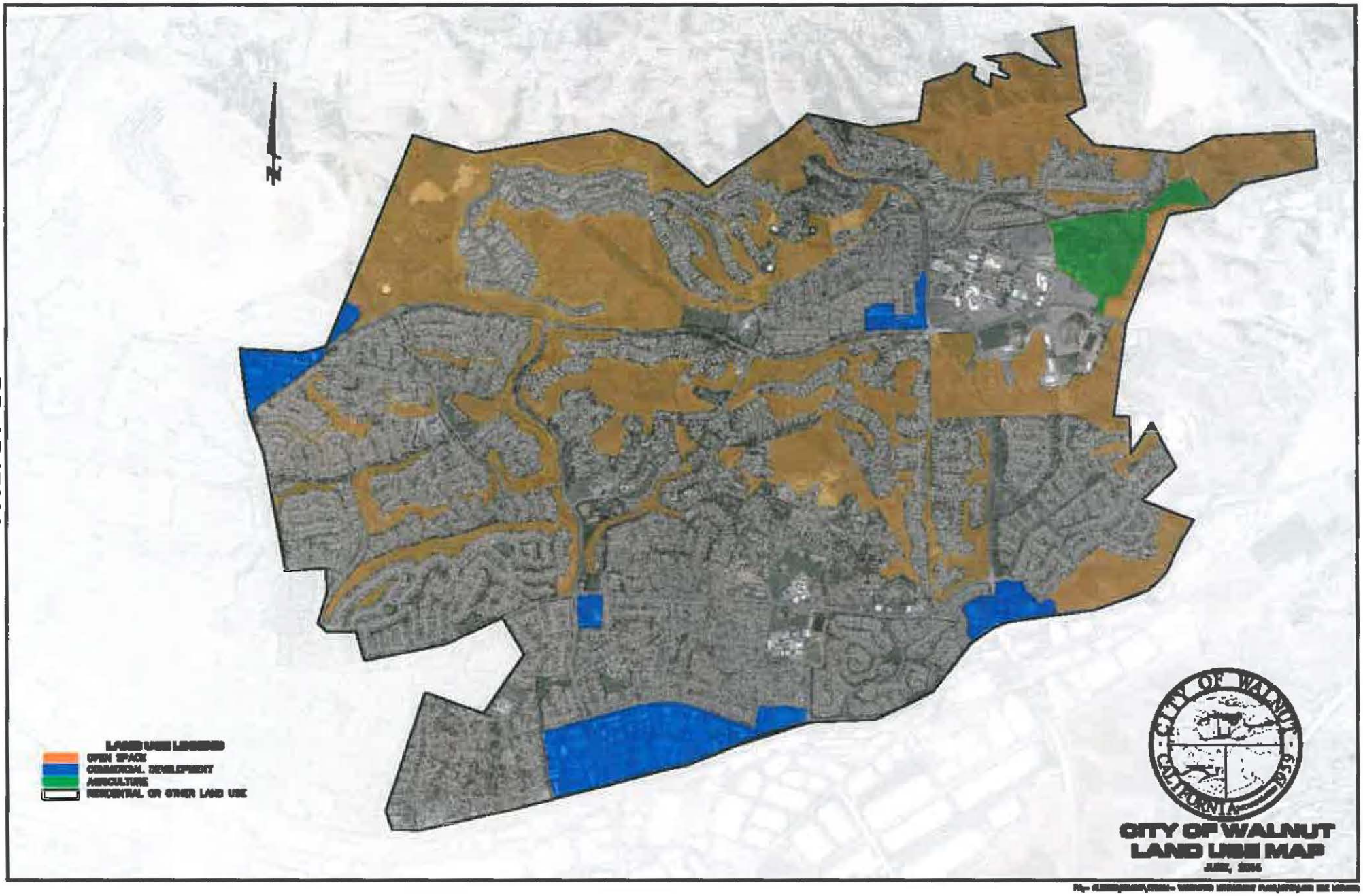


Figure 1-2: City of Walnut Land Use Map



1.2.2- Walnut Creek Wash

The remaining 7% of the City of Walnut's jurisdictional area drains to the Walnut Creek Wash. A majority of the City's tributary area to Walnut Creek Wash watershed is open space with a small portion of residential development. With a majority of the tributary area land use categorized as open space, MS4 discharges originating from this area are minimal. The existing MS4 flows drain to the north of the City into unincorporated Los Angeles County and eventually into Walnut Creek Wash.

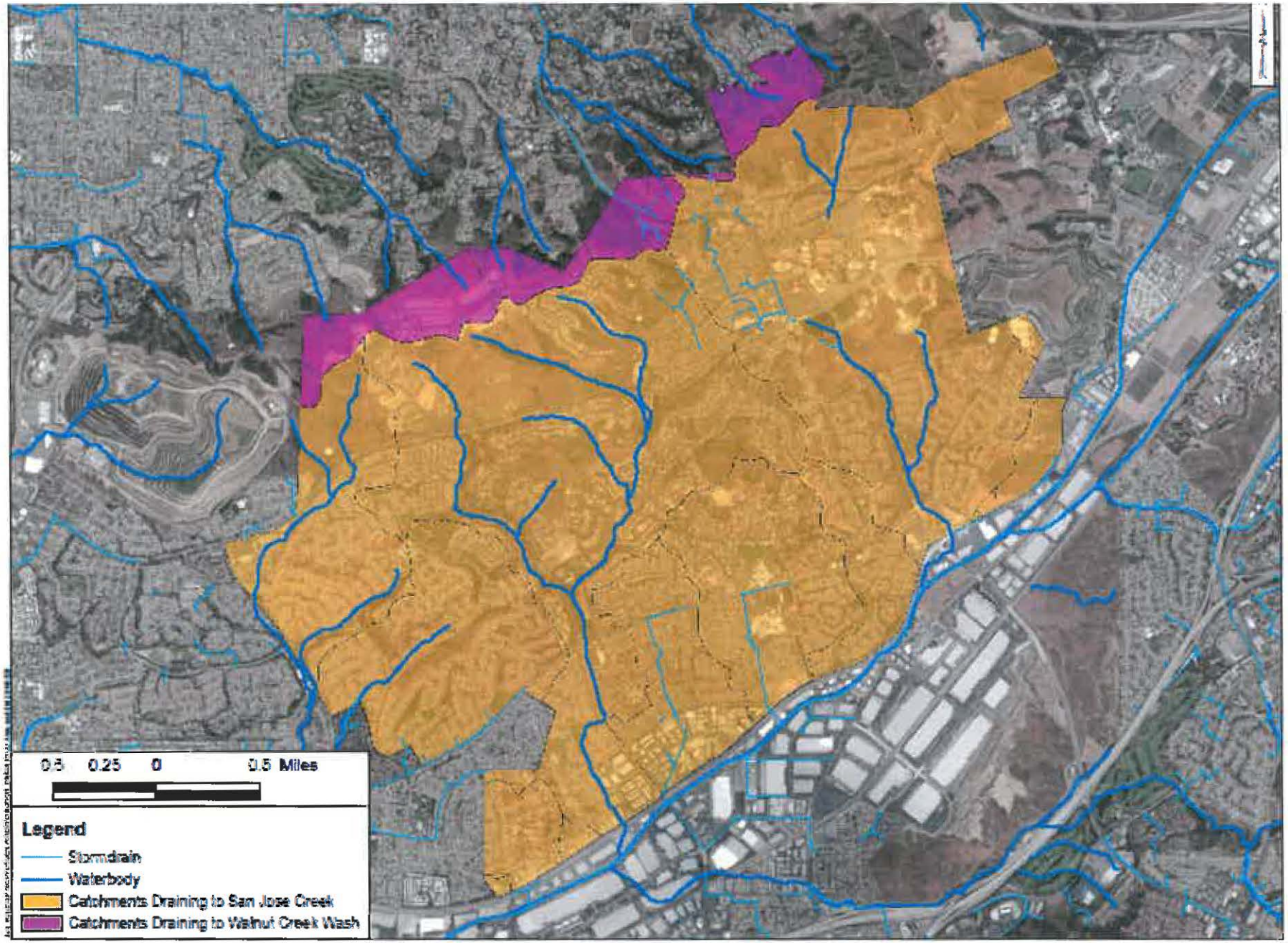
Walnut Creek Wash originates at the Puddingstone Dam, and is soft bottom up to a quarter mile east of Covina Hills Road where it transitions to a channelized wash. The channelized wash returns to a soft bottom channel at Baldwin Park Boulevard and continues as such to confluence with the San Gabriel River. The confluence of Walnut Creek Wash and the San Gabriel River is located south west of the interchange of State Route 10 and State Route 605. The City of Walnut contributes a very small portion of flow to the Walnut Creek Wash which is primarily composed of flow from a number of other permittees in the SGRWMA

1.2.3- City of Walnut MS4 System

The City of Walnut's storm drain system consists of 644 City owned catch basins and 142 Los Angeles County Flood Control owned catch basins. A majority of the City's storm drain system outlets connect directly to Reach 1 of the San Jose Creek.

There is one storm drain outfall that contains flows originating from the Walnut Creek Wash watershed area of the City of Walnut. This singular outfall is an underground storm drain that drains to the north of the City into unincorporated Los Angeles County and eventually into Walnut Creek Wash. The referenced storm drain carries a relatively small amount of the total City run off and has 13 catch basins connected the line from the City of Walnut.

There are two open soft bottom creeks in the City which for much of their extents run in or adjacent to parks. Lemon Creek drains portions of the western side of the city and begins in the San Jose hills in the Vicinity of the Three Oaks Development and extends south to its confluence with Reach 1 of the San Jose Creek. Snow Creek begins near the intersection of Grand Avenue and Temple Avenue at Mount. San Antonio Community College located in the north eastern section of the City. Snow Creek travels south along Grand Boulevard to just south of Snow Creek Park where it connects to an underground reinforced concrete box (RCB). The RCB eventually connects directly with Reach 1 of San Jose Creek near the intersection of Somerset Drive and Valley Boulevard.


0.5 0.25 0 0.5 Miles
Legend
Stormdrain
Waterbody
Catchments Draining to San Jose Creek
Catchments Draining to Walnut Creek Wash

2.0- Water Quality Priorities

Per section VI.C.5.a.ii of the MS4 Permit, permittees are required to identify and prioritize water body pollutants within each Watershed Management Area (WMA) that overlays their jurisdictional area. The City of Walnut is wholly encompassed by one WMA. Per table K-6 of Attachment K in the MS4 Permit, the City of Walnut is included in the SGRWMA.

2.1- Water Quality Impairments

As described in section 1.2.1 "Watershed Characteristics" of this document, the City of Walnut is tributary to two tributary water bodies of the San Gabriel River. Each of the receiving water bodies that the City of Walnut is tributary to have individual water quality issues that have been established by a TMDL or by the California Clean Water Act Section 303(d) list. Table 2-1 of this document outlines the impairments for each of the receiving waters that the City of Walnut discharges MS4 flows into. These pollutants will be the primary focus for the City of Walnuts WMP.

Table 2-1

Watershed Management Area Impairments

Water Body	TMDL	303(d) List	Other Pollutants of Concern
San Jose Creek Reach 1	• Selenium	• Ammonia • Coliform Bacteria • pH • Total Dissolved Solids • Toxicity	N/A
San Gabriel River Reach 3	N/A	• Indicator Bacteria	N/A
San Gabriel River Reach 2	• Lead	• Coliform Bacteria • Cyanide • Lead	N/A
Walnut Creek Wash	N/A	• Benthic-Macroinvertebrate Bio-assessments • Indicator Bacteria • pH	N/A

The MS4 Permit's prioritization of pollutants is categorized into three levels. The highest prioritization (Category 1) is reserved for water body pollutant combinations for which water quality based effluent limitations and/or receiving water limitations are established in Part IV.E and Attachments L through R of the MS4 Permit. High prioritization (Category 2) has been defined as including pollutants for which data indicate water quality impairment in the receiving water according to the State's Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (State Listing Policy) and for which MS4 discharges may be causing or contributing to the impairment. Medium Priority Pollutants (Category 3) are defined as pollutants for which insufficient data indicate water quality impairment in the receiving water according to the States Listing Policy, but which exceed applicable receiving water limitations contained in this Order and for which MS4 discharges may be causing or contributing to the exceedance.

The City will maintain the prioritization of pollutants as defined by the categorization priorities. In the event that a pollutant(s) of a category is determined to be within the allowable limit, the City will shift focus to the next tier down. For example, if all the Category 1 pollutants are found to be within allowable limits the City will then focus on the Category 2 pollutants of that receiving water body.

Table 2-2 identifies the prioritization of the individual constituents per the organization method defined in section VI.C.2.a. of the MS4 Permit.

Table 2-2

Water Quality Priorities		
Priority	**Water Body Pollutant**	**Source**
Category 1 (Highest)	Lead	TMDL
	Selenium	TMDL
Category 2 (High)	Ammonia	303(d)
	Benthic Macroinvertebrates	303(d)
	Coliform Bacteria	303(d)
	Cyanide	303(d)
	pH	303(d)
	Total Dissolved Solids	303(d)
	Toxicity	303(d)
Category 3 (Medium)	N/A	N/A

Pollutants identified as Category 1 priority in Table 2-2 have Waste Load Allocations determined by their applicable TMDL. Both Lead and Selenium Waste Load Allocations (WLA) are established by the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL .

Table 2-3 identifies the established WLA for each of the applicable TMDL pollutants. Pollutants identified in Table 2-3 should be referenced against Table 2-1 to determine the applicable WLA for the associated water body.

Table 2-3

Category 1 (Highest Priority) Pollutant Waste Load Allocation		
Pollutant	**Daily Maximum**	**Weather**
Lead	81.34 µg/L X Daily Storm Volume (L)	Wet
Selenium	5 µg/L	Dry

Pollutants identified as Category 2 priority in Table 2-2 have Water Quality Based Effluent Limits (WQBELs) identified in the Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. WQBELs are established based on the beneficial uses also determined in the Basin Plan. Some Category 2 pollutants that are identified in Table 2-4 do not originate from MS4 discharges and will not be included in the Reasonable Assurance Analysis portion of this document.

Table 2-4

Category 2 (High Priority) Pollutant Waste Load Allocation	
Pollutant	**WQBEL**
Ammonia	See LARWQCB Basin Plan Table 3-1 through 3-4
Benthic Macroinvertebrates	See Attachment D for Bio assessment
Coliform Bacteria	See Table 2-5
Cyanide	.005mg/L
Dissolved Oxygen (DO)	Mean Annual 7mg/L, but not less than 5 mg/L
pH	6.5-8.5 Standard Units
Total Dissolved Solids	750mg/L
Toxicity	See Attachment E for Toxicity Assessment

Allowable coliform bacteria loadings are based on the beneficial uses assigned to the impaired water body. As previously discussed in the document, the City of Walnut is tributary to two sub watersheds in the SGRWMA. Each of these sub-watersheds has a different beneficial use assigned for recreational activities. Subsequently the individual sub-watershed areas have different allowable coliform bacteria loadings. Table 2-5 identifies the applicable bacteria WQBEL for each of the sub-watershed receiving water bodies that the City is tributary to.

Table 2-5

Coliform Bacteria WQBEL		
Receiving Water Segment	**Recreational Beneficial Use**	**Water Quality Objective**
San Jose Creek	REC2 (intermittent) with High Flow Suspension*	4000/100mL fecal coliform (10% of samples not to exceed)
Walnut Creek Wash	REC1 (intermittent), REC2 (intermittent)	400/100mL fecal coliform** (single sample limit)

REC1 = water contact recreation

REC2 = non-water contact recreation

* Based on Table 2-1a, Order #2003-010. "Potential" use designations (e.g., REC1 for San Jose Creek) are not included here as these are not applicable for RAA.

** While the REC1 fecal coliform objective was removed from the Los Angeles Basin Plan through Order R10-005, fecal coliform is used in this RAA as the modeling surrogate for indicator bacteria. Therefore, the old REC1 objective is used here.

Existing water quality monitoring data and land use in the City were examined to determine if there was significant evidence identifying the presence of Category 3 pollutants. Los Angeles County Mass Emissions Station S14 was chosen for this analysis.

Most of the pollutants identified as exceeding WQBELs at S14 already have been established as either Category 1 or Category 2 pollutants. The remaining pollutants identified as exceeding the WQBEL over a 10 year period, only had few instances of exceedances. When considering the size of the watershed tributary to the monitoring station it is impossible to truly establish the City of Walnut's potential

contribution of the pollutants in question. The limited data available does not provide any correlation between the monitored exceedances at station S14 and the City of Walnut's storm drain outfalls.

The City will continue to examine monitoring data made available by other agencies in addition to the data that the City gathers under the City IMP. Under the permit requirements, the City is required the monitor for all of the pollutants identified in Table E-2 of the permit for the first year of the program. The City will utilize future data to determine the presence of Category 3 pollutants. If any pollutants are identified by the City's IMP, they will be added to the WMP during the adaptive management process.

2.2- Pollution Source Assessment

Pollutants identified as causing impairments on the applicable receiving waters originate from various sources in the watershed. MS4 discharges from the City of Walnut are composed of surface runoff from storm events or other non-storm water sources. Pollutants that are mobilized by surface runoff are likely from non-point sources which are difficult to eliminate prior to mobilization.

Existing receiving water monitoring data from within the San Gabriel River watershed was examined to determine the existing water quality conditions. Data from the Los Angeles County monitoring station S14 was selected for this review. Los Angeles County monitoring station S14 is located below San Gabriel River Parkway in Pico Rivera. The upstream tributary area is 450 square miles at this location. The City of Walnut is directly tributary to San Jose Creek Reach 1 which is located upstream of monitoring station S14. The last ten years of data from the Los Angeles County Storm water Monitoring program mass emissions station S14 was compiled and reviewed. A summary of the exceedances is included as Attachment E. The pollutants with exceedances identified by the S14 monitoring data are mostly established on the 303(d) list. Due to vast area that drains to the S14 monitoring station, it is unclear how MS4 flows originating from the City of Walnut impact the San Gabriel River watershed.

This section highlights potential sources of the specific pollutants of concern that have been established as causing or contributing to impairment of the local water bodies that the City is tributary to.

Ammonia

Ammonia has been identified on the 303(d) list as causing impairment in the San Jose Creek Reach 1. The 303(d) list support documents identify that discharges from Publicly Owned Treatment Works (POTWs) as a potential source of most of the ammonia in the Los Angeles Region Watersheds. The City of Walnut is downstream from a POTW facility that discharges to the San Jose Creek.

POTWs have since been issued NPDES permits that include water quality objectives for Ammonia. Based on County monitoring data, it appears that Ammonia exceedances are decreasing in occurrence. Modifications to treatment processes and facilities are expected to yield results that will reduce previously measured amounts of ammonia to acceptable levels. This pollutant does not likely originate from the MS4. The City of Walnut's WMP will not address this pollutant any further other than as required in the monitoring program.

Benthic Macroinvertebrate Bio assessment

The 303(d) listing for bio assessment of benthic macroinvertebrates was established by the State Water Board after recommendation by the LARWQCB. The Walnut Creek Wash has been identified as having pollutant combinations in concentrations that are detrimental to the populations of benthic macro-invertebrates in the water body. MS4 discharges with toxic properties are identified as causing impacts

to populations of benthic macroinvertebrates. The jurisdictional area of Walnut that is tributary to Walnut Creek Wash is composed of open space and single family residential land use. A 30" RCP storm drain coveys all of water contributed to the Walnut Creek Wash. The volume of MS4 discharges contributed by the City of Walnut is relatively small and not likely to contribute pollutants in toxic levels. Water quality conveyed by said storm drain will be monitored as part of the IMP. The runoff that is deposited into the wash is connected to the channelized portion of the wash. It is unclear if this requirement is incorrectly assigned to the City of Walnut based on the beneficial uses applicable to channelized water bodies.

Coliform Bacteria

Coliform bacteria are used as an indicator to determine the likelihood of pathogenic bacteria present in surface waters. Coliform bacteria are linked to the presence of E. coli and other pathogens that originate from fecal contamination in surface waters. Storm water and non-storm water runoff originating from residential development land uses have been known to contribute to bacteria loading in receiving waters. Potential sources may be natural or from contamination caused by interaction of septic or sanitary sewer system flows with the MS4 or agricultural runoff that is captured by the MS4. Homeless populations and wild life have also been identified a potential sources of coliform bacteria in the Basin Plan.

Cyanide

Cyanides are produced in both natural and manmade processes. The source of cyanide deposition into the receiving waters is not clear. Due to the land uses within the City it is assumed that the MS4 is not a likely source of this pollutant. Further data will be gathered though the City's monitoring program.

Lead

Lead has been identified as a Category 1 priority pollutant per the MS4 permit. Section 4 "Source Assessment" of the Total Maximum Daily Loads for Metals and Selenium San Gabriel River and Impaired Tributaries defines that the sources of metals in the San Gabriel River as originating from either point sources or atmospheric deposition.

The potential sources of lead in the watershed have been identified as natural and manmade. Potential manmade sources identified in the EPA TMDL document as contributing lead to storm water runoff are: automobile brake pads, vehicle wear, building materials, pesticides, erosion of paint, and atmospheric deposition from fuel ignition and industrial facilities.

Within the City of Walnut, it is not likely that potential lead pollution is originating from industrial discharges due to current the land uses. Atmospheric deposition and naturally occurring sources may account for some of the lead loading found in the local watershed. Automobile related sources and urbanized land use are also potential sources within the City of Walnut. Lead deposited on impervious surfaces such as a street is mobilized by surface runoff and transported to the receiving waters.

pH

The CWA 303(d) list identifies pH as causing impairment in both San Jose Creek Reach 1 and Walnut Creek Wash. pH is a measure of acidic or basic chemistry properties of water. The scale is a range from 0 to 14 with 7 being the measurement that reflects pure water at a temperature of 25^{0}C. pH

measurements of <7 indicate that the water sample is acidic whereas measurements of >7 are considered to have basic chemistry properties. Natural waters tend to have a pH slightly higher than 7, and are very sensitive to major shifts in either the acidic or basic direction. A number or environmental conditions can impact the pH of a receiving water including natural or manmade conditions. MS4 discharges may contribute to changes in pH in receiving waters.

Selenium

Selenium has been identified as a Category 1 priority pollutant per the MS4 permit. Selenium in the San Jose Creek is suspected to likely be from a natural source. Limited data is available to verify this assumption. However, because there are no industrial facilities that manufacture products known to utilize selenium in the production process within the City, natural sources are the only apparent remaining potential source. Selenium is an element (Se on the periodic table) that is found naturally in local marine sedimentary soils. The local watershed area is known to have marine sedimentary soils. While the source is natural in nature the possibility that urbanization in the watershed has increased mobilization and deposition of the element in the receiving waters. The source may also be in the soft bottom portion of the San Jose Creek. Further studies are required to better understand the source of selenium. The IMP portion of this plan will be utilized as a tool to determine if the City of Walnut's MS4 discharges are contributing to the Selenium impairment in the San Jose Creek.

Total Dissolved Solids

Total Dissolved Solids (TDS) includes both organic and inorganic particles that are fully suspended in water. TDS identified in the watershed may be naturally occurring but can also be from compounds that a mobilized by urban runoff. Residential development is a known potential source of TDS in storm water and non-storm water runoff.

Toxicity

Toxicity in receiving waters is defined as when chemical properties of water adversely affect organism's ability to normally survive. Chronic Toxicity is identified as a level of toxicity that results in an impact in an organism's ability grow or reproduce, but not result in death. Toxicity at a level that results in death of an organism is classified as acute toxicity. Toxicity is not limited to concentrations of a singular pollutant, and can be caused by a number of pollutants. Urban runoff has been identified as a potential source of toxicity in MS4 discharges.

3.0- Minimum Control Measures

The MS4 Permit requires permittees to implement policies and practices that will aid in the improvement of water quality in the City and WMA. These policies and practices are defined as Minimum Control Measures (MCMs) and are outlined in section VI.D.5 for Non-LACFCD permittees. Many of the City's existing MCMs were implemented under the previous permit, but latest permit has expanded some of the requirements for the existing programs. Per the MS4 Permit, the City of Walnut is required to have the following MCM Programs.

- Public Information and Participation Program
- Industrial/Commercial Facilities Program
- Planning and Land Development Program
- New Development/Re-Development Program
- Development Construction Program
- Public Agency Activities Program
- Illicit Connection and Illicit Discharge Elimination Program

3.1- Public Information and Participation Program

Each permittee is required to implement a Public Information and Participation Program (PIPP) under the MS4 Permit. Improving public education and awareness is likely to have a positive impact on water quality by changing activities or actions of the public that negatively impact water quality. The PIPP encompass a number of outreach and education opportunities and expected to have a positive effect in water quality. The MS4 Permit identifies the primary goals of the PIPP as follows:

- The PIPP shall measurably increase the knowledge of the target audiences about the MS4, and the adverse impacts of storm water pollution on receiving waters and potential solution to mitigate the impacts.

- The PIPP shall also measurably change the waste disposal and storm water pollution generation behavior of target audiences by developing and encouraging the implementation of appropriate alternatives.

- The PIPP shall involve and engage a diversity of socio-economic groups and ethnic communities in Los Angeles County to participate in mitigating the impacts of storm water pollution.

The City of Walnut is approaching compliance with the MS4 Permit as a singular permittee implementing an individual WMP. The City currently maintains a PIPP program that was implemented under the previous MS4 Permit. Much of the same requirements from the previous permit are included in the latest permit, however this document will describe the program moving into the current permit term.

3.1.1- Public Reporting

The City currently contracts with Los Angeles County for maintenance of catch basins, storm drain and sanitary sewer networks. The City of Walnut is a contract city and utilizes the 888-CLEAN-LA hotline for its general public reporting contact in coordination with the Los Angeles County Maintenance Crews.

County hotline and City contact information for the Environmental Department and the Building and Safety Department is made available on the City's Website on the Storm Water pollution Prevention page. Contact information related to public reporting of storm water issues is also provided in pamphlets available at the City Hall and the City's Environmental Services Guide page on the City Website. The City maintains and will continue to maintain current contact information as updates are made necessary.

3.1.2- Public Outreach

The City's Environmental Services department hosts a community outreach booth at the Walnut Family Festival. At this booth, the City provides educational material regarding the importance of Walnut's commitment to storm water pollution prevention as well as specific information on how Walnut residents can help improve or reduce impacts on the local environment. Flyers on the importance of proper pet waste are distributed along with promotional pet waste bag dispensers to promote picking up after pets. The City also provides used oil containers for residents to facilitate the proper disposal of used oil, keeping it out of our storm water system.

In additional to the booth at the Family Festival, the City provides environmental information and storm water education material at all major city events including: Concerts in the Park, National Night Out, Fourth of July, and Arbor Day.

The City of Walnut also conducts two free composting workshops per year through SmartGardening. This workshop covers backyard composting as well as water-wise gardening. An information table and storm water education is provided at these events as well.

3.1.3- Public Education Materials

The City of Walnut develops a recreation brochure on a quarterly basis which has a section dedicated to environmental issues in Walnut. This section highlights environmental topics including storm water pollution. This section also promotes the "Go Green with Walnut" page of the City's website. The "Go Green with Walnut" page is where residents can find educational material related to environmental issues. The City also produces a quarterly mailer that is sent to every resident four times a year.

On the "Go Green with Walnut" page there is a specific page for Storm Water Pollution Prevention. This page provides a brief overview of the storm drain system and the importance of keeping common forms of storm water pollution out of the system. Here residents can find information on ways that they can contribute to Walnut's commitment to protect the environment and water resources. Listed are best management practices (BMPS) that they can implement as residents and business owners.

There are a number of helpful links to information sheets that outline proper procedures for handling and disposal of vehicle waste fluids, household waste materials, construction waste materials, gardening related materials and animal wastes. Copies of these information sheets have been included in Attachment C of this document. These information sheets are also distributed to local auto parts stores, home improvements centers, garden centers and pet supply stores. Additionally, the City includes environmental related education on a City mailer that is sent out quarterly.

The City's storm water pollution prevention page is easily accessible from the City Services tab on the City's website. The page is maintained by City staff and continuously updated with new information as it becomes available. The following is a direct link to the City's storm water pollution prevention page:

http://www.ci.walnut.ca.us/general.asp?id=282

The environmental services department is present at all of the City's special events where material regarding the City's storm water pollution prevention program is handed out. All the city facilities have access to and post the material for patrons. An environmental services brochure was created by the City which contains an overview of the storm water pollution prevention program and is passed out at the City facilities.

3.1.4- Storm Water Education in Schools

City staff works closely with environmental clubs at local educational sites. The City works with student groups at the high school, middle school, and elementary school levels to host park cleanup events twice a year. The City also interacts with other student community groups including the Boy Scouts of America and Girl Scouts of America which have partnered with the City of Walnut to host additional educational events throughout the year. Education material is made available to all of the local environmental clubs and the school district, as well as available at all of the park clean up events.

The City reaches out to the environmental club participants when looking for volunteers for the environmental services booth at the Family Festival. Staff is available for outreach to the local school districts and continuing to foster that partnership.

3.1.5- PIPP Outreach to Multi Cultural Communities

The City of Walnut has a number of culturally diverse communities that live and/or work in the City. Effectively communicating educational materials related to storm water quality can be a challenge when there is a language barrier. To address this hurdle, multilingual City staff located at City Hall are available to translate and answer any questions including environmental issues such as storm water pollution. Members of city staff are fluent in Spanish, Mandarin, Tagalog, German, Japanese, and Korean. All members of the public with questions or concerns relating to storm water or any other topic are encouraged communicate with City staff.

3.2- Industrial/Commercial Facilities Program

The industrial Facilities Program is designed to prevent illicit discharges from industrial and commercial facilities into the MS4 and receiving waters. It will also reduce storm water discharges from industrial and commercial facilities and prevent industrial and commercial discharges from causing or contributing to a violation of receiving water limitations. The MS4 permit identifies the minimum components of this program to include tracking, education, inspection and enforcement.

3.2.1- Industrial/Commercial Facilities Tracking

The City's tracking program will include an electronic based inventory that will identify all qualifying commercial and industrial facilities within the city boundaries. Information regarding the facility location and operations will be logged into the tracking system.

The City land use is primarily dedicated to single family residential and open space, allowing for only a small portion of the City to be utilized for commercial and industrial facilities. The MS4 Permit recommends that a Geographic Information System (GIS) is utilized for this task, however due to the relatively small number of these facilities a spreadsheet program will be utilized to track qualifying facilities. As the city develops its GIS program, the tracking information gathered as part of this plan will be reassessed to determine if adding a GIS element to the tracking program will improve effectiveness of the system.

The MS4 Permit requires that commercial and industrial facilities that are tracked. The following list outlines four categories that tracking is mandatory for.

1. Commercial Facilities
    - Restaurants
    - Automotive service facilities (including facilities located at automotive dealerships)
    - Retail Gasoline
    - Nurseries and Nursery Centers
2. USEPA "Phase I" Facilities [as specified in 40 CFR §122.26(b)(14)(i)-(xi)]
3. Other federally-mandated facilities [as specified in 40 CFR §122.26(d)(2)(vi)(C)]
    - Municipal Landfills
    - Hazardous waste treatment, disposal and recovery facilities
    - Industrial facilities subject to section 313 "Toxic Release Inventory" reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986 (EPCRA) [42 U.S.C. § 11023]
4. All other commercial or industrial facilities that the permittee determines may contribute a substantial pollutant load to the MS4.

The MS4 Permit requires the City to track minimum parameters under the commercial and industrial facilities program. Not all of this information is currently tracked by the City. Although the City has a limited number of commercial facilities and no industrial facilities, gathering and organizing the required data is a demanding task. Upon receipt of the Regional Boards approval of the City's WMP, the City will begin the process of organizing and centralizing all available tracking information.

Outstanding tracking information will be assessed and gathered within a reasonable time frame. Once a complete inventory is developed, the City's Planning department will maintain and update the database on an as needed basis with the frequency of updates occurring at least annually. The information for new Commercial/Industrial site data will be gathered from the City's permitting program and field inspections.

The following list includes the minimum parameters to be included in the tracking program:

- Name of facility
- Name of owner/ operator and contact information
- Address of Facility (physical and mailing)
- North American Industry Classification System (NAICS) code
- Standard Industrial Classification (SIC) code
- A narrative description of the activities performed and/or principal produces produced
- Status of exposure of materials to storm water
- Name of receiving water
- Identification of whether the facility is tributary to a CWA §303(d) listed water body segment or water body segment subject to a TMDL, where the facility generates pollutants for which the water body segment is impaired.
- Ability to denote if the facility is known to maintain coverage under the State Water Board's General NPDES Permit for the Discharge of Storm water Associated with Industrial Activities (Industrial General Permit) or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Water Board pertaining to storm water discharges.
- Ability to denote if the facility has filed a No Exposure Certification with the State Water Board.

3.2.2- Industrial/Commercial Education

Per section VI.D.6.c, the City of Walnut is required to notify commercial and industrial site owners/operators of applicable BMPs based on the activities that take place at the site. City Staff will utilize the commercial and industrial facilities tracking data base to identify sites requiring notice. Notices sent will include a list of BMPs and related BMP implementation information applicable to the commercial site. Notices will be directed to the owner/operator of each of the inventoried commercial and industrial sites. This notice will occur at least once during the five year period of the MS4 permit. The City Environmental Services Department will utilize the commercial/industrial facility tracking database to document when such notification is made.

In coordination with the City's BMP education notice, the City will provide all commercial/industrial facility owners with contact information for a City Business Assistance Program. The program will provide additional information to businesses, upon request, to facilitate their efforts in the reduction of pollutant discharges. The Business Assistance Program will also further target business sectors or small businesses that have been determined as potential sources of pollutant loads to the MS4 or receiving water. The City will utilize the results from the monitoring of MS4 outfalls and receiving waters to better direct efforts in reducing or eliminating pollutant loading.

Additional technical information provided to businesses in the City of Walnut may include the following items listed below:

- Provision of education materials
- Telephone and/or e-mail consultation
- On-site technical assistance

A determination of what will be provided to the business will be made on a case by case basis and will be tailored to the needs of the businesses that fit the criteria for providing additional assistance. All additional information and support provided to will be at the discretion of the City.

3.2.3- Commercial Facility Inspection

Per section VI.D.6.d of the MS4 permit the City of Walnut will implement a commercial facility inspection program. Inspections at all of the facilities identified in the City's database will take place at least twice during the five year term of the MS4 Permit. The first inspection will take place no later than December 28, 2014, two years after the effective date of the permit (December 28, 2013). The second inspection will have a minimum interval of at least six months following the first inspection.

Parameters to be included in the above mentioned inspections are as follows:

- Proper Implementation of storm water and non-storm water BMPs
- Proper maintenance of storm water and non-storm water BMPs
- Verification of effective source control BMP implementation
- Review/Enforcement for proper BMP implementation in areas that drain to a Significant Ecological Areas (SEA), water body subject to a TMDL or CWA § 303(d) listed impaired water body.
- Require additional BMPs if necessary

In the past City inspectors have performed random inspections on commercial businesses that the City has identified as having a higher potential for contributing to storm water pollution. These random inspections were not previously tracked. The City will develop a system to track and log these drop in type inspections for recording purposes.

3.2.4- Industrial Facility Inspection

Per section VI.D.6.e of the MS4 permit the City of Walnut will implement an industrial facility inspection program. Currently, there are no Industrial facilities within the Jurisdictional boundaries of the City. Should that change in the future the following inspection program will be implemented.

Inspections at all of the facilities identified in the City's database will take place at least once during the five year term of the MS4 Permit. The deadline established by the MS4 permit of December 28, 2015 will not apply to the City of Walnut due to the lack of industrial facilities at the time of adoption of this plan. Should that change, the City will inspect the industrial site within a reasonable time period after the site begins normal operations. After the initial inspection, all facilities that have not filed a No Exposure Certification with the State Water board are subject to a second mandatory inspection to take place at least six months after the first inspection.

As part of the first industrial facility inspection, the City will identify if a facility has filed a No Exposure Certification with the State Water Board. Approximately three to four years after the effective date of the MS4 Permit, the City will evaluate its inventory of industrial facilities and perform a secondary inspection for at least 25% of the facilities identified to have a No Exposure Certification if any exist in the City.

Industrial facilities that have been inspected by the Regional Water Board within prior a 24 period are not required to be inspected. The City will review the State Water Board's Storm Water Multiple Application and Report Tracking System (SMARTS) database on an annual basis if an industrial site opened in the City. If a facility is subject to a second inspection, it shall take place approximately four years following the effective date of the MS4 Permit. Similar to the conditions of the first inspection, a second inspection is not required if the Regional Water Board has previously inspected the site within a 24 month period.

Parameters to be included in the above mentioned inspections are as follows:

- Verify Waste Discharge Identification (WDID) number for coverage under the Industrial General Permit.
- Verify that a Storm Water Pollution Prevention Plan (SWPPP) is on site; or
- Verify the site has applied for, and has received a current No Exposure Certification for facilities subject to the requirement
- Verify BMPs are effectively implemented in compliance with municipal ordinances. Facilities must implement the source control BMPs identified in table 3-1 below.

Applicable industrial facilities identified as not having either a current WDID or No Exposure Certification shall be notified that they must obtain coverage under the Industrial General Permit and shall be referred to the Regional Water Board per the Progressive Enforcement Policy identified in part VI.D.2.

Table 3-1

Industrial Facility BMP Applications	
Pollutant-Generating Activity	**BMP Narrative Description**
Unauthorized Non-Storm water Discharges	Effective elimination of non-storm water discharges
Accidental Spills/Leaks	Implementation of effective spills/leaks prevention and response procedures
Vehicle/Equipment Fueling	Implementation of effective fueling source control devices and practices
Vehicle/Equipment Cleaning	Implementation of effective equipment vehicle cleaning practices and appropriate wash water management
Vehicle/Equipment Repair	Implementation of effective vehicle/equipment repair practices and source control devices
Outdoor Liquid Storage	Implementation of effective outdoor liquid storage control devices and practices
Outdoor Equipment Operations	Implementation of effective outdoor equipment source control devices and practices
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices

Table 3-1 (Continued)

Industrial Facility BMP Applications	
Pollutant-Generating Activity	**BMP Narrative Description**
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/handling practices and appropriate control measures
Building and Grounds Maintenance	Implementation of effective facility maintenance practices
Parking/Storage Area Maintenance	Implementation of effective parking /storage area designs and housekeeping/maintenance practices
Storm water conveyance system maintenance practices	Implementation of proper conveyance system operation and maintenance protocols
Sidewalk Washing	Remove trash, debris, and free standing oil/grease spills/leaks (use absorbent material, if necessary) from the area before washing; and Use high pressure, low volume spray washing using only potable water with no cleaning agents at an average usage of 0.006 gallons per square feet of sidewalk area.
Street Washing	Collect and divert wash water to the sanitary sewer – publically owned treatment works (POTW) Note: POTW approval may be needed.

3.3- Planning and Land Development Program

Per section VI.D.7 the City of Walnut will implement a Planning and Land Development Program for all new development and redevelopment projects. The goal of the Planning and Land Development Program is to lessen the potential water quality impact from new or redevelopment through implementation of water quality driven development practices.

The program will promote smart growth practices that minimize adverse impacts from storm water runoff on the biological integrity of Natural Drainage Systems, and the beneficial uses of water bodies in accordance with requirements under the California Environmental Quality Act (CEQA). Future developments will focus on minimizing the percentage of impervious surfaces and utilize Low Impact Development features and BMPs to maintain a site's predevelopment hydrology in accordance with the MS4 Permit requirements.

3.3.1- Low Impact Development Ordinance

On November 13, 2013, the Walnut City Council adopted a Low Impact Development (LID) Ordinance in compliance with the requirements VI.C.4.c.ii. and section VI.D.7 of the MS4 permit. A copy of the adopted ordinance is included in Attachment B of this document. The LID Ordinance is an enforcement

tool the City will utilize when reviewing and permitting development projects that qualify under the triggering requirements of the ordinance.

The list below outlines project parameters that qualify for implementation of LID design requirements under the City of Walnut's LID Ordinance.

- All Development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.
- Industrial parks 10,000 square feet or more of surface area.
- Commercial malls 10,000 square feet or more of surface area.
- Retails gasoline outlets with 5,000 square feet or more of surface area.
- Restaurants (SIC of 5812) with 5,000 square feet or more of surface area.
- Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.
- Streets and roads construction of 10,000 square feet or more of impervious surface area.
- Automotive service facilities (SIC of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.
- Projects located in or directly to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
  - Discharge storm water runoff that is likely to impact a sensitive biological species or habitat; and
  - Create 2,500 square feet or more of impervious surface area
- Single family hillside homes (see ordinance for definition)
- Redevelopment Projects
  - Land Disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.
  - Where redevelopment would result in an alteration to more than 50% of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction storm water quality control requirements, only the alteration must be mitigated, and not the entire development.
  - Where redevelopment results in an alteration of less than 50% of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction storm water quality control requirements, only the alteration must be mitigated, and not the entire development.
  - Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

- Existing single-family dwelling and accessory structures area exempt from the redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

3.3.2- New Development/Redevelopment Project Performance Criteria

Qualifying development projects will be subject to storm water pollution control requirements including retention of all storm water resulting from a specified rain event as outlined in more detail in the City's LID ordinance. The City Planning department will work with developers to ensure that all requirements set forth in the LID ordinance are met.

Should a project applicant find that technical infeasibilities prevent a new or re-development project from meeting the storm water pollution control requirements, they must demonstrate to the City that the project cannot retain 100% of the water resulting from the design storm volume on-site. The technical infeasibility demonstration must include the maximum application of City approved BMPs. Such a demonstration would include a site-specific hydrologic and/or design analysis conducted and endorsed by a registered professional engineer, geologist, architect and/or landscape architect.

Alternative compliance measures are available in instances of technical infeasibility or if there is the opportunity for regional ground water replenishment. These options include on-site biofiltration, offsite infiltration, ground water replenishment projects, and offsite retrofits to existing development.

3.4- Development Construction Program

The MS4 Permit requires that the City of Walnut develop and implement a Development Construction Program. The general nature of construction activities has a high potential for discharges of pollutants and/or sediment from a site. Conditions on construction sites often include potential sources of pollution including but not limited to disturbed soils, stockpiled materials and construction vehicles. General construction activities or storm water surface flow can often result in transport and discharge of these pollutants. It is the internet of the development construction program to prevent discharges from construction sites to the MS4.

The program shall prevent illicit construction-related discharges of pollutants into the MS4, require the implementation and maintenance of structural and non-structural BMPs to reduce pollutants in storm water runoff from construction sites, reduce construction site discharges of pollutants to the MS4 or to the maximum extent practicable, and prevent construction site discharges to the MS4 from causing or contributing to a violation of water quality standards. The Development Construction Program shall also include an enforceable erosion control and sediment control ordinance for all construction sites that disturb soil.

3.4.1- Construction Sites of Less Than One Acre

Construction sites of less than one acre are required to comply with the provisions of this section and section VI.D.8.d of the MS4 Permit. Construction activities covered by this section include but are not limited to grading, vegetation clearing, soil compaction, paving re-paving and linear underground/overhead projects (LUPs).

The City of Walnut will require that all qualifying construction sites implement the BMPs identified in Table 3-2 in an effective manner to prevent erosion and the discharge of construction wastes.

The City will maintain an inventory of construction sites with soil disturbing activities requiring a permit. The City will conduct inspections at these sites on an as-needed basis. When determining the need for inspection the City will take into account factors that may result in the discharge of construction site pollutants. Factors in the construction site assessment may include soil erosion potential, site slope, project size and type, receiving water body sensitivities, past record of construction site compliance by the operator of the construction site. The City will also utilize a progressive enforcement policy to ensure that construction sites found to be out of compliance are brought back into compliance with the requirements of the MS4 Permit.

Table 3-2

Applicable Set of BMPs for All Construction Sites	
BMP Type	**BMP**
Erosion Control	Scheduling
	Preservation of Existing Vegetation
Sediment Controls	Silt Fence
	Sand Bag Barrier
	Stabilized Construction Site Entrance/Exist
Non-Storm Water Management	Water Conservation Practices
	Dewatering Operations
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management
	Concrete Waste Management
	Sanitary/Septic Waste Management

3.4.2- Construction Site Inventory

The City of Walnut will develop and maintain permit tracking data base for all grading, encroachment, demolition, building and construction permits issued by the City. The database will be an electronic system that includes the following site specific information.

- Owner and Contractor Contact Information
- Site location, size, status and disturbed area
- Proximity of Water Bodies to the Construction Site
- Significant threat to water quality status (Appendix 1 of the Construction General Permit)
- Current Phase of Construction
- Required Inspection Frequency
- Start and anticipated end date
- Is the project covered under the Construction General Permit
- Date of City approval of the Erosion and Sediment Control Plan (ESCP)
- Post Construction Structural BMPs subject to operation and maintenance requirements

3.4.3- Construction Plan Review and Approval Procedures

The City of Walnut will review and approve relevant construction documents prior to issuing permits. Each operator of a construction activity within the City's jurisdiction will be required to prepare and submit to the City, for review and approval, an Erosion and Sediment Control Plan (ESCP). An ESCP shall include site specific BMPs that are appropriate for the activities that will take place on the site and elements of a Storm Water Pollution Prevention Plan (SWPPP). SWPPPs that conform to the requirements of the Construction General Permit may be accepted as a project's ESCP.

ESCP Shall include the Following:

- Methods used to minimize the foot print of disturbed area and to prevent soil compaction of outside of the disturbed area
- Methods used to protect native vegetation and trees
- Sediment and Erosion Control
- Controls to prevent tracking on and off site
- Non-storm water controls
- Materials Management
- Spill Prevention and Control
- Waste Management
- Site Risk Level as classified by the Construction General Permit
- BMP Selection Rationale including expected soil loss
- ESCP Developed and certified by QSD
- BMPs are designed by a California licensed Engineer

Additionally the City will require that the landowner or the landowner's agent include and sign the following certification statement on the ESCP:

> *"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/ or inaccurate information, failing to update the ESCP to reflect current conditions or failing to properly and/or adequately implement the ESCP may result in revocation of grading and/ or other permits or other sanctions provided by law."*

Prior to issuing a grading or building permit, The City of Walnut will verify that the construction site operators have existing coverage under applicable permits, including, but not limited to the State Water Board's Construction General Permit, and State Water Board 401 Water Quality Certification.

The City of Walnut will also develop and implement an ESCP checklist for City staff to use when conducting a document review of each ESCP.

3.4.4- BMP Implementation Requirements

The City of Walnut will develop and implement a construction site BMP program that adequately addresses the potential for construction site pollutants reaching the City's MS4. The City will utilize the Los Angeles County Department of Public Works BMP Design Manual as a technical reference for construction site operators to select, design and maintain BMPs on their construction site.

All construction sites shall undergo a risk assessment during the ESCP development process. The risk assessment shall identify a projects risk level on a low risk (Risk 1) to high risk (Risk 3) scale. The project risk assessment will be based on the potential for erosion from the site and the sensitivity of the receiving water. Receiving waters listed on the Clean Water Act (CWA) section 303(d) list for sediment or siltation are considered to be high risk. Receiving water bodies that have beneficial uses of SPWN, COLD and MIGR will also be categorized high risk. The risk assessment shall conform to the procedures defined in Appendix 1 of the California Construction General Permit. Minimum BMPs for high risk construction sites shall include BMPs identified in Table 3-3.

Table 3-3

Enhanced BMPs for High Risk Sites	
BMP Type	**BMP**
Erosion Controls	Hydraulic Mulch
	Hydroseeding
	Soil Binders
	Straw Mulch
	Geotextiles and Mats
	Wood Mulching
	Slope Drains
Sediment Controls	Silt Fence
	Fiber Rolls
	Sediment Basin
	Check Dam
	Gravel Bag Berm
	Street Sweeping and / or Vacuum
	Sand Bag Barrier
	Storm Drain Inlet Protection
Additional Controls	Wind Erosion Controls
	Stabilized Construction Entrance/ Exit
	Stabilized Construction Roadway
	Entrance/ Exit Tire Wash
	Advanced Treatment Systems
Non-Storm Water Management	Water Conservation Practices
	Dewatering Operations (Ground water dewatering only under NPDES Permit No. CAG994004)
	Vehicle and Equipment Washing
	Vehicle and Equipment Fueling
	Vehicle and Equipment Maintenance
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management

BMPs identified in Table 3-4 and the List of Minimum BMPs for Paving Projects shall be utilized for all construction sites of one acre or more and paving projects.

Table 3-4

Applicable Set of BMPs for All Construction Sites	
BMP Type	**BMP**
Erosion Controls	Hydraulic Mulch
	Hydroseeding
	Soil Binders
	Straw Mulch
	Geotextiles and Mats
	Wood Mulching
Sediment Controls	Fiber Rolls
	Gravel Bag Berm
	Street Sweeping and / or Vacuum
	Storm Drain Inlet Protection
	Scheduling
	Check Dam
Additional Controls	Wind Erosion Controls
	Stabilized Construction Entrance/ Exit
	Stabilized Construction Roadway
	Entrance/ Exit Tire Wash
Non-Storm Water Management	Vehicle and Equipment Washing
	Vehicle and Equipment Fueling
	Vehicle and Equipment Maintenance
Waste Management	Material Delivery and Storage
	Spill Prevention and Control

Paving Project Minimum BMPs

- Restrict paving and re-paving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions.
- Install gravel beds and filter fabric or to the equivalent inlet protection at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat.
- Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or receiving waters.
- Minimize non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
- Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
- Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly.
- Cover the "Cold-mix" asphalt (i.e. per-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm.
- Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
- Minimize airborne dust by using water spray or other approved dust suppressants during grinding.

Paving Project Minimum BMPs (continued)

- Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or receiving waters.
- Protect stockpiles with a cover or sediment barriers during rain.

All ESCPs submitted to the City shall include BMP cut sheets, design guidelines and maintenance expectations that are approved by the City of Walnut. BMPs design guidelines shall conform to the Los Angeles County Department of Public Works BMP Design Manual or a City approved equal.

3.4.5- Construction Site Inspection

The construction site inspection program is critical to the Development and Construction Program. Construction site inspections aid the City in verifying and enforcing the requirements of an ESCP or standard practices focused on maintain water quality in the City. The City of Walnut will continue to implement a construction site inspection program and train inspectors on NPDES related concerns that may originate from construction sites.

Inspection frequencies will vary based on construction site size and activities. Sites of one acre or larger that discharge to a receiving water listed on the CWA section 303(d) for sedimentary or turbidity list, or determined to pose a significant threat to water quality shall be inspected at minimum, prior to a rain event of two or more consecutive days with greater than 50% chance of rain fall forecasted by NOAA, within 48 hours of a ½-inch rain event and at least once every two weeks. All other construction sites of one acre or more shall be inspected at least monthly.

The City will inspect construction sites during all phases of construction. The first inspection will take place prior to disturbance of soil to ensure that all required BMPs are in place. Site inspections shall also take place during active construction activities to ensure that all applicable BMPs are in place and properly maintained. A final inspection shall take place as a condition of, and prior to issuing a Certificate of Occupancy. The final inspection will confirm that the site has reached final stabilization and that all temporary erosion and sediment BMPs are removed.

Construction site inspections shall include:

- Verification of active coverage under the Construction General Permit (sites >1 acre)
- Review of applicable ESCP and verification of installation of all selected BMPs
- Assessment of appropriateness of the planned and installed BMPs
- Observation of record keeping of non-storm water discharges
- Development of a written or electronic inspection report
- Tracking of inspections

When a site inspection results in observed deficiencies in an ESCP implementation or other NPDES related requirements, the City will notify the construction site operator of the issues identified. The site operator will be assigned a reasonable time period to fix the issue prior to the enforcement being escalated through the progressive enforcement policy.

3.5- Public Agency Activities

The City of Walnut is required to develop and implement a Public Agency Activities Program. It is the intent of this program to minimize storm water pollution impacts from city owned or operated facilities and activities. The program will also identify opportunities to reduce storm water pollution impacts from areas of existing development.

Requirements for Public Facilities and Activities Program shall include the following:

- Public Construction Activities Management
- Public Facilities Inventory
- Inventory of Existing Development for Retrofitting Opportunities
- Public Facility and Activity Management
- Vehicle and Equipment Wash Areas
- Landscape, Park, and Recreational Facilities Management
- Storm Drain Operational and Maintenance
- Emergency Procedures
- Municipal Employee and Contractor Training

3.5.1- Public Construction Activities Management

The City of Walnut's public construction activities shall conform to the Planning and Development (Section 3.3) and Development Construction Programs (Section 3.4) included in this document. The City will require that all contractors and construction related activities that take place under a City contract will conform to the requirements of the MS4 Permit and the California Construction General Permit.

3.5.2- Public Facility Inventory

The City will develop an inventory of all City owned or operated facilities that are potential sources of storm water pollution within its jurisdiction. Facilities that are required to be tracked are as follows:

- Chemical Storage Facilities
- Composting Facilities
- Equipment Storage and Maintenance Facilities
- Fueling or Fuel Storage Facilities
- Material Storage Yards
- Pesticide Storage Facilities
- Fire Stations
- Public Restrooms
- Public Parking Lots
- Public Pools
- Public Parks
- Public Works Yard
- Vehicle Storage and Maintenance Yards
- Storm Water Management Facilities
- All Other City Owned Facilities

Not all of the facilities listed in the MS4 Permit are included in the above list. City owned facilities excluded from the list are not found within the City's jurisdiction.

Of the facilities identified in this document, the following minimum information shall be tracked by the City:

- Name of the Facility
- Name of the Facility Manager
- Address of the facility (physical and mailing)
- Narrative of the activities performed at the site
- If the site has coverage under the Industrial General Permit

The City will update the inventory at least once during the five year term of the MS4 Permit.

3.5.3- Inventory of Existing Retrofitting Opportunities

The MS4 Permit requires that Permittees develop an inventory of retrofitting opportunities with in the public right of way. The inventory of retrofitting opportunities will be utilized by permittees when considering potential projects. All opportunities considered for retrofitting are required to undergo a screening process. Factors that may be considered when screening a project are outlined below.

- Feasibility
- Cost Effectiveness
- Pollution Removal Effectiveness
- Tributary Area Potentially Treated
- Maintenance Requirements
- Land Owner Cooperation
- Neighborhood Acceptance
- Aesthetic Qualities
- Potential Improvements to Public Health and Safety

Projects determined to have high levels of feasibility and effectiveness in water quality improvement shall be given the highest priority for implementation. High priority projects should be considered when off-site mitigation is required for a re-development or new development project. The City of Walnut will work with residents and land owners to develop and implement an effective retrofitting program. The City will educate residents and landowners of the benefits for implementing BMPs through the education and outreach program. City staff will work with owners of development projects subject to the requirements of the LID Ordinance to ensure that feasible opportunities for water quality improvement are maximized. At the discretion of the City, retrofit projects may also be included in other public infrastructure projects.

3.5.4- Public Agency Facility and Activity Management

Permittees are required to obtain coverage under the Industrial General Permit for all permittee owned or operated facilities that require coverage based on activities that take place at the sites. The City of Walnut does not currently have any public facilities that require separate coverage under the Industrial General Permit.

All other City owned or operated sites shall implement activity based BMPs identified in Table 3-5:

Table 3-5

BMPs for Public Agency Facilities and Activities	
Activity	**BMP**
General BMPs	Scheduling and Planning
	Spill Prevention and Control
	Sanitary/Septic Waste Management
	Material Use
	Safer Alternative products
	Vehicle/Equipment Cleaning, Fueling and Maintenance
	Illicit Connection Detection, Reporting and Removal
	Illegal Spill Discharge Control
	Maintenance Facility Housekeeping Practices
Flexible Pavement	Asphalt Cement Crack and joint Grinding/ Sealing
	Asphalt Paving
	Structural Pavement Failure (Digouts) Pavement Grinding and Paving
	Emergency Pothole Repairs
	Sealing Operations
Rigid Pavement	Portland Cement Crack and Joint Sealing
	Mudjacking and Drilling
	Concrete Slab and Spall Repair
Slope/Drains/ Vegetation	Shoulder Grading
	Non-landscape Chemical Vegetation Control
	Non-landscape Mechanical Vegetation Control/
	Mowing
	Nonlandscape Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal
	Fence Repair
	Drainage Ditch and Channel Maintenance
	Drain and Culvert Maintenance
Litter/ Debris/ Graffiti	Sweeping Operations
	Litter and Debris Removal
	Emergency Response and Cleanup Practices
	Graffiti Removal
Landscaping	Chemical Vegetation Control
	Manual Vegetation Control
	Landscape Mechanical Vegetation Control
	Landscape Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal
	Irrigation Line Repairs
	Irrigation (Watering), Potable and Non-potable
Environmental	Storm Drain Stenciling
	Roadside Slope Inspection
	Roadside Stabilization
	Storm Water Treatment Devices
	Traction Sand Trap Devices

Table 3-5 (Continued)

BMPs for Public Agency Facilities and Activities	
Activity	**BMP**
Bridges	Welding and Grinding
	Sand Blasting, Wet Blast with Sand Injection and Hydroblasting
	Painting
	Bridge Repairs
Other Structures	Pump Station Cleaning
	Tube and Tunnel Maintenance and Repair
	Tow Truck Operations
	Toll Booth Lane Scrubbing Operations
Electrical	Sawcutting and Loop Installation
Traffic Guidance	Thermoplastic Striping and Marking
	Paint Striping and Marking
	Raised/ Recessed Pavement Marker Application and Removal
	Sign Repair and Maintenance
	Median Barrier and Guard Rail Repair
	Emergency Vehicle Energy Attenuation Repair
Storm Maintenance	Minor Slides and Slipouts Cleanup/ Repair
Management and Support	Building and Grounds Maintenance
	Storage of Hazardous Materials (Working Stock)
	Material Storage Control (Hazardous Waste)
	Outdoor Storage of Raw Materials
	Vehicle and Equipment Fueling
	Vehicle and Equipment Cleaning
	Vehicle and Equipment Maintenance and Repair
	Aboveground and Underground Tank Leak and Spill Control

**These BMPs may not all apply to the public facilities and activities that are conducted by the City of Walnut. These have been included in the WMP to conform to the requirements of the MS4 Permit.*

3.5.5- Vehicle and Equipment Washing

All vehicle and equipment washing activities that take place at a City owned or maintained facility will conform to the requirements of the MS4 Permit. Per section VI.D.9.f of the MS4 Permit, the City of Walnut will implement and maintain applicable BMPs identified in table 3-5 of this document.

All vehicles washing of public vehicles and equipment takes place at the City yard. The City retains all runoff from washing activities in an on-site take which is emptied on an as-needed basis. The contents of the tank are hauled off site and disposed outside of the City of Walnut in accordance with all local and state requirements.

No vehicle or equipment maintenance takes place at a City owned or operated facility. City staff are trained to address spills and prevent discharge of pollutants to the MS4. The City also works with Los Angeles County Fire and Public Works to provide spill response for spills that are beyond the City's ability to mitigate.

3.5.6- Landscape, Park, and Recreational Facilities Management

All landscape, park and recreational facilities that are City owned or maintained will conform to the requirements of the MS4 Permit. Per section VI.D.9.g of the MS4 Permit, the City of Walnut will implement and maintain applicable BMPs identified in Table 3-5 of this document.

The MS4 Permit requires that the City implement an Integrated Pest Management (IPM) program. The intent of the IPM is to limit or prevent the impact on water quality from the use of pesticides. The IPM is required to have the following provisions:

- Pesticides are only used if monitoring indicates that they are needed, and pesticides are applied according to applicable permits and established guidelines.
- Treatments are made with the goal of removing only the target organism.
- Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial non-targeted organisms, and the environment.
- The use of pesticides, including Organophosphates and Pyrethroids, does not threaten water quality.
- Partner with other agencies and organizations to encourage the use of IPM.
- Adopt and verifiably implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and encouraging the use of IPM techniques (including beneficial insects) for Public Agency Facilities and Activities.
- Policies, procedures, and ordinances shall include commitments and a schedule to reduce the use of pesticides that cause impairment to surface waters by implementing the following procedures:
    - Prepare and annually update an inventory of pesticides used by all internal departments, divisions, and other operational units.
    - Quantify pesticides use by staff and hired contractors.
    - Demonstrate implementation of IPM alternatives where feasible to reduce pesticide use.

As part of a normal landscaping maintenance program, the City does utilize fertilizers. The City of Walnut does not use pesticides or herbicides on a regular basis. On an as needed basis, pesticides are used to eliminate fire ants and gofers. Pesticides are applied by qualified staff that have been trained on the proper application methods and potential impacts of the pesticides utilized. Pesticides and fertilizers are not applied prior to forecasted rain and irrigation is ceased during the days following application. All use of pesticides is recorded and reported to the Los Angeles County Agriculture Commission.

3.5.7- Storm Drain Operation and Maintenance

The City of Walnut is required to conform to the requirements of the section VI.D.9.h of the MS4 Permit. The City of Walnut will implement and maintain applicable BMPs identified in table 3-5 of this document.

The City has an effective trash management program in place for public events. If required, additional trash receptacles are placed throughout the area that an event is to take place. Following the conclusion of the event trash receptacles are emptied with in one business day after the event.

The City utilizes staff and volunteers in an effort to minimize trash and litter generated at an event. Sites of public events are restored to their daily operation following the conclusion of an event.

The City contracts to Los Angeles County Public Works for maintenance of the City's storm drain system and catch basins. City owned catch basins are cleaned of any trash or debris present on an annual basis prior to the start of the rainy season. Also included in the Los Angeles County Departments maintenance services is the painting of "No Dumping" messages on catch basins. There is no current Trash TMDL for the San Gabriel River thus no Catch Basin Connector Pipe Screens have been installed in the City.

The City of Walnut is required to prevent infiltration from the sanitary sewer system into the MS4. The City of Walnut utilizes the following program controls:

- Adequate plan checking for construction and new development
- Incident response training for its municipal employees that identify sanitary sewer spills
- MS4 maintenance and inspections
- Interagency coordination with sewer agencies
- Proper education of municipal staff and contractors conducting field operations on the sanitary sewer or MS4

The City of Walnut has a Sanitary Sewer management Plan (SSMP) in place to prevent or minimize the effects on receiving waters and public health from a sanitary sewer overflow. One of the measures put in place by the SSMP involves video inspection of the City's Sanitarily Sewer System. The video inspection in addition to the City's plan check and inspection system and clean up response coordination with the Los Angeles County maintenance crews are critical programs that the City utilizes to eliminate sewer leaks from infiltrating into the MS4.

The City owned treatment control BMPs shall be maintained per the requirements of the MS4 Permit. The City shall implement an inspection program that ensures that BMPs are properly maintained. The City will conduct inspections of all City owned Structural BMPs on a quarterly basis or as required by manufacture recommendations or special site conditions.

Any residual water that is produced by a treatment control BMP not being internal to the BMP performance shall be removed by an approved method. The MS4 Permit allows residual water to be hauled away and legally disposed of, applied to the land without runoff, discharged to the sanitary sewer system, or treated/filtered to remove bacteria, sediments, and nutrients to limitations identified in Table 3-6.

Table 3-6

Discharge Limitations for Dewatering Treatment BMPs		
Parameter	**Units**	**Limitation**
Total Suspended Solids	mg/L	100
Turbidity	NTU	50
Oil and Grease	mg/L	10

3.5.8- Streets, Roads and Parking Facilities Maintenance

Streets, Roads and Parking Facilities play a major role in the generation and transportation of pollutants to the MS4. The City of Walnut plans to utilize aggressive programs to limit or reduce the contamination of surface flow water in an effort.

The City of Walnut has classified all of the street segments in the City as "Priority C" streets. The City is predominately single family residential developments which generate low volumes of trash and debris. Priority C streets are required to be swept at least once per year, however the City of Walnut utilizes a bi-monthly street sweeping frequency for all of the streets in the City's jurisdiction.

Road reconstruction shall include the following BMPs:

- Restrict Paving and repaving activity to exclude periods of rainfall of predicted rainfall unless required by emergency conditions.
- Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat.
- Prevent the discharge of release agents including soybean oil, other oils or diesel into the MS4 or receiving waters.
- Prevent non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
- Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
- Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly.
- Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused recycled or disposed of properly.
- Cover the "cold-mix" asphalt with protective sheeting during a rain storm.
- Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
- Minimize airborne dust by using water spray during grinding.
- Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in our near MS4 or receiving waters.
- Protect stockpiles with a cover or sediment barriers during a rain.

City owned or operated parking lots exposed to storm water shall be kept clear of debris and excessive oil buildup and cleaned no less than two times per month on the same schedule as the City's street sweeping.

3.5.9- Emergency Procedures

The City of Walnut is a Contract City and depends on outside agencies or contractors to provide maintenance services. In the event of an NPDES emergency, the City will contact the applicable agency

or contractor that the City contracts with for maintenance services that are related to the emergency. Contact information is distributed to City staff and residents.

NDPES Emergency Contacts- City of Walnut

Emergency Contacts for the City of Walnut:		(909) 595-7543
Los Angeles County Sewer Maintenance District:		(800) 675-HELP
Los Angeles County Department of Public Works:		(888) CLEAN-LA
Los Angeles County Fire Department:	Non-Emergency	(909) 595-3001
	Emergency	911

The MS4 Permit allows for permittees to conduct repairs essential to public service systems and infrastructure in emergency situations with a self-waiver of the provisions of the order as follows:

- The City shall abide by all other regulatory requirements, including notification to other agencies as appropriate.
- Where the self-waiver has been invoked, the City of Walnut shall submit to the Regional Water Board Executive Officer a statement of the occurrence of the emergency, an explanation of the circumstances, and the measures that were implemented to reduce the threat to water quality, no later than 30 business days after the situation of emergency has passed.
- Minor repairs of essential public services systems and infrastructure in emergency situation (that can be completed in less than one week) are not subject to the notification provisions. Appropriate BMPs to reduce the threat to water quality shall be implemented.

3.5.10- Employee and Contractor Training

The City of Walnut has implemented an employee training program that targets job specific and general BMP training to City maintenance staff. City staff receive training on NPDES related topics and procedures at least once per year.

The City's training program address the potential for pesticide-related surface water toxicity, proper use and disposal of pesticides, least toxic methods of pest prevention and control and the reduction of pesticide use.

3.6- Illicit Connection and Illicit Discharge Elimination Program

The City of Walnut is required to develop and implement an illicit connection and illicit discharge elimination program. The program will be utilized by City staff to identify and eliminate illicit connections and discharges to the MS4. MS4 discharges containing illicit connections and discharges have been known to contain pollutants which may cause or contribute to the impairment of a receiving water body. The program shall include the following components:

- Procedures for conducting source investigations for IC/IDs
- Procedures for eliminating the source of IC/IDs
- Procedures for public reporting of illicit discharges

- Spill response plan
- IC/IDs education and training for Permittee staff

3.6.1- Illicit Discharge Source Investigation and Elimination

The City of Walnut will make a reasonable effort to initiate an illicit discharge source investigation as soon as staff receives notification of an event. All reports of illicit discharges will be investigated. As required by the MS4 Permit, the City will initiate an illicit discharge source investigation within 72 hours of becoming aware to the illicit discharge. Investigations will be conducted by available qualified City or County Staff in the applicable department based on the initial details reported.

Illicit discharges suspected to contain sanitary sewage shall be the highest priority for investigation. The source of sanitary sewer discharges should be traced back to the point of origination and stopped immediately if possible. Discharges of sanitary sewage from the sanitary sewer system shall be differed to Los Angeles County Sewer Maintenance District. The City has a Sewer System Management Plan (SSMP) in place to address sanitary sewer overflows (SSOs). The City of Walnut, as a member of the Consolidated Sewer Maintenance District (CSMD) utilizes the County reporting hotline 1-800-675-HELP (4357) for sewer related emergencies. The SMD reporting hotline is posted on the City website for residents should an event occur after business hours. City Staff are also trained to contact SMD if a report is received directly by the City.

The City will track all reports and investigations of illicit discharges that are determined to originate from or enter the jurisdictional area of the City of Walnut. Minimum information included in the City's tracking program is as follows:

- Date and time of observed illicit discharge
- Location of observed illicit discharge
- Results of the investigation
- Date the investigation was closed

Illicit discharge inspection and response procedures shall conform to the following:

1. Following receipt of a reported illicit discharge qualified staff will be directed to investigate as soon as possible but no later than 72 hours after initial receipt of the report.
   a. Suspected discharge from construction site, private residents, or commercial site: Staff shall contact the on call building inspector to conduct an investigation.
   b. Suspected discharge from public works project site: Staff shall contact the City Engineer's office. The project manager will conduct an investigation or coordinate with the public works inspector to investigate.
   c. Suspected Hazmat discharge: Staff shall contact Los Angeles County Fire Department. Station 61 is located at 20011 La Puente Road, Walnut. Phone:(909) 595-3001; Emergency: 911
   d. All other suspected discharges: Staff shall contact Los Angeles Flood Control District at 1-888-CLEAN-LA.
2. Staff dispatched to the reported discharge site shall conduct an investigation and if possible identify the source of the discharge.

3. Dispatched staff shall notify the responsible party of the issue and require that corrective measures are taken to eliminate the illicit discharge. It shall be noted by staff if the illicit discharge has made it to the MS4 by catch basin or other route.
4. The City shall conduct a follow up investigation following the elimination of the illicit discharge to confirm that the illicit discharge is eliminated and that the site has been cleaned to the satisfaction of the City.
5. If the source is determined to be upstream from the City's jurisdiction, staff dispatched to the site shall report back to the City's Community Services Department staff. City staff will provide notice of the illicit discharge to the agency as soon as possible. City staff will notify in writing the upstream agency and the Regional Board of the illicit discharge no later than 30 days following the determination of the discharge origination.
6. If the source of an ongoing illicit discharge is unidentified the City shall proceed with the required actions identified in section VI.D.10.v of the MS4 Permit.

3.6.2- Illicit Connection Source Investigation and Elimination

The City of Walnut will make a reasonable effort to initiate an illicit connection source investigation as soon as staff receives notification. As required by the MS4 Permit, the City will initiate an illicit connection source investigation within 21 days of becoming aware of the illicit connection. Investigations will be conducted by available qualified City or County Staff.

During the initial investigation of a reported or identified illicit connection, Staff shall record the following conditions:

- Source of the connection
- Nature and volume of discharge from the connection
- Responsible party for the connection

Upon confirmation that the reported/identified connection is illicit the City shall ensure that the connection is permitted and documented only if the connection discharges storm water and exempt or conditionally exempt non-storm water discharges allowed under the MS4 Permit or other individual or general NPDEs permits. If the illicit connection does not qualify for undergoing the permitting or documentation option it shall be eliminated within 180 days of completion of the investigation. Formal enforcement authority shall be used if necessary, to eliminate the illicit connection. All illicit connection investigations shall be documented.

3.6.3- Public Reporting of Non-Storm Water Discharges and Spills

The City of Walnut publicizes and promotes the importance of public reporting of illicit discharges on the City's website and through the public outreach and education program. The City participates in the Los Angeles County Reporting hotline, and has made the hotline number available through the City website, quarterly mailers, and education materials. The City of Walnut has also implemented and will continue to maintain signage adjacent to open channels or creeks that display information regarding dumping prohibitions.

City staff will be trained to document all reports of complaint calls received by the City. Complaints will be documented and tracked. The City will investigate all complaints in a timely manner and will include the results and follow up actions if needed on the tracking system selected by the City to document complaints.

3.6.4- Spill Response Plan

The City of Walnut is a Contract City. Upon receipt of a complaint or notice of an illicit discharge during normal business hours the City will determine based on the details reported to either dispatch an inspector to investigate or forward the complaint to Los Angeles County. The County reporting hotline is available to residents and City Staff.

Once reported to Los Angeles County through the reporting hotline. County hotline operators direct the call to the appropriate maintenance crew. The County crew will then be dispatched to the location reported to address the issue identified.

3.6.5- Illicit Connection and Illicit Discharge Education and Training

The City of Walnut will continue to train all City staff on the critical impact that illicit discharges and connections play in MS4 discharge water quality. Field staff will receive annual training to reinforce how to recognize an illicit discharge or connection. Field staff will also receive training on the City's procedures for documenting and reporting illicit discharges and connections.

City field staff will be trained to properly eliminate and cleanup a site of an illicit discharge. City staff will only be trained to address sediment related illicit discharges that have not made it into the MS4. All other illicit discharges will be referred to the Los Angele County Department of Public Works reporting hotline. The City of Walnut is a contract City and relies on the Los Angeles County Department of Public Works for spill response related to illicit discharges that are beyond the City's ability to address.

4.0- Reasonable Assurance Analysis

The Permit allows an agency to customize their storm water programs through the development and implementation of a Watershed Management Program to demonstrate compliance with relevant receiving water limitations through a Reasonable Assurance Analysis. Following the adoption of the Permit, the City of Walnut elected to develop an individual WMP.

The Permit specifies that a viable RAA must identify a suite of best management practices, both structural and non-structural, that demonstrates compliance with appropriate water quality standards as developed through applicable Total Maximum Daily Loads and other Permit limitations (water quality based effluent concentrations, receiving water limitations, and water quality objectives).

This section summarizes the City of Walnut's RAA approach and results of the following steps:

- Setting target load reductions based on Permit limitations;
- Modeling identified structural BMPs and quantifying their associated load reductions;
- Demonstrating, with reasonable assurance, that target load reductions (and therefore Permit limitations) can be met by the final compliance dates; and
- Phasing of structural and non-structural BMPs to achieve interim milestones.

The RAA modeling approach presented herein conforms to Part VI.C.5.b.iv(5) of the Permit, which states:

> *"Permittees shall conduct a Reasonable Assurance Analysis for each water body-pollutant combination addressed by the [WMP]. [The] RAA shall be quantitative and performed using a peer-reviewed model in the public domain. Models to be considered for the RAA, without exclusion, are the Watershed Management Modeling System (WMMS), Hydrologic Simulation Program-FORTRAN (HSPF), and the Structural BMP Prioritization and Analysis Tool (SBPAT).... The objective of the RAA shall be to demonstrate the ability of [the WMP] to ensure that Permittees' MS4 discharges achieve applicable water quality based effluent limitations and do not cause or contribute to exceedances of receiving water limitations."*

The Regional Board has developed a guidance document titled, "Guidelines for Conducting Reasonable Assurance Analysis in a Watershed Management Program, Including an Enhanced Watershed Management Program (March 25, 2014)." Although the guidance document presents guidelines and not necessarily requirements, the results of the RAA presented in this section have been developed to conform to the Regional Board guidance document where appropriate. The approach outlined in this section was presented to the Regional Board by Geosyntec during meetings on January 30, 2014 and April 9, 2014 (each for other Watershed Management Groups) and was found to be consistent with their guidelines.

4.1- Dry Weather RAA

The City of Walnut's dry weather compliance approach is to eliminate 100% of non-exempt dry weather MS4 discharges using a suite of non-structural source controls (e.g., water conservation incentives, enhanced IC/ID efforts, and enhanced education/outreach and inspection/enforcement to prevent non-sources of storm water flow) and source investigations following dry weather outfall screening. By eliminating flows, this is equivalent to 100% load reduction for all pollutants, thereby demonstrating reasonable assurance of meeting all applicable Permit limitations during dry weather. Elimination of discharges is a pathway for compliance with RWLs and WQBELs in the MS4 permit (per section VI.E.2.e.i.(3)); without discharges there can be no "cause or contribute" to receiving water issues.

The remainder of the RAA addresses wet weather.

4.2- Water Body Pollutant Combinations

Permit Attachment K indicates that the Walnut Watershed Management Area (WMA) drains to two receiving water bodies, San Jose Creek to the south and Walnut Creek Wash to the north, and that the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL applies to both. Both of these receiving waters are tributary to San Gabriel River Reach 3, which is itself tributary to San Gabriel River Reach 2. Permit Attachment P sets a daily waste load allocation (WLA) for lead[1] for San Gabriel River Reach 2 and all tributaries at 81.34 µg/L x daily storm volume (L) for periods when the maximum daily flow of the River is greater than or equal to 260 cfs as measured at USGS station 11085000, which is located at the base of Reach 3 above the Whittier Narrows Dam. Therefore lead in San Jose Creek and Walnut Creek Wash are the only Category 1 (Highest Priority) Water Body Pollutant Combinations (WBPCs) evaluated in this RAA.

San Jose Creek and Walnut Creek Wash are 303(d) listed for indicator bacteria. These water bodies are also listed for other pollutants including ammonia, total dissolved solids, toxicity, pH, and benthic macroinvertebrate bioassessment; however, these pollutants are either not able to be modeled given currently available datasets or are not typically associated with MS4 wet weather discharges. Therefore indicator bacteria in San Jose Creek and Walnut Creek Wash are the only Category 2 (High Priority) WBPCs evaluated in this RAA. Applicable wet weather bacteria water quality objectives used for the RAA are identified in Table 4-1.

There are no Category 3 (Medium Priority, based on other receiving water exceedances) pollutants identified by the City.

[1] For selenium, based on the 1994-2000 LA County land use monitoring dataset, selenium concentrations are below the 5 ug/L detection level – which is equivalent to the applicable CTR freshwater chronic criterion -- in 100% of the 38 single family residential (SFR) samples. These data are available at http://dpw.lacounty.gov/wmd/NPDES/Int_report/Tables/Table_4-12.pdf. In the City of Walnut, SFR is the dominant land use. Therefore we do not believe there is any evidence to link Walnut's MS4 discharges to elevated selenium concentrations that have been observed in the receiving waters, and no further response actions are proposed.

Table 4-1

Bacteria Objectives Used for the Walnut RAA		
Receiving Water Segment	**Recreational Beneficial Use**	**Water Quality Objective**
San Jose Creek	REC2 (intermittent) with High Flow Suspension*	4000/100mL fecal coliform (10% of samples not to exceed)
Walnut Creek Wash	REC1 (intermittent), REC2 (intermittent)	400/100mL fecal coliform** (single sample limit)

REC1 = water contact recreation

REC2 = non-water contact recreation

* Based on Table 2-1a, Order #2003-010. "Potential" use designations (e.g., REC1 for San Jose Creek) are not included here as these are not applicable for RAA.

** While the REC1 fecal coliform objective was removed from the Los Angeles Basin Plan through Order R10-005, fecal coliform is used in this RAA as the modeling surrogate for indicator bacteria. Therefore, the old REC1 objective is used here.

There are no Category 3 (Medium Priority, based on other receiving water exceedances) pollutants identified by the City.

4.3- Target load Reductions, Critical Conditions

The Regional Board's RAA guidance document requires that RAAs consider critical conditions when evaluating load removals for structural and non-structural BMPs. For bacteria, the critical condition is defined as the 90th percentile TMDL year (Nov 1-Oct 31, consistent with various Los Angeles region bacteria TMDLs). For lead, the critical condition, based on the metal TMDL WLA, is defined as the 90th percentile daily lead load for metal TMDL wet days (i.e., days with measured flowrates in the river above a certain threshold). The 90th percentile bacteria TMDL year for the Walnut WMA, based on both number of bacteria TMDL wet days (i.e., days with 0.1 inch of rain and the three days that follow, a definition taken from Los Angeles region bacteria TMDLs) and total rainfall depth, is 1993.[2] This is based on the most representative Los Angeles County Flood Control District precipitation gauge, or Mt. San Antonio College Station (D255), for the 1989-2011 period[3]. This gauge location is shown in Figure 4-1. A data summary for this gauge for each year in this period is shown in Table 4-2.

Wet days for lead are defined in the San Gabriel River metals TMDL as days in which the maximum daily flow at USGS gauge 11085000 is 260 cfs or greater; this value was set in the TMDL based on the 90th percentile flows at this gauge between 1990 and 2005. The 90th percentile daily lead load for wet days

[2] The Regional Board's definition of "TMDL year" (for example, as used in the Los Angeles River Bacteria TMDL), was used throughout this RAA. For 1993, this is November 1, 1992 to October 31, 1993.

[3] The period of Nov 1, 1988 to Oct 31, 2011 (TMDL years 1989-2011) is based on the range of precipitation data available in Los Angeles County's WMMS model. The model contains data between 1/28/1986 and 4/26/2012, but the model requires at least one year of "spin-up" time from initial conditions, and only whole TMDL years were used. Therefore, TMDL years 1989-2011 were chosen as the representative period for model outputs.

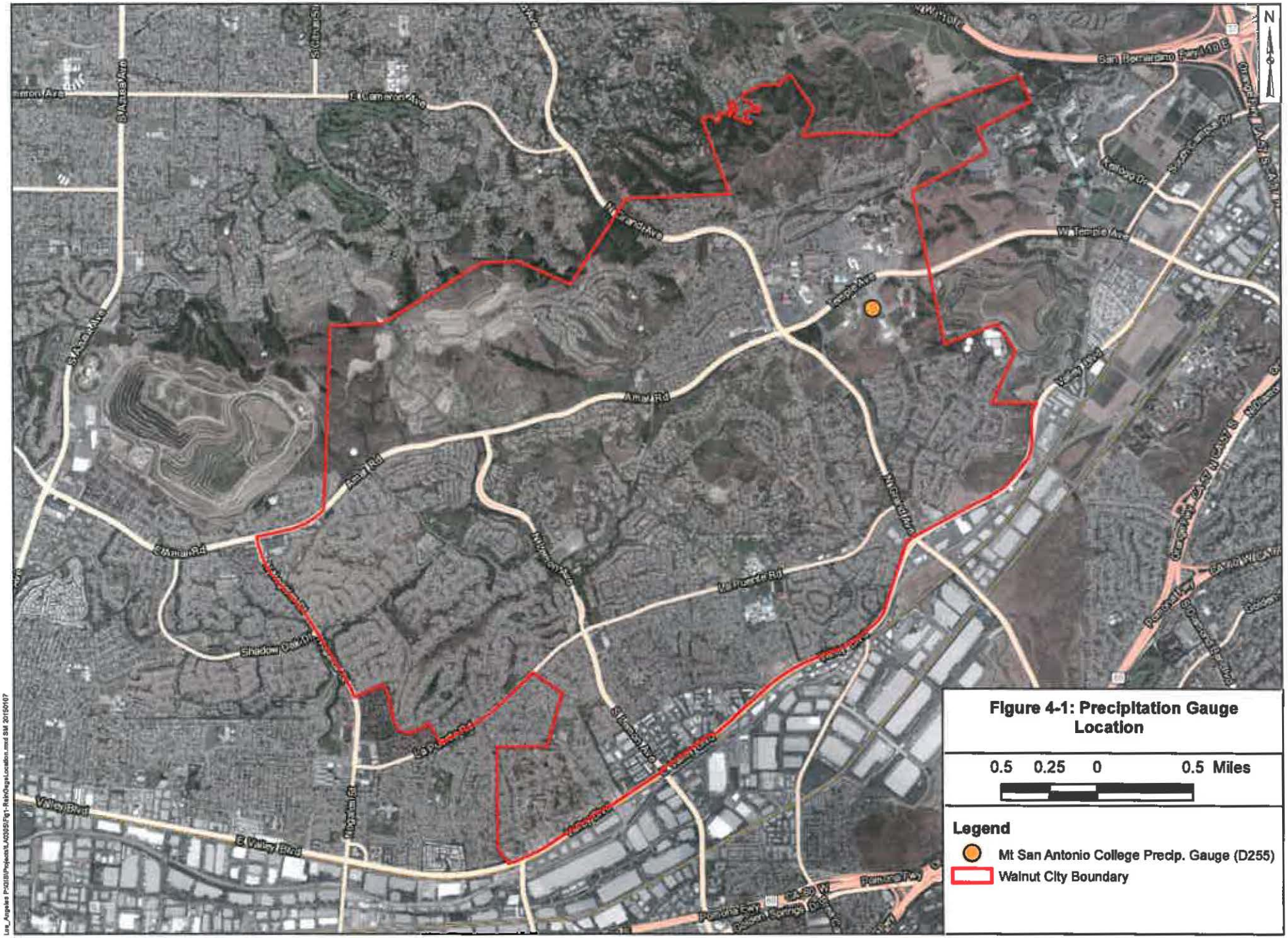
in the November 1, 1989 to October 31, 2011 period was determined based on modeling output as described below. An electronic file with daily model-predicted lead loads for the entire period at the outlets to San Jose Creek and Walnut Creek Wash, as well as at all catchments within the model domain is available .

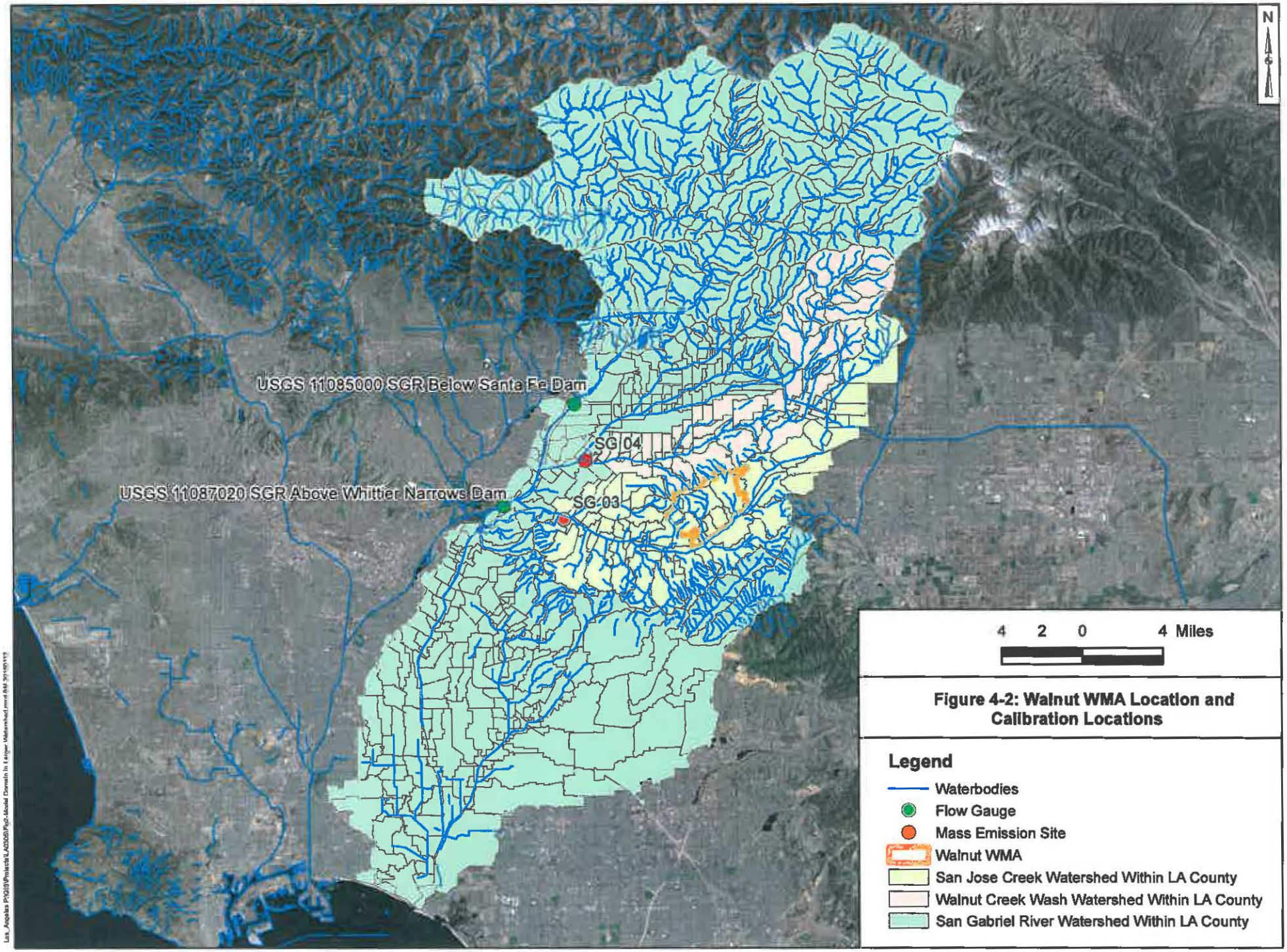
Table 4-2

Annual Rainfall and Number of Wet Days at Mt. San Antonio College Station Rain Gauge for TMDL years 1989-2011

TMDL Year	Annual Rainfall Depth (inches)	Percentile by Rainfall Depth (%)	Number of Bac. TMDL Wet Days*	Percentile by Number of Wet Days(%)
1989	6.12	5%	68	68%
1990	9.01	23%	49	27%
1991	18.68	68%	45	5%
1992	25.24	86%	70	73%
1993	**26.67**	**91%**	**77**	**91%**
1994	8.81	18%	67	64%
1995	24.74	77%	75	**82%**
1996	18.12	64%	54	45%
1997	14.61	45%	52	36%
1998	33.23	100%	118	**100%**
1999	4.76	0%	46	9%
2000	11.12	32%	47	14%
2001	15.6	50%	48	23%
2002	8.69	14%	41	0%
2003	16.33	55%	47	14%
2004	20.11	73%	63	59%
2005	25.13	82%	93	95%
2006	10.47	27%	62	55%
2007	6.34	9%	49	27%
2008	17.56	59%	53	41%
2009	11.52	36%	59	**50%**
2010	29.88	95%	72	77%
2011	11.88	41%	76	86%

*Wet days for bacteria are days in which 0.1" or greater rainfall occurs plus the three days following as defined in various Los Angeles area Bacteria TMDLs.


N
Figure 4-1: Precipitation Gauge Location
0.5 0.25 0 0.5 Miles
Legend
Mt San Antonio College Precip. Gauge (D255)
Walnut City Boundary


N
USGS 11085000 SGR Below Santa Fe Dam
SG 04
USGS 11087020 SGR Above Whittier Narrows Dam
SG-03
4 2 0 4 Miles
Figure 4-2: Walnut WMA Location and Calibration Locations
Legend
Waterbodies
Flow Gauge
Mass Emission Site
Walnut WMA
San Jose Creek Watershed Within LA County
Walnut Creek Wash Watershed Within LA County
San Gabriel River Watershed Within LA County

4.4- Baseline Loads, Critical Conditions

The Los Angeles County Loading Simulation Program C++ (LSPC) model was used to compute baseline and allowed loads, and to determine target load reductions for the RAA. The Los Angeles County LSPC model is a publically available watershed model that was developed for Los Angeles County in connection with the greater Watershed Management Modeling System (WMMS) framework. LSPC uses Hydrologic Simulation Program Fortran (HSPF) algorithms to simulate hydrology, sediment transport, water quality, and the fate and transport of pollutants within receiving waters and through a watershed. GIS is used for the spatial component of the analysis as well as general visualization. WMMS' LSPC model has been calibrated for hydrology as well as water quality in the San Gabriel River Watershed. Default model settings and input parameter values were not changed for this project, therefore the original County calibration results still apply and are summarized here to the extent that documentation exists for the San Gabriel River Watershed. Additional documentation regarding the development and calibration of LSPC within the greater WMMS modeling framework can be found in the Los Angeles County Department of Public Works' WMMS portal (Los Angeles County DPW, 2010c).

The original County hydrology calibration of the LSPC model was done by comparing predicted flow rates with measured values at 30 stream gauge locations throughout Los Angeles County including four locations within the San Gabriel River Watershed (Los Angeles County Department of Public Works, 2010a). Areas with a single or dominant land use were calibrated first to establish attributes for that land use throughout the rest of the county. Attributes for other land uses were then calibrated using areas where the previously calibrated land uses had fixed attributes. Point sources and hydromodification features (such as dams and spreading grounds) were then calibrated once all land use attributes were calibrated. Analyses included both graphical and statistical comparisons of model prediction with measured stream gauge data, including comparisons of mean daily, monthly, and seasonal flow as well as flow exceedance probabilities.

The County calibrated the LSPC model for water quality in much the same way, where an area with a dominant land use was calibrated first, then the attributes of that land use were held fixed to calibrate the other land uses (Los Angeles County Department of Public Works, 2010b). Predicted pollutant concentrations were compared with land-use specific water quality data collected by the Southern California Coastal Water Research Project (SCCWRP) (SCCWRP, 2007) in order to adjust model input parameters for each pollutant for each land use. The County water quality calibration report includes visual comparisons only. The model was validated by comparing predicted versus measured water quality data for receiving water mass emission sites, again using measured data collected by SCCWRP.

The Walnut WMA represents 1.3% of the overall San Gabriel River watershed area (Figure 4-2). No stream gauge or mass emission site exists that represents stormwater discharges exclusively from the Walnut WMA. The nearest downstream flow gauge (USGS gauge #11087020 is located 10 miles downstream and drains an area 49 times larger than the Walnut WMA. The County used two San Gabriel River stream gauges for hydrology calibration of the LSPC model: one immediately upstream of the confluence with Walnut Creek Wash (USGS gauge #11085000 San Gabriel River below Santa Fe Dam near Baldwin Park, CA) and one immediately downstream of the confluence with San Jose Creek (USGS gauge #11087020 San Gabriel River above Whittier Narrows) (Figure 2). Although both of these

gauges were used for calibration of the model, the calibration statistics are only provided in the County hydrology calibration report for the downstream gauge. At this location, an average difference of 12.4% was computed based on a comparison between predicted and measured total volumes between October 1, 1986 and September 30, 1992 (Los Angeles County Department of Public Works, 2010a). For comparison, the RAA guidelines provided by the Los Angeles Regional Water Quality Control Board (LARWQCB) state that a difference between predicted and measured values of 10-15% is "good" for hydrology and flow (LARWQCB, 2014). An excerpt from the calibration report showing the mean daily and mean monthly flows measured at the stream gauge versus those predicted by the model is shown in Figure 4-3.

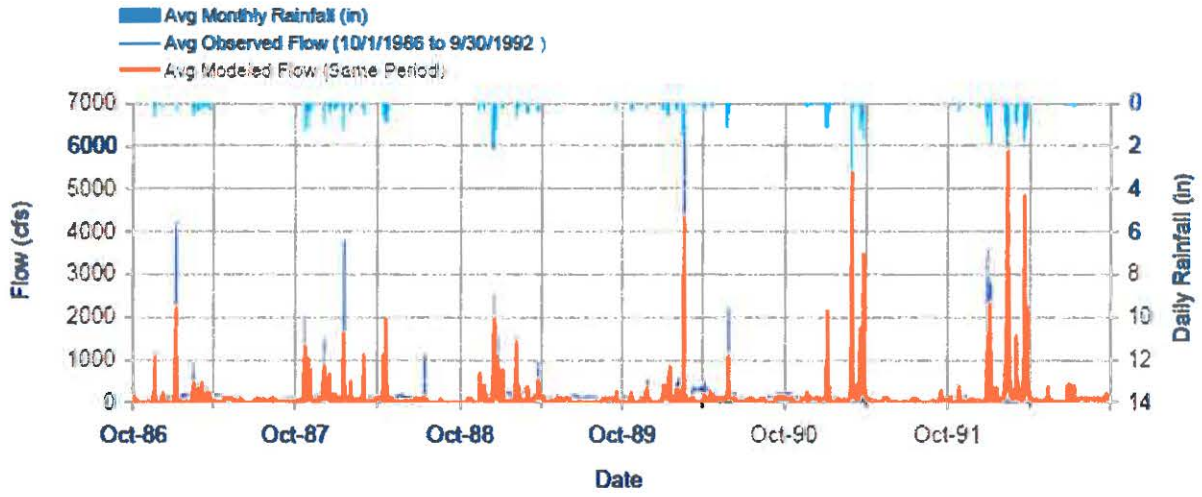


Figure F-1. Mean daily flow: Model Outlet 5156 vs. USGS 11087020 San Gabriel R Ab Whittier Narrows Dam CA

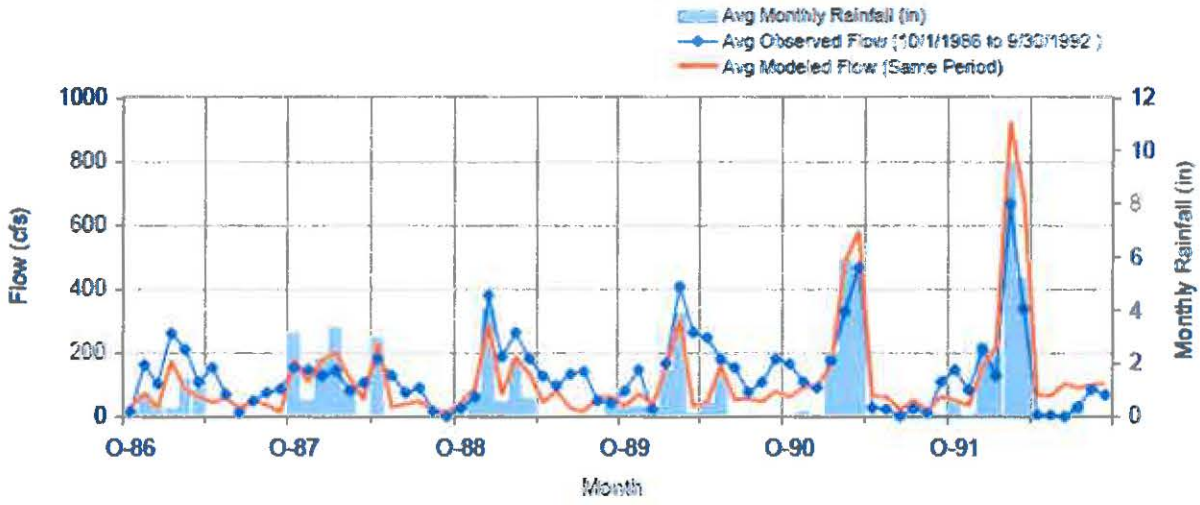


Figure F-2. Mean monthly flow: Model Outlet 5156 vs. USGS 11087020 San Gabriel R Ab Whittier Narrows Dam CA

Figure 4-3: LSPC Predicted vs Measured Stream Flow Rates. (Figure from Los Angeles County Department of Public Works, 2010a)

For water quality calibration, the County's water quality calibration report evaluates four locations in the San Gabriel River Watershed, including mass emission sites on San Jose Creek (SG03) and Walnut Creek Wash (SG04), each located downstream of the WMA (Figure 4-2) (Los Angeles County Department of Public Works, 2010b). SG03 is located approximately 7 miles downstream of the WMA and has a drainage area of 85 square miles, of which the WMA makes up less than 10%. SG04 is located approximately 5.5 miles downstream of the WMA and has a drainage area of 59 square miles, of which the WMA makes up approximately 1%. Each site had 19-20 lead and 27-29 total coliform bacteria samples collected by SCCWRP between 2004 and 2005, which were used for model validation (as described earlier, SCCWRP land use monitoring sites were used for model water quality calibration). A time series of the predicted lead concentrations compared with measured concentrations at these mass emission sites is shown in Figures 4-4 and 4-5.

Through the WMP adaptive management process, as monitoring data from the Walnut WMA become available, the RAA models will be recalibrated – thus better reflecting site specific conditions – and the RAA results will be revised.

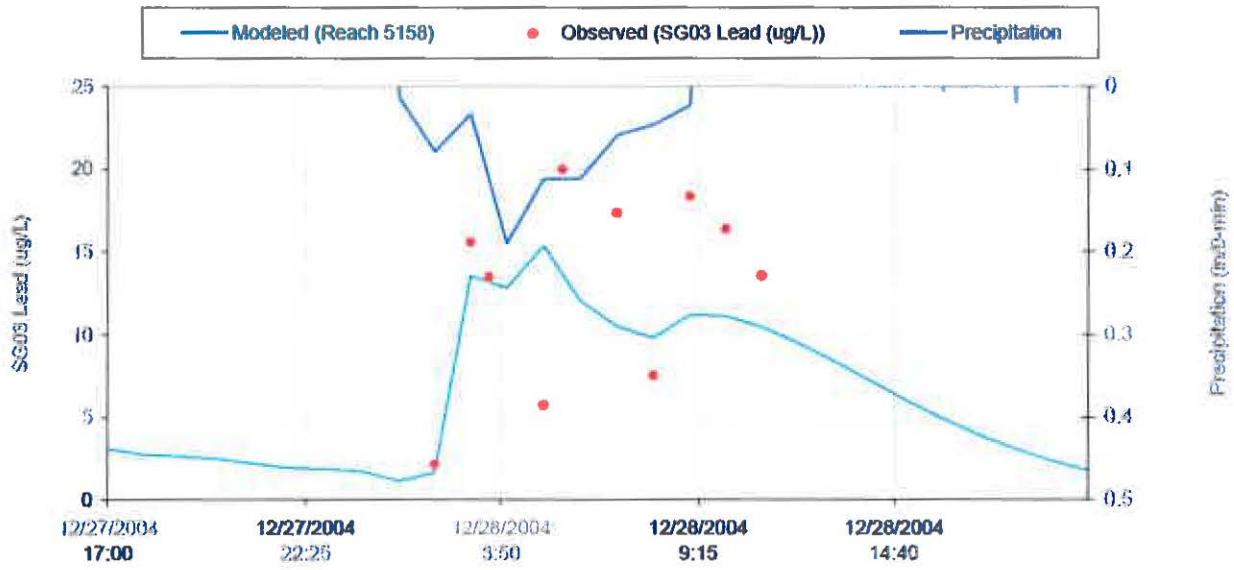


Figure 4-4: LSPC Predicted vs Measured Lead Concentrations at Mass Emission Site SG 03. (Figure from Los Angeles County Department of Public Works, 2010b)

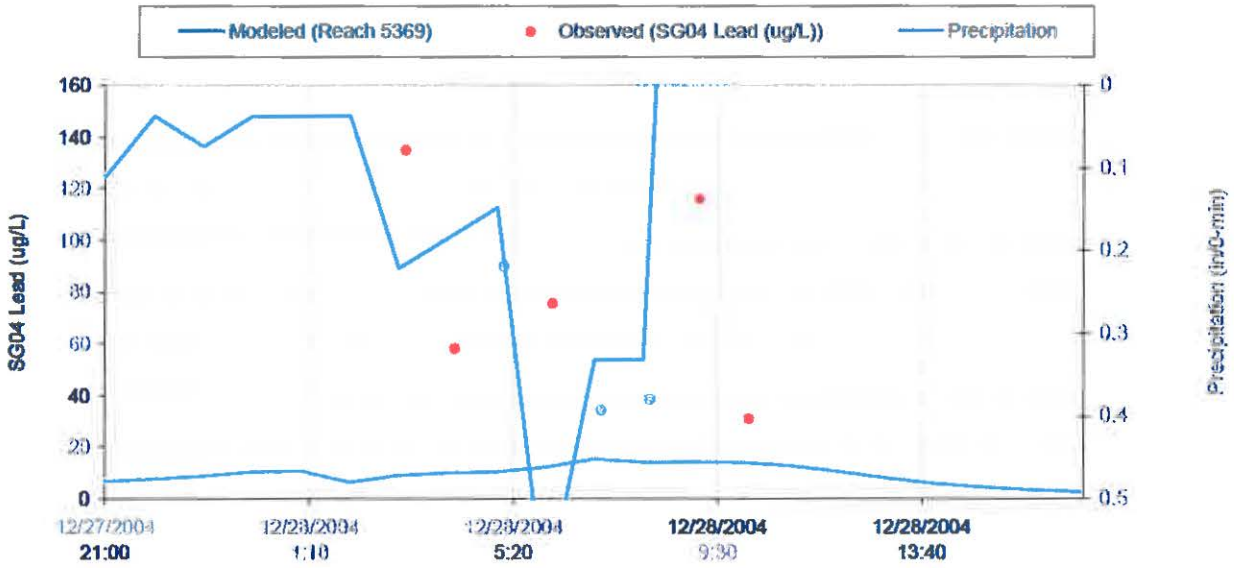


Figure 4-5: LSPC Predicted vs Measured Lead Concentrations at Mass Emission Site SG 04. (Figure from Los Angeles County Department of Public Works, 2010b)

4.4.1- Methodology

The County LSPC model's catchments were clipped to the boundary of the Walnut WMA. Figure 4-6 presents revised LSPC model catchments, storm drains, and receiving waters for the WMA. The majority of the WMA (93%) drains towards San Jose Creek.

LSPC land uses in the San Gabriel River Watershed are unchanged from the County's published LSPC model, and represent 2000 conditions. While new development has occurred in the City since 1996 (and therefore this developed area isn't captured by the existing LSPC model), the stormwater impacts of this development have been at least partially mitigated through Standard Urban Stormwater Management Plan (SUSMP) implementation consistent with requirements from the 2001 MS4 permit.

In order to establish baseline (or existing condition) pollutant loads, pollutant concentrations, and runoff volumes, a single model run without any BMPs or treatment control measures was carried out for both the San Jose Creek and Walnut Creek Wash sides of the WMA. Baseline bacteria loads (modeled using fecal coliform[4]) were predicted for the 90th percentile TMDL year by rainfall. Baseline lead loads were predicted for the 90th percentile lead load wet day, using the metals TMDL definition of wet day where the measured flow at USGS gauge #11085000 was 260 cfs or greater. These dates were found to be 2/23/1993 and 2/22/1993 for San Jose Creek and Walnut Creek Wash, respectively. Baseline predicted loads for both fecal coliforms and lead are shown in Table 4-3. LSPC-predicted daily flows, concentrations, and volumes for the summed catchments that drain to San Jose Creek and Walnut Creek Wash for the entire November 1, 1989 to October 31, 2011 modeling period, along with the LSPC modeling files, results are available.

[4] Fecal coliform is used as the representative indicator bacteria for RAA modeling given its relatively larger land use event mean concentration datasets and given that it is the basis for the REC2 objective, which is the applicable recreational use for the water body that most of the City drains to.

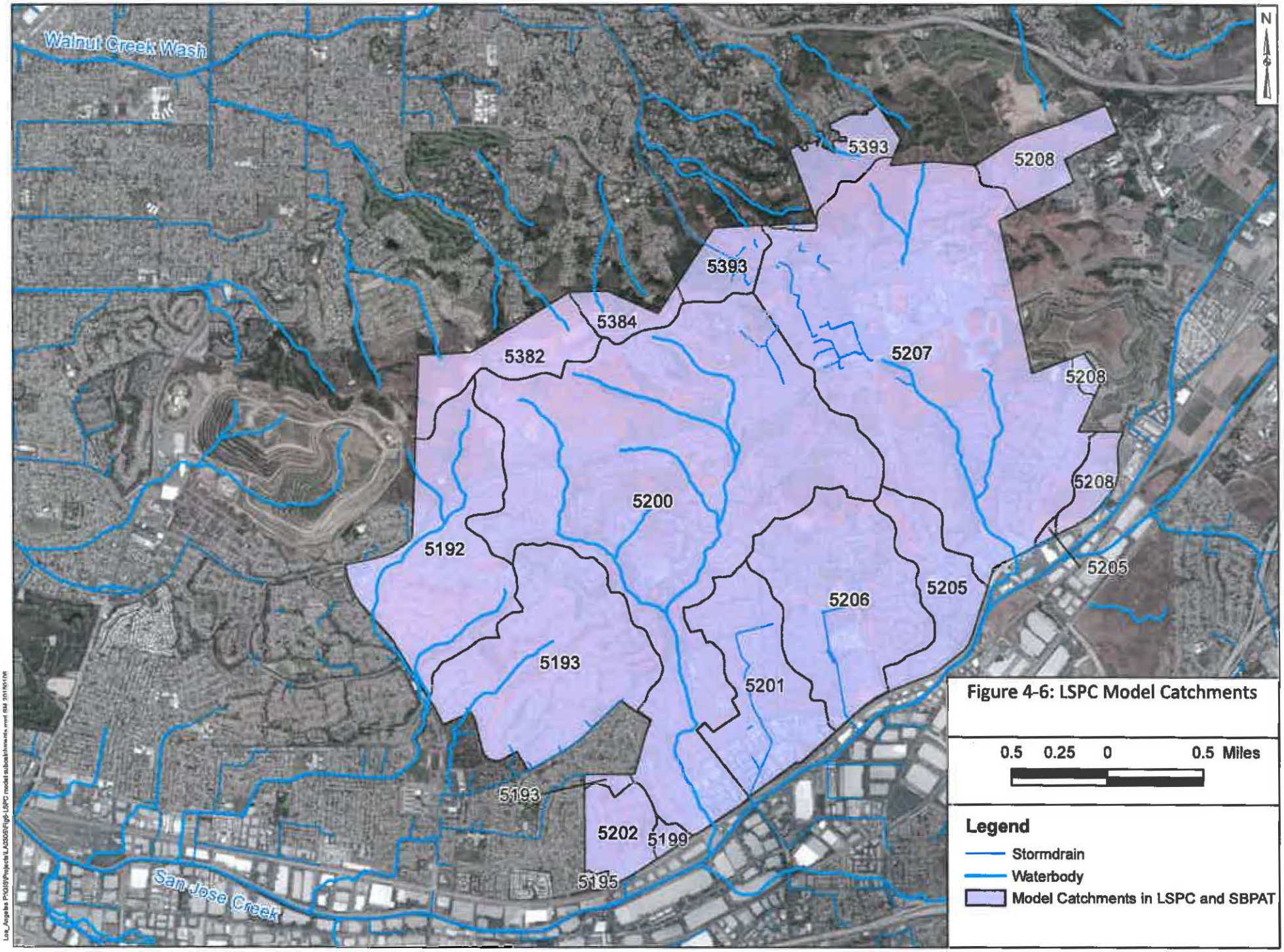

Walnut Creek Wash
San Jose Creek
5393
5208
5393
5384
5382
5207
5208
5208
5200
5192
5205
5206
5205
5193
5201
5193
5202
5199
5195
N
Figure 4-6: LSPC Model Catchments
0.5 0.25 0 0.5 Miles
Legend
Stormdrain
Waterbody
Model Catchments in LSPC and SBPAT

Table 4-3

Baseline Loads Derived from LSPC for the Critical Condition		
Receiving Water Segment	90th Percentile Daily Lead Load on Wet Days (lbs)	90th Percentile Annual Fecal Coliform Load (MPN*10^12)
San Jose Creek	0.62	436
Walnut Creek Wash	0.018	7.4

4.5- Allowable Loads

4.5.1- Lead

The allowable lead load for the WMA was computed by multiplying the concentration-based WQBEL (81.34 µg/L) by LSPC-predicted runoff volumes on the wet day with the 90th percentile lead load for the areas draining to San Jose Creek and Walnut Creek Wash. For both San Jose Creek and Walnut Creek Wash, the allowable load is approximately an order of magnitude greater than the baseline load (Table 4- 4).

Table 4-4

Allowable Daily Lead Loads (Computed for the Baseline Wet Day with the 90th Percentile Lead Load)			
Receiving Water Segment	Baseline Daily Runoff Volume (acre feet)	WQBEL (ug/L)	Allowable Daily Lead Load (lb)
San Jose Creek	26	81.34	5.7
Walnut Creek Wash	0.81	81.34	0.18

4.5.2- Bacteria

Since there is no bacteria TMDL for the San Gabriel River Watershed, the bacteria allowable load is based on assumed allowable exceedance day[5] (AED)-based limitations consistent with the Los Angeles River Bacteria TMDL. The 90th percentile TMDL year (1993) has 77 wet days (i.e., days with 0.1 inch of rain and the three days that follow). In San Jose Creek, 30 of these days are exempt from recreational objectives through the High Flow Suspension (HFS)[6], and 10% of the remaining wet days (47) are allowed to exceed REC2 objectives, resulting in 5 AEDs (in addition to the HFS days). The net result for San Jose Creek is that, of the 77 wet days that occur during 1993, 35 are allowed to exceed recreational objectives (the combination of the HFS and reference-based AEDs). For Walnut Creek Wash, consistent with the Los Angeles region bacteria TMDLs for creeks, 19% of the 77 wet days are allowed to exceed REC1 objectives based on average reference stream exceedance rates, resulting in 15 AEDs. For both

[5] An exceedance day is a day in which bacteria concentrations exceed the applicable recreational objectives.

[6] The HFS applies during days with greater than or equal to 0.5 inches of rain and the following day.

creeks, these AEDs were used to directly calculate target load reductions through a methodology that is described in the next section. Allowable loads were then calculated by subtracting target load reductions from baseline loads. Table 4-5 summarizes the allowable loads for lead and bacteria for the 90th percentile year.

Table 4-5

Allowable Bacteria Loads for 90th percentile year	
Receiving Water Segment	**Annual Fecal Coliform Load (MPN*10^12)**
San Jose Creek	353
Walnut Creek Wash	5.0

4.6- Target Load Reductions

4.6.1- Lead

Target load reductions (TLRs) are the reduction of baseline loads needed to achieve allowable loads for the critical condition. The TLRs for lead were determined to be zero since baseline loads are already below allowable loads. The zero TLR serves as reasonable assurance demonstration that the lead WQBEL will be met in both receiving water bodies without the need for new BMPs. Therefore, quantification of BMP load reductions for lead are not reported in the BMP sections of this RAA. However, the BMPs proposed for addressing bacteria will also have a substantial load reduction benefit for lead and other metals.

4.6.2- Bacteria

TLRs for bacteria were established as the load reductions from baseline conditions that are required to decrease the number of wet-weather exceedance days (i.e., non-HFS wet days with receiving water concentrations above 4000 MPN/100 mL for San Jose Creek and 400 MPN/100 mL in Walnut Creek Wash) in the 90th percentile year to the AEDs described earlier. In order to calculate this required load reduction, a single regional retention basin was modeled at the outlets of the San Jose Creek and Walnut Creek Wash drainage areas in LSPC. Each basin was iteratively sized until the number of exceedance days was equivalent to the number of AEDs for the downstream receiving water body. Exceedance days for each basin were calculated as any non-HFS wet day with a predicted fecal coliform concentration in the basin discharge (i.e., during overflow events) that was above the applicable fecal coliform objective. Therefore, it was possible for each retention basin to overflow and not cause an exceedance as long as it either occurred on a dry day or an HFS day, or if concentrations did not exceed the criteria. Once each basin was sized appropriately so that the number of exceedance days did not exceed the allowable number of exceedance days in TMDL year 1993, TLRs were calculated as the load reductions that were achieved by each infiltration basin. The percent reduction in the bacteria load relative to baseline was calculated by comparing the predicted annual bacteria loads from the WMA with the retention basin in place to the predicted annual bacteria loads from the WMA from the

baseline conditions for the 90th percentile TMDL year. Table 4-6 summarizes the TLRs for lead and bacteria as a percentage reduction from the respective baseline loads.

Table 4-6

Target Load Reductions for the Critical Condition (as a percent of baseline load)		
Receiving Water Segment	**Total Lead***	**Fecal Coliforms****
San Jose Creek	0%	19%
Walnut Creek Wash	0%	32%

*Applicable on the 90th percentile lead load wet day where wet days are days where the maximum flow rate at USGS 11085000 is 260 cfs or greater.

**Applicable on the 90th percentile bacteria TMDL year for number of wet days where wet days are days with 0.1" or precipitation or greater plus the next three days

4.7- Modeling assumptions for WMP Control Measures

4.7.1- BMP Model Description

SBPAT, a public domain GIS-based water quality analysis tool was used to evaluate structural BMP performance for the purposes of this RAA. SBPAT links a modified USEPA Storm Water Management Model (SWMM) hydrologic engine to a Monte Carlo analysis capable of repeated random sampling of pollutant event mean concentrations (EMCs) and BMP effectiveness distributions to obtain numerical results regarding the expected performance of a specific BMP configuration (Geosyntec Consultants, 2012). SBPAT was designed specifically for the purpose of identifying structural retrofit BMP opportunities, and quantifying their benefits and costs. Each Monte Carlo analysis typically involves 10,000 iterations of EMC lognormal distributions fitted to Los Angeles region land use EMC datasets (the same datasets that were also used to calibrate LSPC), as well as BMP effluent EMC distributions based on recent data from the International BMP Database. SBPAT's land use EMC log statistics are presented in Table 4-7. SBPAT is capable of quantifying model output variability, which is a component of the Regional Board's RAA guidance. The model:

- Calculates and tracks inflows to BMPs, treated discharge, bypassed flows, evaporation, and infiltration at a user-defined time step (e.g., 15 minutes);
- Distinguishes between individual runoff events by defining six-hour minimum inter-event times in the rainfall record, yet tracks inter-event antecedent conditions;
- Tracks volume treated by BMPs and summarizes and records these metrics by storm event; and
- Produces a table of each BMP's hydrologic performance, including concentration and load metrics by storm event, and consolidates these outputs on an annual basis.

SBPAT is specifically referenced in the MS4 Permit Part VI.C.5.b.iv and was presented at the first two Permit Group Technical Advisory Committee (TAC) RAA Subcommittee meetings. Additional information regarding SBPAT can found in the SBPAT portal at www.SBPAT.net.

Table 4-7

SBPAT Fecal Coliform Event Mean Concentrations for the Walnut WMA – Arithmetic Estimates of the Lognormal Summary Statistics (means with standard deviations in parentheses)[a]

Land Use	Fecal Coliform MPN/100mL
Single Family Residential	31,100[b] (94,200)
Commercial	51,600 (173,400)[c]
Industrial	3,760 (4,860)
Education (Municipal)	11,800[d] (23,700)
Transportation	1,680 (456)
Multi-Family Residential	11,800[e] (23,700)
Agriculture (Row Crop)	60,300 (153,000)
Vacant / Open Space	484 (806)

[a] Fecal coliform EMC statistics are calculated based on 2000-2005 SCCWRP Los Angeles region land use data (SCCWRP, 2007). These EMC datasets are summarized in the SBPAT User's Guide (Geosyntec, 2012).

[b] The fecal coliform EMC for the single-family residential land use is based on SCCWRP's dataset for "low-density residential".

[c] The default log distribution best fit summary statistics for this land use-pollutant combination produced an unreasonably high deviation, therefore the arithmetic estimate of the log mean was held constant while the log summary statistics were recomputed based on the log CoV for SFR (SCCWRP's low-density residential EMC).

[d] Multi-family residential EMC used here since educational land use site not available in the SCCWRP fecal coliform dataset.

[e] The fecal coliform EMC for the multi-family residential land use is based on SCCWRP dataset for "high-density residential". High density single-family residential land use areas are also assigned this EMC.

4.7.2- BMP Model Calibration

The LSPC-derived TLRs were expressed as *percentages* of baseline loads to allow comparison with SBPAT's BMP load reductions even if the LSPC and SBPAT baseline loads didn't exactly match. However, some input parameter adjustments were made to SBPAT to improve the comparability between SBPAT output and the County-calibrated LSPC output for the baseline condition. First, SBPAT-predicted runoff volumes were calibrated to the LSPC-predicted runoff volumes. SBPAT uses the same catchment delineations as LSPC, and the dominant rain gauge used by LSPC (which applies to 93% of the total area in the WMA) is the rain gauge used by SBPAT. SBPAT was calibrated by adjusting the saturated hydraulic conductivity rates (Ksats) of the underlying soils until the predicted annual runoff volumes for the entire 1989-2011 modeling period and for TMDL year 1993 were within 10% of the LSPC-predicted volumes (after removal of base flows), to meet the "very good" threshold from the RAA guidance calibration performance criteria. Base flows were removed from the LSPC results using the Web-based Hydrograph Analysis Tool for porous aquifers with ephemeral streams; this tool was developed by Purdue University to separate base flows and runoff (Lim et al., 2005). Table 4-8 summarizes the annual runoff volume comparisons for the entire modeling period and for TMDL year 1993. In the future, through the WMP adaptive management process, as WMA-specific monitoring data become available, the LSPC and SBPAT calibrations may be updated, and the RAA revisited.

Table 4-8

Annual Runoff Volume Comparison Between LSPC and SBPAT Models

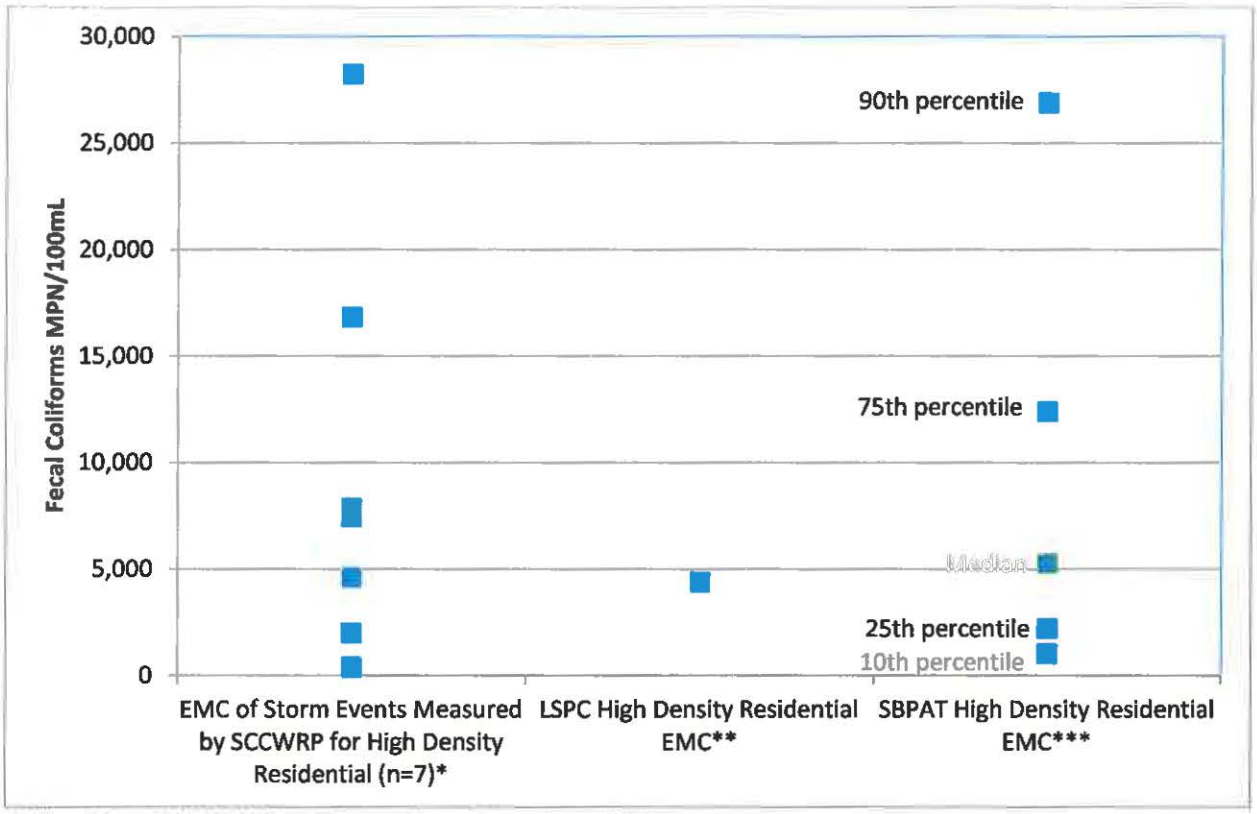
TMDL Year	San Jose Creek			Walnut Creek Wash		
	LSPC Runoff Volume (acre ft)	SBPAT Runoff Volume (acre ft)	Diff (%)	LSPC Runoff Volume (acre ft)	SBPAT Runoff Volume (acre ft)	Diff (%)
1993	6,542	7,156	9%	311	340	9%
1989-2011	61,337	65,501	7%	2,197	2,230	2%

Next, SBPAT's land use pollutant EMC statistics – which are the only water quality parameters used by the model to compute baseline pollutant loads – were compared with raw SCCWRP land use EMC datasets and LSPC's calibrated input values. The EMCs used by SPBAT for fecal coliforms are log-normal distributions calculated directly from the land use-specific monitoring data collected by SCCWRP. These were the same data used by the County to calibrate LSPC. These data are used directly in SBPAT by assigning each storm event a random concentration that is drawn from the log-normal distribution; then the modeling period is repeated for 10,000 iterations, to capture the effect of input variability on the variability of predicted output (a feature that makes SBPAT a "stochastic" model for water quality). While LSPC also used the SCCWRP land use data for calibration, static average land use EMC values are used deterministically, with no adjustment to capture variability.

The model EMC comparison was performed for the most representative urban land use in the WMA. Based on LSPC land use designations, 75% of the developed area in the Walnut WMA is high density single family residential (a land use the was originally calibrated by the County to the SCCWRP "high density residential" data), and 73% of the runoff volume is from this land use. In SBPAT, this areas is labeled "single family residential," but because of its high density classification it is assigned the SCCWRP high density residential EMC distribution. Therefore, this is the land use category that is evaluated in Figure 4-7.

Even though LSPC and SBPAT use the same data to set their EMC input values, the EMCs are used differently in each model. This is illustrated in Figure 4-7, which compares fecal coliform EMC values for the high density residential land use category between the original SCCWRP measured dataset, the volume-weighted EMC used by the County's calibrated LSPC model (extracted based on a runoff volume weighting of the high density residential impervious, urban pervious, and secondary street land use types which make up the whole high density single-family residential area), and the non-parametric summary statistics from the log-normal distribution used by SBPAT. Here it is evident how SBPAT's distributional statistics well represent the variability that is inherent to the measured data. And while both land use EMC inputs used by the models are "correct" and based on the same measured data, it is evident how each model can produce different concentration and load results due to their statistical representations. It was therefore decided not to make changes to SBPAT's land use EMC statistics based on a review of either LSPC concentration or load results or the raw SCCWRP measured land use EMC data.

To account for the difference in land use EMC statistics used by the two models, and to ensure comparability between the LSPC-derived TLRs and SBPAT's BMP load reductions, the TLRs expressed as a *percentage* of the total baseline load for both models. Therefore, even if the resulting baseline loads differed between the models, the relative differences in loads resulting from BMP implementation were similar. The retention basins used in LSPC to determine the TLRs, as well as most of the BMPs chosen for implementation in SBPAT, rely primarily on reducing runoff volume to achieve bacteria load reductions. Therefore, the effect on the loads relative to baseline loads is similar, even with differing land use EMC statistics.



*Values from Table B-14 from Appendix B of SCCWRP, 2007

** Flow-weighted mean from Walnut WMA using high density single family residential, and the portion of urban pervious and secondary roads within the single-family residential land use area.

***Based on a ln mean of 8.38 and the ln standard deviation of 1.24.

Figure 4-7: Comparison of Fecal Coliform High Density Residential EMC Values Between SCCWRP Measurements (n=7), LSPC (only an average value is used by the model), and SBPAT Models (a full log distribution is used by the model, but non-parametric summary statistics are shown for comparison)

The following sections describe the approach for modeling each BMP category. An iterative process was employed to identify the final proposed suite of structural and non-structural BMPs that were found to be capable of achieving the bacteria TLRs.

4.8- Low Impact Development Ordinance

Implementation of Low Impact Development (LID) as a result of redevelopment was modeled uniformly throughout the WMA. Permit Section VI.C.4.c.i(1) requires permittees to develop and implement a LID ordinance applicable to redevelopment meeting minimum criteria thresholds of disturbance. City staff indicated that approximately one residential redevelopment project per year would meet the Permit's post-construction onsite retention applicability requirements. Average residential lots within the Walnut WMA were assumed to be 0.15 acres. The redevelopment of a single lot would therefore account for 0.0053% of the WMA's single family residential land use area. The City's LID ordinance was assumed to become effective in 2014 and the area redeveloped each year was sampled without replacement (i.e., areas that had undergone redevelopment in previous years were not available to

undergo redevelopment again in subsequent years). Extrapolating the annual redevelopment rate without replacement for 10 years, or until the 2024 final compliance date, suggests that 1.6 acres or 0.058% of the City's residential land use area would be required to implement onsite retention LID BMPs.

Areas treated by LID as a result of the ordinance were modeled assuming unlined (with infiltration) bioretention systems sized for the 85th percentile, 24 hour storm depth for the WMA, or 0.98 in (Los Angeles County DPW, 2004a), with a saturated hydraulic conductivity (Ksat) of 0.15 in/hr, which is similar in magnitude to the Ksats of the underlying soils throughout the WMA.

4.9- Green Streets

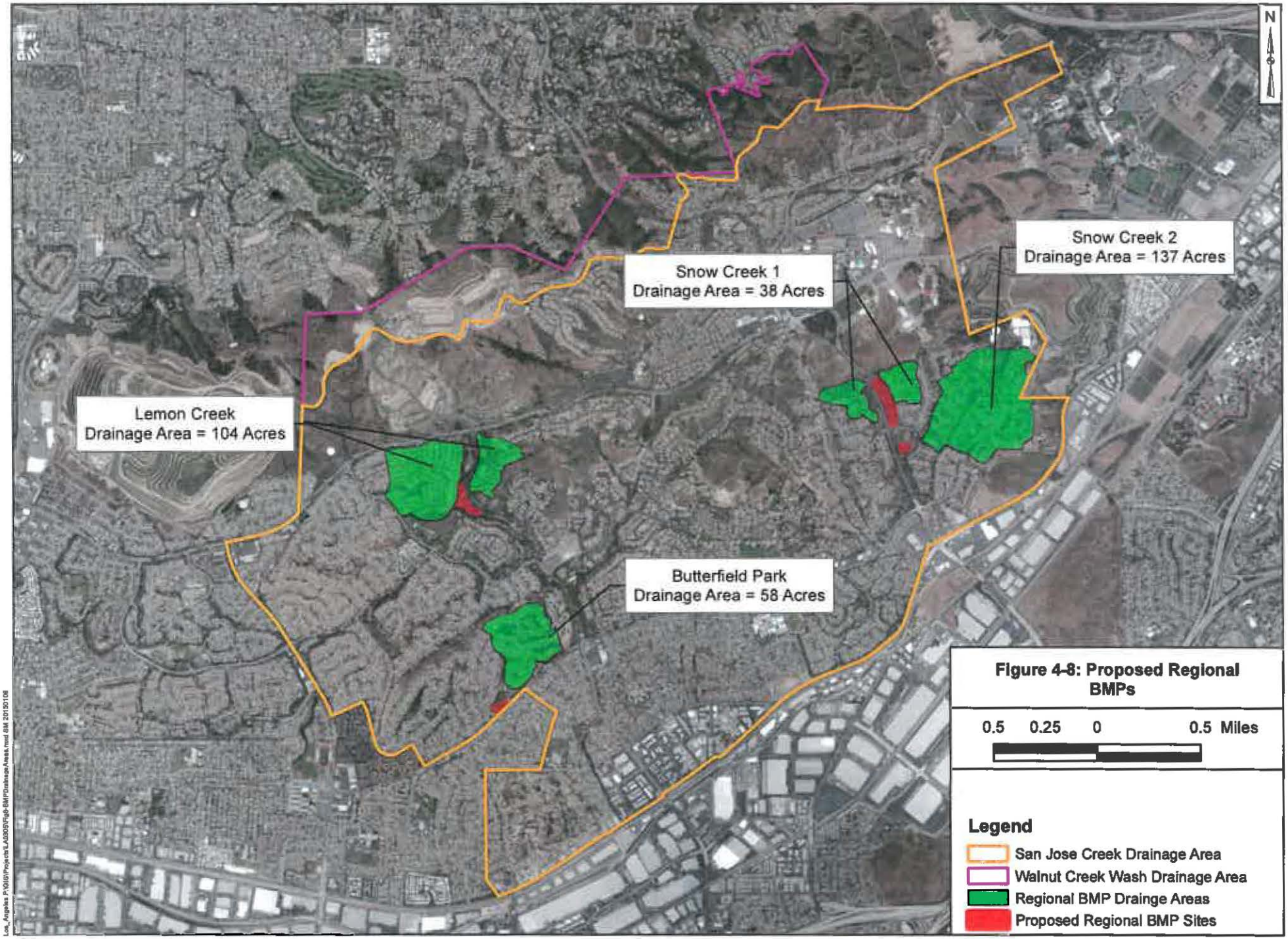
Green streets were applied to treat 15%[7] of commercial and residential land uses in areas that were not tributary to a proposed regional BMP in the San Jose Creek portion of the WMA. A total of 374 acres of residential and 23 acres of commercial land uses were assumed to be treated by green streets on the San Jose Creek side of the WMA for the purposes of this analysis. Green streets were applied to treat 30 acres or 55% of the residential area on the Walnut Creek Wash side of the WMA. Green street treatment was modeled assuming unlined (with infiltration) bioretention systems sized for the 0.98 in 85th percentile design storm with a Ksat of 0.15 in/hr.

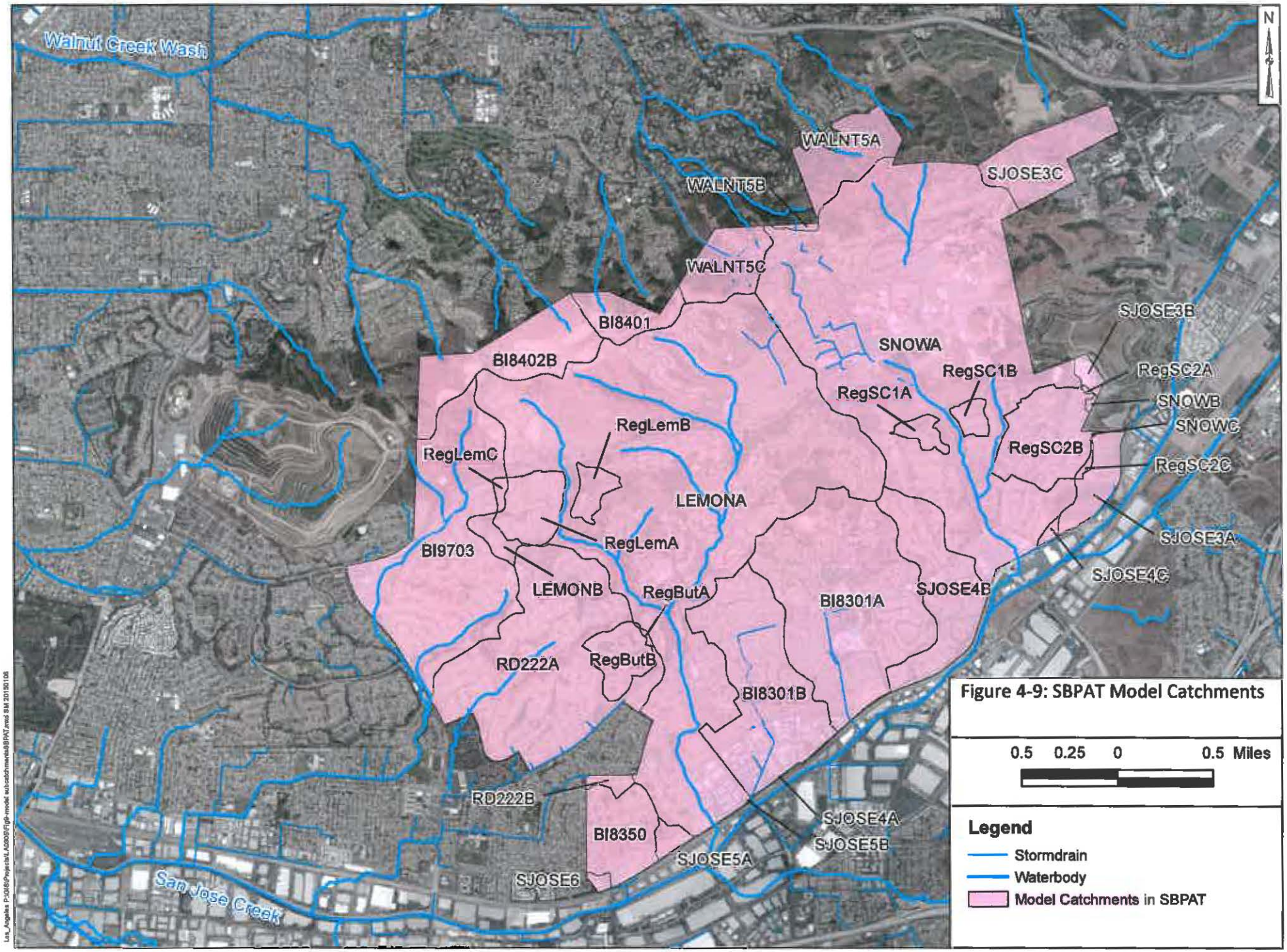
4.10- Regional BMPs

The regional type BMPs described in this section are included in the RAA on the basis of a number of assumptions that include construction feasibility and project funding. For the purpose of this document, only a desktop level investigation was conducted for establishing potential sites and footprints. No field samples of existing soil conditions or underground utility research have been completed.

Four publicly-owned potential regional BMP opportunity parcels have been identified for the purpose of this study. The locations of these regional BMPs and their drainage areas are shown in Figure 4-8. In SBPAT, the catchments were modified to enable modeling of the drainage areas to these regional BMPs, as shown in Figure 4-9. All regional BMPs were sized to the maximum footprint available based on local siting constraints. Side slopes and pre-treatment were assumed to occupy 15% of the available footprint. Infiltration basins and subsurface infiltration structures were assumed to account for the remaining 85% of the available footprint while the remaining subsurface flow wetland footprint is assumed to be comprised of an equalization basin and the wetland itself. Regional BMP conceptual design attributes that were used for SBPAT modeling are summarized in the following subsections. The most effective (for bacteria reduction) implementable regional BMP type was modeled at each project site – i.e., where soil types indicated that infiltration rates might be sufficient for infiltration based BMPs to be feasible, an infiltration basin or a subsurface infiltration system was modeled (infiltration basins were assumed at parks where existing uses could accommodate periodic temporary flooding, whereas subsurface systems were assumed at parks where existing land uses, such as ball fields, were to be maintained); otherwise subsurface flow wetlands (which could alternatively be implemented as any equivalent-performing flow-through or filtration-based BMP type) were assumed.

[7] The percent of area that drains to green street BMPs was iteratively determined based on meeting the TLRs.


N
Snow Creek 2
Drainage Area = 137 Acres
Snow Creek 1
Drainage Area = 38 Acres
Lemon Creek
Drainage Area = 104 Acres
Butterfield Park
Drainage Area = 58 Acres
Figure 4-8: Proposed Regional BMPs
0.5 0.25 0 0.5 Miles
Legend
San Jose Creek Drainage Area
Walnut Creek Wash Drainage Area
Regional BMP Drainge Areas
Proposed Regional BMP Sites


Walnut Creek Wash
WALNT5A
WALNT5B
WALNT5C
SJOSE3C
SJOSE3B
BI8401
BI8402B
SNOWA
RegSC1B
RegSC1A
RegSC2A
SNOWB
SNOWC
RegSC2B
RegSC2C
RegLemB
RegLemC
LEMONA
RegLemA
SJOSE3A
BI9703
LEMONB
RegButA
SJOSE4C
SJOSE4B
BI8301A
RD222A
RegButB
BI8301B
RD222B
BI8350
SJOSE4A
SJOSE5B
SJOSE5A
SJOSE6
San Jose Creek
N
Figure 4-9: SBPAT Model Catchments
0.5 0.25 0 0.5 Miles
Legend
Stormdrain
Waterbody
Model Catchments in SBPAT

The project details in this section demonstrate a potential route to establish reasonable assurance as required by the Los Angeles Regional Water Quality Control Board adopted Order R4-2012-0175. The inclusion of these projects in this document does not assume that they will be constructed as identified in this document. No regional funding sources have been identified for these projects. Design and construction timelines cannot be estimated at this time.

4.10.1- Butterfield Creek Subsurface Flow Wetland

A subsurface flow wetland project opportunity was identified at Butterfield Park on the southwest portion of the WMA. A schematic representation of the regional BMP footprint is presented in Attachment F. This regional BMP was modeled in SBPAT using the following design parameters and assumptions:

- Approximate Footprint Area: 93,000 sq ft
- Drainage Area: 58 acres
- Design Storm Intensity: 0.06 in/hr
- Treatment Flow Rate: 1.6 cfs
- Equalization Volume[8]: 270,000 cu ft
- Hydraulic Residence Time: 24 hrs
- Infiltration Rate: [no infiltration modeled]
- Depth: 8 ft
- Treatment Assumption: Concentration[9] and volume reduction

4.10.2- Lemon Creek Infiltration Basin

An infiltration basin project opportunity was identified in open space adjacent to North Lemon Avenue. A schematic representation of the regional BMP footprint is presented in Attachment F. This proposed facility was modeled as an infiltration basin in SBPAT using the following design parameters and assumptions:

- Approximate Footprint Area: 48,000 sq ft
- Drainage Area: 104 acres
- Water Quality Design Volume: 53,000 cu ft
- Design Storm: 0.3 in
- Infiltration Rate[10]: 0.30 in/hr
- Depth: 1.3 ft[11]
- Treatment Assumption: Volume reduction

---

[8] The equalization volume is the total volume required to attenuate peak flows after pretreatment occurs and before entering the SSF wetland.

[9] Subsurface flow wetlands are not well represented by BMP categories in the International BMP Database, which is used as the basis for SBPAT's BMP performance statistics. Therefore, a percent removal of 90 percent (1 log removal) was conservatively estimated for fecal coliform, consistent with methodologies documented in Geosyntec's Combined Load Reduction Plans from the San Diego region (which can be found here: www.sbpat.net/example.html). FC based on review of various SSF wetland studies

[10] Infiltration rate extracted from Los Angeles County Department of Public Works Soil Types dataset for the footprint area (Los Angeles County DPW, 2004b).

[11] Infiltration basin depth limited by infiltration rate and 48 hour drawdown limit for vector control.

4.10.3- Snow Creek 1 Subsurface Flow Wetland

A subsurface flow wetland project opportunity was identified north of the intersection of Grand Ave. and Snow Creek Dr. in the eastern portion of the WMA. A schematic representation of the regional BMP footprint is presented in Attachment F. This regional BMP was modeled in SBPAT using the following design parameters and assumptions:

- Approximate Footprint Area: 110,000 sq ft
- Drainage Area: 38 acres
- Design Storm Intensity: 0.11 in/hr
- Treatment Flow Rate: 1.8 cfs
- Equalization Volume: 310,000 cu ft
- Hydraulic Residence Time: 24 hrs
- Infiltration rate: [no infiltration modeled]
- Depth: 8 ft
- Treatment Assumption: Concentration and volume reduction

4.10.4- Snow Creek 2 Subsurface Infiltration System

A subsurface infiltration project opportunity was identified at the baseball field in Snow Creek Park. A schematic representation of the regional BMP footprint is presented in Attachment F. The water quality design volume of this subsurface infiltration facility was modeled as an infiltration basin in SBPAT using the following design parameters and assumptions:

- Approximate Footprint Area: 130,000 sq ft
- Drainage Area: 137 acres
- Water Quality Design Volume: 190,000 cu ft
- Design Storm: 0.9 in
- Infiltration Rate[12]: 0.77 in/hr
- Depth: 2 ft[13]
- Treatment Assumption: Volume reduction

4.11- Non-Modeled Non-Structural BMPs

A range of load reductions derived from non-modeled non-structural BMPs were assumed based on Geosyntec discussion with Regional Board staff during an RAA meeting on April 9, 2014. A total of 8% of the baseline fecal coliform load was assumed to be removed for the average load reduction scenario, and a range of 5% to 10% was assumed for the "low" and "high" load reduction scenarios, respectively. These non-structural BMPs will include the following program enhancements (i.e., beyond the Permit minimum), with an emphasis on those BMPs that most effectively target urban stormwater bacteria sources:

[12] Infiltration rate extracted from Los Angeles County Department of Public Works Soil Types dataset for the footprint area (Los Angeles County DPW, 2004b).

[13] BMP depth is based on approximate capture of the 85th percentile, 24 hour storm event. Alternatively, equivalent load reduction could be achieved by a larger depth and smaller area, as long as total volume is maintained.

- enhanced street sweeping,
- enhanced catch basin and stormdrain cleaning,
- enhanced commercial and food outlet inspection,
- enhanced pet waste controls,
- enhanced education and outreach,
- septic inspection/enforcement, and
- enhanced Illicit Discharge Detection Elimination (IDDE) efforts (including microbial source tracking to identify inputs of human fecal contamination into the MS4).

4.12- Final Milestone Load Reductions

The following tables present individual and summed BMP load reductions for fecal coliform for the San Jose Creek and Walnut Creek Wash drainage areas as a percentage of the baseline loads for the 90th percentile year. Bacteria load reduction results (Tables 4-9 and 4-10) are shown for the final wet weather bacteria TMDL compliance date of 2024 (based on an assumed compliance schedule of 10 years from the WMP submittal date), modeled using rainfall data from the 90th percentile year (1993). Average (mean) load reduction results are shown, as well as the interquartile ranges (25th to 75th percentiles, to reflect the Monte Carlo-derived variability of these model output. A total BMP load reduction that exceeds the TLR indicates that reasonable assurance (of meeting the Permit limits) has been demonstrated for that drainage area.

Lead load reductions are not quantified here since target load reductions were determined to be zero, however lead loads will be reduced considerably through implementation of the proposed non-structural and structural BMPs.

Table 4-9

Fecal Coliform Load Reductions as a Percentage of Total Baseline Load for the San Jose Creek Drainage Area for the 90th Percentile Year

BMP Program	Average	Low (25th %ile)*	High (75th %ile)*
Non-Structural BMPs			
LID Ordinance	0.01%	0.01%	0.02%
Other non-modeled	8%	5%	10%
Regional BMPs			
Butterfield (RBMP_01)	0.9%	0.6%	1.0%
Lemon Creek (RBMP_02)	0.3%	0.3%	0.4%
Snow Creek 1 (RBMP_03)	0.7%	0.4%	0.8%
Snow Creek 2 (RBMP_04)	1.3%	0.9%	1.3%
Distributed BMPs			
Green Streets	4.4%	3.4%	5.9%
Target Load Reduction	**19%**		
Total BMP Load Reduction	**16%**	**11%**	**20%**

*All percentages shown are percentages of the average baseline load

Table 4-10

Fecal Coliform Load Reductions as a Percentage of Total Baseline Load for the Walnut Creek Wash Drainage Area for the 90th Percentile Year			
BMP Program	**Average**	**Low (25th %ile)***	**High (75th %ile)***
Non-Structural BMPs			
LID Ordinance	0.02%	0.01%	0.02%
Other non-modeled	8%	5%	10%
Distributed BMPs			
Green Streets	18.5%	15.1%	23.1%
Target Load Reduction		**32%**	
Total BMP Load Reduction	**27%**	**20%**	**33%**

*All percentages shown are percentages of the average baseline load

4.13- Interim Milestones

Fecal coliform bacteria is a Category 2 pollutant; therefore, a compliance schedule and interim milestones must be developed in the WMP. An interim milestone date was set as the end of the Permit term, or December 2017. The interim target for this date is assumed to be the estimated load reduction resulting from the BMPs that will be implemented by that date based on the City's proposed phasing of BMPs.

Table 4-11 identifies the proposed BMP implementation schedule. The resulting bacteria load reductions for the interim and final milestones are presented in Figures 4-14 and 4-15 for the San Jose Creek and Walnut Creek Wash drainage areas, respectively.

4.14- Conditions for RAA Revision

As part of the WMP adaptive management process, as outfall and/or receiving water data specific to the Walnut WMA are accumulated, the RAA models will be recalibrated and/or validated, and the RAA will be updated as appropriate. This has the potential to result in modification of the proposed suite of structural and non-structural BMPs. Similarly, if the applicable recreational uses or bacteria objectives change, then relevant modeling assumptions and/or TLRs, and the resulting suite of structural and non-structural BMPs, will be adjusted accordingly.

4.15- Reasonable Assurance Demonstration

Lead TLRs were found to be zero for both drainage areas of the WMA, therefore new BMPs were not needed to demonstrate reasonable assurance of compliance with the applicable lead WQBEL. For bacteria in San Jose Creek and Walnut Creek Wash, total estimated BMP load reductions, using 75th percentile values[14], meet or exceed the TLR. Therefore, reasonable assurance has been demonstrated for both pollutants for both water bodies based on the proposed suite of non-structural and structural BMPs for the Walnut WMA.

[14] In the future, through the adaptive management process, as the RAA models are revisited, different load reduction output statistics may be used to demonstrate compliance; for example, as compliance deadlines approach, the City's risk tolerance may narrow and therefore BMPs may be added to increase the average load reductions above the TLRs (whereas currently only the 75th percentile load reductions exceed the TLRs).

5.0- Proposed WMP Implementation Plan

The City of Walnut has developed an approach for complying with the MS4 Permit water quality requirements that includes a combination of Source Control BMPs and Structural BMPs in coordination with the MCMs outlined in section 3.0 of this document. The City's proposed BMP plan has been confirmed through the RAA process to be effective in reducing the modeled pollutant loads to the allowable levels established by applicable TMDLs and the Basin Plan. Source control BMPs proposed by the City include policies, programs and ordnances that support practices that improve or prevent additional pollution from being deposited into the local rivers and creeks. A majority of the pollutant reductions will come from the proposed structural BMP plan.

The City's planned structural BMPS include Regional and Local approaches. The combination of structural BMPs has been formulated to reach the water quality goals established by the Basin Plan and applicable TMDLs through the treatment of wet weather runoff originating from the City.

5.1- MCM Implementation

The City has proposed the implement an enhanced MCM program that will aid in the protection and improvement of water quality in the City. Much of the MCM program is prescribed by the MS4 Permit, but the City has elected to focus additional resources in some areas. Table 5-1 highlights the enhancements to the MCM program.

Table 5-1

MCM Program Enhancements	
Public Information and Participation Program	• Storm water education available at community events • Focused education materials provided to key businesses for distribution to public
Commercial Tracking and Inspections	• Random commercial site inspections of critical potential sources
Streets, Roads and parking Facilities Maintenance	• Streets are swept bi-monthly
Landscape, Park, and Recreational Facilities Management	• Installation of Pet waste stations

5.2- Regional BMPs

The City has identified four potential regional BMPs to be located at existing parks modeled as sub-surface wetlands. The proposed regional BMPs will be complimentary to existing park uses after construction. As described in previous sections, no funding source for the design and construction of these BMPs has been identified. The City will continue to study potential funding opportunities for these projects during the duration of the Permit. Should a regional funding source be established, the project implementation schedule for these BMPs will be updated during the adaptive management process.

5.3- Local BMPs

In coordination with the regional BMPS, the City has developed a plan for local BMPs that has been demonstrated in the RAA portion of this document to provide adequate treatment for the City's storm water. As identified in the Section 4.9, the RAA calls for Green Streets BMPs to be implemented on a scale that covers a specified area summarized in Table 5-2. Bio filtration and bio retention BMPs will be utilized in the local BMP program, but other localized BMPs may be considered in the future.

Table 5-2

Green Streets BMPs	
San Jose Creek Watershed	
Land Use	**Acreage Treated by BMPs**
Residential	374
Commercial	23
Walnut Creek Wash	
Residential	30

Implementation of the local BMP program will be dependent on the results of the IMP. The monitoring results will help establish where the greatest need is within the City. If the local BMPs are necessitated through the results of the IMP, the City will initiate an annual CIP program over the remaining life of the permit to ensure the BMPs are cost feasible and contribute to pollutant load reductions. This stepped approach will enable the City to implement the BMPs with the most effective approach.

Pending the results of the IMP the City has established a planned implementation schedule. In an effort to maximize the programs initial impact, the City will review at least two years of monitoring data from the integrated monitoring plan to prioritize the potential Green Streets Project sites. Following the development of the prioritized projects schedule the City will begin design and construction based on the following schedule (Table 5-3).

Table 5-3

City of Walnut Green Streets Interim Implementation Schedule		
Task	Design Completion Date	Construction Completion Date
Project No. 1	December 31, 2018	December 31, 2019
Project No. 2	December 31, 2019	December 31, 2020
Project No. 3	December 31, 2020	December 31, 2021
Project No. 4	December 31, 2021	December 31, 2022
Project No. 5	December 31, 2022	December 31, 2023
Project No. 6	December 31, 2023	December 31, 2024

5.4- Dry Weather Flow Elimination Program

The City of Walnut is proposing to eliminate manmade dry weather discharges to prevent exceedances in the receiving waters. The City will coordinate this program with the IMP and wet weather BMP program to maximize efficacy of available resources.

5.4.1- Dry Weather Water Quality Considerations

As outlined in Section 2.0 "Water Quality Priorities" the City is subject to a dry weather WAL for Category 1 pollutant Selenium. The source of selenium in the watershed is suspected to be natural. The man made dry weather flows originating from residential land uses are not expected to be a source of selenium with in the City.

Bacteria will be regarded as the primary Category 2 pollutant receiving focus during dry weather conditions. To reach the WQBEL established for bacteria the City proposes to utilize the dry weather source elimination program outline in this section. Eliminating all dry weather flows will also carry over to meet WQBELs for all of the other established Category 2 pollutants.

5.4.2- Dry Weather Flow Elimination Program Implementation

The IMP includes a dry weather flow source investigation program that will include water quality testing and field source investigations. The City will utilize City staff and contractors to assess the sources of dry weather flows. Additionally, City field staff will be utilized to identify upstream dry weather flows within the City. Flows identified in the gutter, day lighted channel connections and a city outfall will be tracked during the first two years of the WMP implementation.

All the available data will be gathered and analyzed to best determine how to address the identified flows. The City of Walnut will utilize education, legal jurisdiction and BMP programs to eliminate dry weather flows. Table 5-4 highlights how the City will address the anticipated dry weather flows once a source is identified.

Table 5-4

Dry Weather Flow Elimination Program	
Over Irrigation	Illicit Discharge program / Education
Pool Draining	Illicit Discharge program / Education
Driveway/Sidewalk Walking	Illicit Discharge program / Education
Vehicle Washing	Education
Commercial Discharge	Illicit Discharge program / Education

Land use within the City of Walnut is primarily single family residential development. Dry weather flows are anticipated to be relatively small in volume and inconsistent in frequency. Dry weather flows within the City may also include conditionally exempt discharges. Should a flow be determined conditionally exempt or of an unidentifiable manmade source the City may consider structural BMPs to mitigate the dry weather flow. These considerations will also be included in the prioritization of the Green Streets Projects to address wet weather conditions.

Natural spring flows are known to exist within the City's two soft bottom streams. Separating natural spring flows from man-made discharges will be a formidable task. The City will rely on the IMP results to confirm the water quality of dry weather flows. Additionally, the City will utilize staff to inspect storm drain connections to the streams for flows.

5.4.3- Implementation Schedule

The source tracking portion of program will be partially implemented upon the approval of the WMP. The remainder of the source tracking will be implemented with the dry weather source assessment conducted under the IMP. The City will take action on easily identified dry weather sources following identification. The more difficult sources to identify will be address later on in the program once a better understanding of the dry weather discharges form the city has been established. The following schedule highlights the interim implementation schedule (Table 5-5):

Table 5-5

Dry Weather Flow Elimination Program Implementation Schedule	
Task	**Start Date**
Develop Source Tracking Program	June 1, 2015
Field Staff Training	June 30, 2015
Establish Data Gathering Procedures	June 1, 2015
Coordinate IMP Dry weather flow Data	30 days following start of dry weather monitoring
Eliminate Identified Dry Weather Flow Sources	Ongoing during dry seasons starting 2015
Establish Potential Structural BMP Locations	Include in considerations for 2019 Green Streets

6.0- Interim and Final Compliance Schedule

The City of Walnut is subject to the interim TMDL compliance schedule established by Regional Board Resolution R13-004. The MS4 Permit requirements the City develop a compliance schedule for all categories of pollutants as part of the WMP. Source control BMPs will begin implementation during the remaining term of the MS4 Permit. The planning and cost required for the implementation of structural BMPs pushes actual implementation of structural water treatment options farther into and beyond the current MS4 Permit's term.

Implementing a program of this size and cost requires that the City fully understand the nature of storm water quality within the City's boundaries. The City has proposed that data gathering and source investigations take place during the first two years of the program. Following that period the City plans to begin scheduling design and construction of phased projects that will ensure the best application of available resources. The funding need that this program represents is also a considerable encumbrance that the City has been required to assume. Establishing and funding this program and its subsequent projects is a major task that will take time and planning. Currently there is no substantial funding source that has been identified to aid the City in implementing this program. The City holds water quality in high regard. While the program demands are great, the City also recognizes that impacts on the watershed need to be address in a timely fashion. In an effort to balance these demands, the City is proposing a 10 year compliance term associated with the proposed BMP implementation schedule.

Table 4-8 outlines the City's proposed BMP implementation schedule. Table 5-6 outline the proposed compliance schedules for all TMDL and 303(d) listed pollutants that the City is currently subject to.

Table 5-6

Compliance Schedule						
Selenium Waste Load Allocation (5µg/L) Compliance Schedule – Dry Weather TMDL						
Watershed	**2017**	[redacted]	**2020**	[redacted]	**2023**	[redacted]
San Jose Creek Reach 1	30%		70%		100%	
Lead Waste Load Allocation (81.34µg/L) Compliance Schedule – Wet Weather TMDL						
City of Walnut	**2017**	**2020**	[redacted]	**2023**	[redacted]	**2026**
	10%	35%		65%		100%
Fecal Coliform WQBEL Compliance Schedule						
Watershed	**2015**	**2017**	**2019**	**2021**	**2023**	**2025**
San Jose Creek Reach 1	-	5%	10%	20%	40%	100%
Walnut Creek Wash	-	5%	10%	20%	40%	100%
pH WQBEL Compliance Schedule						
City of Walnut	**2015**	**2017**	**2019**	**2021**	**2023**	**2025**
	-	5%	10%	20%	40%	100%
Total Dissolved Solids WQBEL Compliance Schedule						
City of Walnut	**2015**	**2017**	**2019**	**2021**	**2023**	**2025**
	-	5%	10%	20%	40%	100%
Toxicity WQBEL Compliance Schedule						
City of Walnut	**2015**	**2017**	**2019**	**2021**	**2023**	**2025**
	-	5%	10%	20%	40%	100%
Cyanide WQBEL Compliance Schedule						
City of Walnut	**2015**	**2017**	**2019**	**2021**	**2023**	**2025**
	-	5%	10%	20%	40%	100%
Benthic- Macroinvertebrates WQBEL Compliance Schedule						
City of Walnut	**2015**	**2017**	**2019**	**2021**	**2023**	**2025**
	-	5%	10%	20%	40%	100%

7.0- Adaptive Management Process

The City of Walnut will utilize the MS4 Permit required adaptive management process to review and potentially modify the WMP in an effort to improve the effectiveness of the plan. The adaptive management process will take place every two years from the date of approval by the Regional Water Quality Control Board. The review process of the plan will include consideration of the following items:

- Progress toward achieving interim and/or final water quality-based effluent limitations and/or receiving water limitations in Part VI.E and Attachment L through R, according to established compliance schedules.
- Progress toward achieving improved water quality in MS4 discharges and achieving receiving water limitations through implementation of the watershed control measures based on an evaluation of outfall-based monitoring data and receiving water monitoring data.
- Achievement of interim milestones.
- Re-evaluation of water quality priorities identified for the WMA based on more recent water quality data for discharges from the MS4 and the receiving water(s) and a reassessment of sources of pollutants in MS4 discharges.
- Availability of new information and data from sources other than the monitoring program with in the WMA that informs the effectiveness of the actions implemented by the WMP.
- Regional Water Board recommendations.
- Recommendations for modifications to the Watershed Management Program solicited through a public participation process.

The findings of the adaptive management review process can result in modifications to the WMP including changes to compliance deadlines, interim milestones necessary to improve the effectiveness of the program. Modifications to compliance deadlines established by TMDLs will not be allowed through the adaptive management process. Proposed modifications to the WMP shall be reported by the City of Walnut in the Annual Report. Proposed modifications identified through the adaptive management process shall be implemented upon approval by the Regional Board Executive Officer within 60 days of their submittal if the Regional Board Executive has not expressed any objections to the modifications.

8.0- References

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Los Angeles County Department of Public Works, 2010b. Los Angeles County Watershed Model Configuration and Calibration-Part II: Water Quality. Submitted by Tetra Tech, Inc. August 6, 2010

SCCWRP. 2007. Technical Report 510 Sources, Patterns, and Mechanisms of Storm Water Pollutant Loading from Watersheds and Land Uses of the Greater Los Angeles Area, California, USA. Written by E.D. Stien, L.L. Tiefenthaler, and K.C. Schiff. March 2007.

Attachment A

City of Walnut

Notice of Intent

P.O. Box 682, Walnut, CA 91788-0682
21201 La Puente Road
Walnut, CA 91789-2018
Telephone (909) 595-7543
FAX (909) 595-6095
www.ci.walnut.ca.us

CITY OF WALNUT

June 26, 2013

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Regional Board Staff:

Enclosed please find the Notice of Intent (NOI) for the City of Walnut required as part of the new National Pollution Discharge Elimination System Municipal Separate Storm Sewer Systems Permit. As stated in the NOI, the City of Walnut will be developing a Watershed Management Plan and associated Integrated Monitoring Plan.

Please do not hesitate to contact me should you require any additional information. Thank you in advance for your time and assistance.

Sincerely,

Alicia Jensen

Alicia Jensen
Senior Management Analyst
City of Walnut
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Notice of Intent

City of Walnut

Watershed Management Plan

Submitted to:

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Submitted by:

The City of Walnut
21201 La Puente Road
Walnut, CA 91789

June 28, 2013

Notice of Intent to Develop a Watershed Management Plan and Integrated Monitoring Plan
The City of Walnut hereby notifies the Los Angeles Regional Water Quality Control Board (LARWQCB) of the City's intent to proceed with the development of a Watershed Management Plan (WMP). Per Order No. R-2012-0175, NPDES Permit No. CAS 004001, Section VI.C.4.b.i. The City of Walnut will develop a Draft WMP and submit the plan for the Regional Board's review by June 28, 2014. Draft versions of the Low Impact Development Ordinance and Green Streets Policy are included in Appendix A and B. As required in Section VI.C.7 of NPDES Permit No. CAS 004001, the City will develop and submit an Integrated Monitoring Plan (IMP) in conjunction with the WMP.

Total Maximum Daily Loads (TMDL) & Water Quality Based Effluent Limitations (WQBEL)
In accordance with Section VI.C.4.b.ii of NPDES Permit CAS004001, the jurisdictional area of the City of Walnut discharges to tributaries subject to the TMDLs listed in Table A. Currently, the City is not subject to any interim or final Water Quality Based Effluent Limitations (WQBELs), however, the City will continue its existing programs and Minimum Control Measures until the WMP is approved and implemented.

Table A TMDLs Applicable to the City of Walnut

TMDL	Resolution Number	Effective Date	EPA Approval Date	Water Body	Impairment
San Gabriel River and Impaired Tributaries Metals and Selenium	2006-014	July 13, 2006	TBD	San Jose Creek	Dry Weather WLA for Selenium*

**As noted at the Board's June 6, 2013, LA Basin Plan Public Hearing, Walnut objects to the inclusion of the San Gabriel River Metals TMDL in the LA Basin Plan amendment since Selenium was removed as a TMDL on the USEPA's 2010 303(d) list.*

City Contact Information

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Attachment A

Draft LID Ordinance
City of Walnut

DRAFT LID ORDINANCE

ORDINANCE NO._____

AN ORDINANCE AMENDING [MUNICIPAL CODE SECTION REFERENCE(S)] OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING [NAME OF POST-CONSTRUCITON REQUIREMENTS – LIKELY "SUSMP" FOR MOST MUNICIPALITIES] REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

CITY COUNCIL OF THE CITY OF WALNUT HEREBY ORDAINS THE FOLLOWING:

(A) The City of Walnut is authorized by Article XI, §5 and §7 of the State Constitution to exercise the police power of the State by adopting regulations to promote public health, public safety and general prosperity.

(B) The City of Walnut has authority under the California Water Code to adopt and enforce ordinances imposing conditions, restrictions and limitations with respect to any activity which might degrade the quality of waters of the State.

(C) The city is a permittee under the "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," issued by the California Regional Water Quality Control Board--Los Angeles Region," (Order No. R4-2012-0175) which also serves as an NPDES Permit under the Federal Clean Water Act (NPDES No. CAS004001), as well as Waste Discharge Requirements under California law (the "Municipal NPDES permit"). In order to participate in a Watershed Management Program and/or Enhanced Watershed Management Program, the Municipal NPDES permit requires permittees to develop and implement a LID Ordinance.

(D) The City of Walnut has applied an integrated approach to incorporate wastewater, stormwater and runoff, and recycled water management into a single strategy through its (_____) Plan.

(E) The City of Walnut is committed to a stormwater management program that protects water quality and water supply by employing watershed-based approaches that balance environmental, social, and economic considerations.

(F) It is the intent of the City of Walnut to expand the applicability of the existing Standard Urban Stormwater Mitigation Plan (SUSMP) requirements by providing stormwater and rainwater LID strategies for Development and Redevelopment projects as defined under "Applicability."

[MUNICIPAL CODE SECTION REFERENCE(S)] of the [CITY NAME] Municipal Code is amended in its entirety to read as follows:

Definitions.

Except as specifically provided herein, any term used in this [SECTION REFERENCE] shall be defined as that term in the current Municipal NPDES permit, or if it is not specifically defined in either the Municipal NPDES permit, then as such term is defined in the Federal Clean Water Act, as amended, and/or the regulations promulgated thereunder. If the definition of any term contained in this chapter conflicts with the definition of the same term in the current Municipal NPDES permit, then the definition contained in the Municipal NPDES permit shall govern. The following words and phrases shall have the following meanings when used in this chapter:

Automotive Service Facility means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. For inspection purposes, Permittees need not inspect facilities with SIC codes 5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to stormwater (Source: Order No. R4-2012-0175).

Basin Plan means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments (Source: Order No. R4-2012-0175).

Best Management Practice (BMP) means practices or physical devices or systems designed to prevent or reduce pollutant loading from stormwater or non-stormwater discharges to receiving waters, or designed to reduce the volume of stormwater or non-stormwater discharged to the receiving water (Source: Order No. R4-2012-0175).

Biofiltration means a LID BMP that reduces stormwater pollutant discharges by intercepting rainfall on vegetative canopy, and through incidental infiltration and/or evapotranspiration, and filtration. Incidental infiltration is an important factor in achieving the required pollutant load reduction. Therefore, the term "biofiltration" as used in this Ordinance is defined to include only systems designed to facilitate incidental infiltration or achieve the equivalent pollutant reduction as biofiltration BMPs with an underdrain (subject to approval by the Regional Board's Executive Officer). Biofiltration BMPs include bioretention systems with an underdrain and bioswales (Modified from: Order No. R4-2012-0175).

Bioretention means a LID BMP that reduces stormwater runoff by intercepting rainfall on vegetative canopy, and through evapotranspiration and infiltration. The bioretention system typically includes a minimum 2-foot top layer of a specified soil and compost mixture underlain by a gravel-filled temporary storage pit dug into the in-situ soil. As defined in the Municipal NPDES permit, a bioretention BMP may be designed with an overflow drain, but may not include an underdrain. When a bioretention BMP is designed or constructed with an underdrain it is regulated by the Municipal NPDES permit as biofiltration (Modified from: Order No. R4-2012-0175).

Bioswale means a LID BMP consisting of a shallow channel lined with grass or other dense, low-growing vegetation. Bioswales are designed to collect stormwater runoff and to achieve a uniform sheet flow through the dense vegetation for a period of several minutes (Source: Order No. R4-2012-0175).

City means the City of Walnut.

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted in 1972, by Public Law 92-500, and amended by the Water Quality Act of 1987. The Clean Water Act prohibits the discharge of pollutants to Waters of the United States unless the discharge is in accordance with an NPDES permit.

Commercial Malls means any development on private land comprised of one or more buildings forming a complex of stores which sells various merchandise, with interconnecting walkways enabling visitors to easily walk from store to store, along with parking area(s). A commercial mall includes, but is not limited to: mini-malls, strip malls, other retail complexes, and enclosed shopping malls or shopping centers (Source: Order No. R4-2012-0175).

Construction Activity means any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that result in land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain the original line and grade, hydraulic capacity, or original purposes of the facility. See "Routine Maintenance" definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage by the State of California General Permit for Storm Water Discharges Associated with Industrial Activities or for Stormwater Discharges Associated with Construction Activities is required if more than one acre is disturbed or the activities are part of a larger plan (Source: Order No. R4-2012-0175).

Control means to minimize, reduce or eliminate by technological, legal, contractual, or other means, the discharge of pollutants from an activity or activities (Source: Order No. R4-2012-0175).

Development means construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail, and other non-residential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Directly Adjacent means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area (Source: Order No. R4-2012-0175).

Discharge means any release, spill, leak, pump, flow, escape, dumping, or disposal of any liquid, semi-solid, or solid substance.

Disturbed Area means an area that is altered as a result of clearing, grading, and/or excavation (Source: Order No. R4-2012-0175).

Flow-through BMPs means modular, vault type "high flow biotreatment" devices contained within an impervious vault with an underdrain or designed with an impervious liner and an underdrain (Modified from: Order No. R4-2012-0175).

General Construction Activities Storm Water Permit (GCASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from construction activities under certain conditions.

General Industrial Activities Storm Water Permit (GIASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from certain industrial activities under certain conditions.

Green Roof means a LID BMP using planter boxes and vegetation to intercept rainfall on the roof surface. Rainfall is intercepted by vegetation leaves and through evapotranspiration. Green roofs may be designed as either a bioretention BMP or as a biofiltration BMP. To receive credit as a bioretention BMP, the green roof system planting medium shall be of sufficient depth to provide capacity within the pore space volume to contain the design storm depth and may not be designed or constructed with an underdrain (Source: Order No. R4-2012-0175).

Hazardous Material(s) means any material(s) defined as hazardous by Division 20, Chapter 6.95 of the California Health and Safety Code.

Hillside means a property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is 25% or greater and where grading contemplates cut or fill slopes (Source: Order No. R4-2012-0175).

Impervious Surface means any man-made or modified surface that prevents or significantly reduces the entry of water into the underlying soil, resulting in runoff from the surface in greater quantities and/or at an increased rate, when compared to natural conditions prior to development. Examples of places that commonly exhibit impervious surfaces include parking lots, driveways, roadways, storage areas, and rooftops. The imperviousness of these areas commonly results from paving, compacted gravel, compacted earth, and oiled earth.

Industrial Park means land development that is set aside for industrial development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry (Source: Order No. R4-2012-0175).

Infiltration BMP means a LID BMP that reduces stormwater runoff by capturing and infiltrating the runoff into in-situ soils or amended onsite soils. Examples of infiltration BMPs include infiltration basins, dry wells, and pervious pavement (Source: Order No. R4-2012-0175).

LID means Low Impact Development. LID consists of building and landscape features designed to retain or filter stormwater runoff (Source: Order No. R4-2012-0175).

MS4 means Municipal Separate Storm Sewer System (MS4). The MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying stormwater;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

(40 CFR § 122.26(b)(8)) (Source: Order No. R4-2012-0175)

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA §307, 402, 318, and 405. The term includes an "approved program" (Source: Order No. R4-2012-0175).

Natural Drainage System means a drainage system that has not been improved (e.g., channelized or armored). The clearing or dredging of a natural drainage system does not cause the system to be classified as an improved drainage system (Source: Order No. R4-2012-0175).

New Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision (Source: Order No. R4-2012-0175).

Non-Stormwater Discharge means any discharge to a municipal storm drain system that is not composed entirely of stormwater (Source: Order No. R4-2012-0175).

Parking Lot means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use, with a lot size of 5,000 square feet or more of surface area, or with 25 or more parking spaces (Source: Order No. R4-2012-0175).

Person means any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, state, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine and the singular shall include the plural where indicated by the context.

Planning Priority Projects means development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution, prior to completion of the project(s) (Modified from: Order No. R4-2012-0175).

Pollutant means any "pollutant" defined in Section 502(6) of the Federal Clean Water Act or incorporated into the California Water Code Sec. 13373. Pollutants may include, but are not limited to the following:

(1) Commercial and industrial waste (such as fuels, solvents, detergents, plastic pellets, hazardous substances, fertilizers, pesticides, slag, ash, and sludge).

(2) Metals (such as cadmium, lead, zinc, copper, silver, nickel, chromium, and non- metals such as phosphorus and arsenic).

(3) Petroleum hydrocarbons (such as fuels, lubricants, surfactants, waste oils, solvents, coolants, and grease).

(4) Excessive eroded soil, sediment, and particulate materials in amounts that may adversely affect the beneficial use of the receiving waters, flora, or fauna of the State.

(5) Animal wastes (such as discharge from confinement facilities, kennels, pens, recreational facilities, stables, and show facilities).

(6) Substances having characteristics such as pH less than 6 or greater than 9, or unusual coloration or turbidity, or excessive levels of fecal coliform, or fecal streptococcus, or enterococcus.

Project means all developmen , redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Pub. Resources Code §21065) (Source: Order No. R4-2012-0175).

Rainfall Harvest and Use means a LID BMP system designed to capture runoff, typically from a roof but can also include runoff capture from elsewhere within the site, and to provide for temporary storage until the harvested water can be used for irrigation or non-potable uses. The harvested water may also be used for potable water uses if the system includes disinfection treatment and is approved for such use by the local building department (Source: Order No. R4-2012-0175).

Receiving Water means "water of the United States" into which waste and/or pollutants are or may be discharged (Source: Order No. R4-2012-0175).

Redevelopment means land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of routine maintenance activity; and land disturbing activity related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Regional Board means the California Regional Water Quality Control Board, Los Angeles Region.

Restaurant means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812) (Source: Order No. R4-2012-0175).

Retail Gasoline Outlet means any facility engaged in selling gasoline and lubricating oils (Source: Order No. R4-2012-0175).

Routine Maintenance

Routine maintenance projects include, but are not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.
4. Update existing lines* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
5. Repair leaks

Routine maintenance does not include construction of new** lines or facilities resulting from compliance with applicable codes, standards and regulations.

* Update existing lines includes replacing existing lines with new materials or pipes.

** New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines (Source: Order No. R4-2012-0175).

Significant Ecological Areas (SEAs) means an area that is determined to possess an example of biotic resources that cumulatively represent biological diversity, for the purposes of protecting biotic diversity, as part of the Los Angeles County General Plan. Areas are designated as SEAs, if they possess one or more of the following criteria:

1. The habitat of rare, endangered, and threatened plant and animal species.
2. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis.
3. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind or are restricted in distribution in Los Angeles County.

4. Habitat that at some point in the life cycle of a species or group of species, serves as a concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or within Los Angeles County.
5. Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent an unusual variation in a population or community.
6. Areas important as game species habitat or as fisheries.
7. Areas that would provide for the preservation of relatively undisturbed examples of natural biotic communities in Los Angeles County.
8. Special areas (Source: Order No. R4-2012-0175).

Site means land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity (Source: Order No. R4-2012-0175).

Storm Drain System means any facilities or any part of those facilities, including streets, gutters, conduits, natural or artificial drains, channels, and watercourses that are used for the purpose of collecting, storing, transporting or disposing of stormwater and are located within the City of Walnut.

Storm Water or Stormwater means water that originates from atmospheric moisture (rain or snow) and that falls onto land, water, or other surfaces. Without any change in its meaning, this term may be spelled or written as one word or two separate words.

Stormwater Runoff means that part of precipitation (rainfall or snowmelt) which travels across a surface to the storm drain system or receiving waters.

SUSMP means the Los Angeles Countywide Standard Urban Stormwater Mitigation Plan. The SUSMP was required as part of the previous Municipal NPDES Permit (Order No. 01-182, NPDES No. CAS004001) and required plans that designate best management practices (BMPs) that must be used in specified categories of development projects.

Urban Runoff means surface water flow produced by storm and non-storm events. Non-storm events include flow from residential, commercial, or industrial activities involving the use of potable and non-potable water.

[MUNICIPAL CODE SECTION REFERENCE(S)] is amended to read as follows:

SEC. [X]. STORMWATER POLLUTION CONTROL MEASURES FOR DEVELOPMENT PLANNING AND CONSTRUCTION ACTIVITIES

(A) **Objective**. The provisions of this section contain requirements for construction activities and facility operations of Development and Redevelopment projects to comply with the current "Municipal NPDES permit," lessen the water quality impacts of development by using smart growth practices, and integrate LID design principles to mimic

predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use. LID shall be inclusive of SUSMP requirements.

(B) Scope. This Section contains requirements for stormwater pollution control measures in Development and Redevelopment projects and authorizes the City of Walnut to further define and adopt stormwater pollution control measures, develop LID principles and requirements, including but not limited to the objectives and specifications for integration of LID strategies, grant waivers from the requirements of the Standard Urban Stormwater Mitigation Plan, and collect funds for projects that are granted waivers. Except as otherwise provided herein, the City of Walnut shall administer, implement and enforce the provisions of this Section.

(C) Applicability. The following Development and Redevelopment projects, termed "Planning Priority Projects," shall comply with the requirements of [SECTION NUMBER]:

(1) All development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.

(2) Industrial parks 10,000 square feet or more of surface area.

(3) Commercial malls 10,000 square feet or more of surface area.

(4) Retail gasoline outlets with 5,000 square feet or more of surface area.

(5) Restaurants (Standard Industrial Classi ication (SIC) of 5812) with 5,000 square feet or more of surface area.

(6) Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.

(7) Streets and roads construction of 10,000 square feet or more of impervious surface area.

(8) Automotive service facilities (Standard Industrial Classification (SIC) of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.

(9) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:

a. Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and

b. Create 2,500 square feet or more of impervious surface area

(10) Single-family hillside homes.

(11) Redevelopment Projects

a. Land disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.

b. Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, the entire project must be mitigated.

c. Where Redevelopment results in an alteration of less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, only the alteration must be mitigated, and not the entire development.

d. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

e. Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

(D) **Effective Date.** The Planning and Land Development requirements contained in Section 7 of Order No. R4-2012-0175 shall become effective 90 days from the adoption of the Order (February 6, 2013). This includes Planning Priority Projects that are discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals within 90 days of adoption of the Order. Projects that have been deemed complete within 90 days of adoption of the Order are not subject to the requirements Section 7.

(E) **Stormwater Pollution Control Requirements.** The Site for every Planning Priority Project shall be designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention and/or rainfall harvest and use.

(1) A new single-family hillside home development shall include mitigation measures to:

a. Conserve natural areas;

b. Protect slopes and channels;

c. Provide storm drain system stenciling and signage;

d. Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability; and

e. Direct surface flow to vegetated areas before discharge, unless the diversion would result in slope instability.

(2) Street and road construction of 10,000 square feet or more of impervious surface shall follow USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets (December 2008 EPA-833-F-08-009) to the maximum extent practicable.

(3) The remainder of Planning Priority Projects shall prepare a LID Plan to comply with the following:

a. Retain stormwater runoff onsite for the Stormwater Quality Design Volume (SWQDv) defined as the runoff from:

i. The 85th percentile 24-hour runoff event as determined from the Los Angeles County 85th percentile precipitation isohyetal map; or

ii. The volume of runoff produced from a 0.75 inch, 24-hour rain event, whichever is greater.

b. Minimize hydromodification impacts to natural drainage systems as defined in the Municipal NPDES Permit. Hydromodification requirements are further specified in [NAME OF POST-CONSTRUCITON BMP HANDBOOK].

c. When, as determined by the City of Walnut, 100 percent onsite retention of the SWQDv is technically infeasible, partially or fully, the infeasibility shall be demonstrated in the submitted LID Plan. The technical infeasibility may result from conditions that may include, but are not limited to:

i. The infiltration rate of saturated in-situ soils is less than 0.3 inch per hour and it is not technically feasible to amend the in-situ soils to attain an infiltration rate necessary to achieve reliable performance of infiltration or bioretention BMPs in retaining the SWQDv onsite.

ii. Locations where seasonal high groundwater is within five to ten feet of surface grade;

iii. Locations within 100 feet of a groundwater well used for drinking water;

iv. Brownfield development sites or other locations where pollutant mobilization is a documented concern;

v. Locations with potential geotechnical hazards;

vi. Smart growth and infill or redevelopment locations where the density and/ or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.

d. If partial or complete onsite retention is technically infeasible, the project Site may biofiltrate 1.5 times the portion of the remaining SWQDv that is not reliably retained onsite. Biofiltration BMPs must adhere to the design specifications provided in the Municipal NPDES Permit.

i. Additional alternative compliance options such as offsite infiltration may be available to the project Site. The project Site should contact the City of Walnut to determine eligibility. Alternative compliance options are further specified in [NAME OF POST-CONSTRUCITON BMP HANDBOOK].

e. The remaining SWQDv that cannot be retained or biofiltered onsite must be treated onsite to reduce pollutant loading. BMPs must be selected and designed to meet pollutant-specific benchmarks as required per the Municipal NPDES Permit. Flow-through BMPs may be used to treat the remaining SWQDv and must be sized based on a rainfall intensity of:

i. 0.2 inches per hour, or
ii. The one year, one-hour rainfall intensity as determined from the most recent Los Angeles County isohyetal map, whichever is greater.

f. A Multi-Phased Project may comply with the standards and requirements of this section for all of its phases by: (a) designing a system acceptable to the City of Walnut to satisfy these standards and requirements for the entire Site during the first phase, and (b) implementing these standards and requirements for each phase of Development or Redevelopment of the Site during the first phase or prior to commencement of construction of a later phase, to the extent necessary to treat the stormwater from such later phase. For purposes of this section, "Multi-Phased Project" shall mean any Planning Priority Project implemented over more than one phase and the Site of a Multi-Phased Project shall include any land and water area designed and used to store, treat or manage stormwater runoff in connection with the Development or Redevelopment, including any tracts, lots, or parcels of real property, whether Developed or not, associated with, functionally connected to, or under common ownership or control with such Development or Redevelopment.

(F) **Validity.** If any provision of this Ordinance is found to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect remaining provisions of this Ordinance are declared to be severable.

(G) **Certification.** The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy.

APPROVED AND ADOPTED this __th day of _____, 20__.

_____

Mayor_____

ATTEST:

_____

Teresa De Dios, City Clerk

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF WALNUT)

I, Teresa De Dios, City Clerk of the City of Walnut, do hereby certify that the foregoing Ordinance _____ being:

AN ORDINANCE AMENDING [MUNICIPAL CODE SECTION REFERENCE(S)] OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING [NAME OF POST-CONSTRUCITON REQUIREMENTS – LIKELY "SUSMP" FOR MOST MUNICIPALITIES] REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

Said Ordinance was duly introduced at a regular meeting held on the __th day of _____, 20__, and was adopted and passed at a regular meeting of the City Council on the _____ day of _____, 20__ by the following vote, to wit:

AYES: COUNCILMEMBER(S):
NOES: COUNCILMEMBER(S):
ABSENT: COUNCILMEMBER(S):
ABSTAIN: COUNCILMEMBER(S):

ATTEST:

_____

Teresa De Dios, City Clerk

Attachment B

City of Walnut

LID Ordinance

ORDINANCE NO. 13-13

AN ORDINANCE AMENDING TITLE V, CHAPTER 21, OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING STANDARD URBAN STORM WATER MITIGATION PLAN REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

CITY COUNCIL OF THE CITY OF WALNUT HEREBY ORDAINS THE FOLLOWING:

(A) The City of Walnut is authorized by Article XI, §5 and §7 of the State Constitution to exercise the police power of the State by adopting regulations to promote public health, public safety and general prosperity.

(B) The City of Walnut has authority under the California Water Code to adopt and enforce ordinances imposing conditions, restrictions and limitations with respect to any activity which might degrade the quality of waters of the State.

(C) The city is a permittee under the "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," issued by the California Regional Water Quality Control Board--Los Angeles Region," (Order No. R4-2012-0175) which also serves as an NPDES Permit under the Federal Clean Water Act (NPDES No. CAS004001), as well as Waste Discharge Requirements under California law (the "Municipal NPDES permit"). In order to participate in a Watershed Management Program and/or Enhanced Watershed Management Program, the Municipal NPDES permit requires permittees to develop and implement a LID Ordinance.

(D) The City of Walnut has applied an integrated approach to incorporate wastewater, stormwater and runoff, and recycled water management into a single strategy through its Integrated Resources Plan.

(E) The City of Walnut is committed to a stormwater management program that protects water quality and water supply by employing watershed-based approaches that balance environmental, social, and economic considerations.

(F) It is the intent of the City of Walnut to expand the applicability of the existing Standard Urban Stormwater Mitigation Plan (SUSMP) requirements by providing stormwater and rainwater LID strategies for Development and Redevelopment projects as defined under "Applicability."

TITLE V PUBLIC WORKS, CHAPTER 21, ARTICLE III STORM WATER AND URBAN RUNOFF POLLUTION CONTROL, SECTION 21-61 PARAGRAPH C IS AMENDED IN ITS ENTIRETY TO READ AS FOLLOWS:

The City of Walnut is a permittee under the "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," issued by the California Regional Water Quality Control Board--Los Angeles Region," (Order No. R4-2012-0175) which also serves as an NPDES Permit under the Federal Clean Water Act (NPDES No. CAS004001), as well as Waste Discharge Requirements under California law (the "Municipal NPDES permit").

TITLE V PUBLIC WORKS, CHAPTER 21, ARTICLE III STORM WATER AND URBAN RUNOFF POLLUTION CONTROL, SECTION 21-63 DEFINITIONS OF THE CITY OF WALNUT MUNICIPAL CODE IS AMENDED IN ITS ENTIRETY TO READ AS FOLLOWS:

Definitions.

Except as specifically provided herein, any term used in this Section 21-63 shall be defined as that term in the current Municipal NPDES permit, or if it is not specifically defined in either the Municipal NPDES permit, then as such term is defined in the Federal Clean Water Act, as amended, and/or the regulations promulgated thereunder. If the definition of any term contained in this chapter conflicts with the definition of the same term in the current Municipal NPDES permit, then the definition contained in the Municipal NPDES permit shall govern. The following words and phrases shall have the following meanings when used in this chapter:

Automotive Service Facility means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. For inspection purposes, Permittees need not inspect facilities with SIC codes 5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to stormwater (Source: Order No. R4-2012-0175).

Basin Plan means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments (Source: Order No. R4-2012-0175).

Best Management Practice (BMP) means practices or physical devices or systems designed to prevent or reduce pollutant loading from stormwater or non-stormwater discharges to receiving waters, or designed to reduce the volume of stormwater or non-stormwater discharged to the receiving water (Source: Order No. R4-2012-0175).

Biofiltration means a LID BMP that reduces stormwater pollutant discharges by intercepting rainfall on vegetative canopy, and through incidental infiltration and/or evapotranspiration, and filtration. Incidental infiltration is an important factor in achieving the required pollutant load reduction. Therefore, the term "biofiltration" as used in this Ordinance is defined to include only systems designed to facilitate incidental infiltration or achieve the equivalent pollutant reduction as biofiltration BMPs with an underdrain (subject to approval by the Regional Board's Executive

Officer). Biofiltration BMPs include bioretention systems with an underdrain and bioswales (Modified from: Order No. R4-2012-0175).

Bioretention means a LID BMP that reduces stormwater runoff by intercepting rainfall on vegetative canopy, and through evapotranspiration and infiltration. The bioretention system typically includes a minimum 2-foot top layer of a specified soil and compost mixture underlain by a gravel-filled temporary storage pit dug into the in-situ soil. As defined in the Municipal NPDES permit, a bioretention BMP may be designed with an overflow drain, but may not include an underdrain. When a bioretention BMP is designed or constructed with an underdrain it is regulated by the Municipal NPDES permit as biofiltration (Modified from: Order No. R4-2012-0175).

Bioswale means a LID BMP consisting of a shallow channel lined with grass or other dense, low-growing vegetation. Bioswales are designed to collect stormwater runoff and to achieve a uniform sheet flow through the dense vegetation for a period of several minutes (Source: Order No. R4-2012-0175).

City means the City of Walnut.

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted in 1972, by Public Law 92-500, and amended by the Water Quality Act of 1987. The Clean Water Act prohibits the discharge of pollutants to Waters of the United States unless the discharge is in accordance with an NPDES permit.

Commercial Malls means any development on private land comprised of one or more buildings forming a complex of stores which sells various merchandise, with interconnecting walkways enabling visitors to easily walk from store to store, along with parking area(s). A commercial mall includes, but is not limited to: mini-malls, strip malls, other retail complexes, and enclosed shopping malls or shopping centers (Source: Order No. R4-2012-0175).

Construction Activity means any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that result in land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain the original line and grade, hydraulic capacity, or original purposes of the facility. See "Routine Maintenance" definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage by the State of California General Permit for Storm Water Discharges Associated with Industrial Activities or for Stormwater Discharges Associated with Construction Activities is required if more than one acre is disturbed or the activities are part of a larger plan (Source: Order No. R4-2012-0175).

Control means to minimize, reduce or eliminate by technological, legal, contractual, or other means, the discharge of pollutants from an activity or activities (Source: Order No. R4-2012-0175).

Development means construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail, and other non-residential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Directly Adjacent means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area (Source: Order No. R4-2012-0175).

Discharge means any release, spill, leak, pump, flow, escape, dumping, or disposal of any liquid, semi-solid, or solid substance.

Disturbed Area means an area that is altered as a result of clearing, grading, and/or excavation (Source: Order No. R4-2012-0175).

Flow-through BMPs means modular, vault type "high flow biotreatment" devices contained within an impervious vault with an underdrain or designed with an impervious liner and an underdrain (Modified from: Order No. R4-2012-0175).

General Construction Activities Storm Water Permit (GCASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from construction activities under certain conditions.

General Industrial Activities Storm Water Permit (GIASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from certain industrial activities under certain conditions.

Green Roof means a LID BMP using planter boxes and vegetation to intercept rainfall on the roof surface. Rainfall is intercepted by vegetation leaves and through evapotranspiration. Green roofs may be designed as either a bioretention BMP or as a biofiltration BMP. To receive credit as a bioretention BMP, the green roof system planting medium shall be of sufficient depth to provide capacity within the pore space volume to contain the design storm depth and may not be designed or constructed with an underdrain (Source: Order No. R4-2012-0175).

Hazardous Material(s) means any material(s) defined as hazardous by Division 20, Chapter 6.95 of the California Health and Safety Code.

Hillside means a property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is 25% or greater and where grading contemplates cut or fill slopes (Source: Order No. R4-2012-0175).

Impervious Surface means any man-made or modified surface that prevents or significantly reduces the entry of water into the underlying soil, resulting in runoff from the surface in greater quantities and/or at an increased rate, when compared to natural conditions prior to development. Examples of places that commonly exhibit impervious surfaces include parking lots, driveways, roadways, storage areas, and rooftops. The imperviousness of these areas commonly results from paving, compacted gravel, compacted earth, and oiled earth.

Industrial Park means land development that is set aside for industrial development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry (Source: Order No. R4-2012-0175).

Infiltration BMP means a LID BMP that reduces stormwater runoff by capturing and infiltrating the runoff into in-situ soils or amended onsite soils. Examples of infiltration BMPs include infiltration basins, dry wells, and pervious pavement (Source: Order No. R4-2012-0175).

LID means Low Impact Development. LID consists of building and landscape features designed to retain or filter stormwater runoff (Source: Order No. R4-2012-0175).

MS4 means Municipal Separate Storm Sewer System (MS4). The MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
(ii) Designed or used for collecting or conveying stormwater;
(iii) Which is not a combined sewer; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

(40 CFR § 122.26(b)(8)) (Source: Order No. R4-2012-0175)

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA §307, 402, 318, and 405. The term includes an "approved program" (Source: Order No. R4-2012-0175).

Natural Drainage System means a drainage system that has not been improved (e.g., channelized or armored). The clearing or dredging of a natural drainage system does not cause the system to be classified as an improved drainage system (Source: Order No. R4-2012-0175).

New Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision (Source: Order No. R4-2012-0175).

Non-Stormwater Discharge means any discharge to a municipal storm drain system that is not composed entirely of stormwater (Source: Order No. R4-2012-0175).

Parking Lot means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use, with a lot size of 5,000 square feet or more of surface area, or with 25 or more parking spaces (Source: Order No. R4-2012-0175).

Person means any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, state, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine and the singular shall include the plural where indicated by the context.

Planning Priority Projects means development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution, prior to completion of the project(s) (Modified from: Order No. R4-2012-0175).

Pollutant means any "pollutant" defined in Section 502(6) of the Federal Clean Water Act or incorporated into the California Water Code Sec. 13373. Pollutants may include, but are not limited to the following:

(1) Commercial and industrial waste (such as fuels, solvents, detergents, plastic pellets, hazardous substances, fertilizers, pesticides, slag, ash, and sludge).

(2) Metals (such as cadmium, lead, zinc, copper, silver, nickel, chromium, and non- metals such as phosphorus and arsenic).

(3) Petroleum hydrocarbons (such as fuels, lubricants, surfactants, waste oils, solvents, coolants, and grease).

(4) Excessive eroded soil, sediment, and particulate materials in amounts that may adversely affect the beneficial use of the receiving waters, flora, or fauna of the State.

(5) Animal wastes (such as discharge from confinement facilities, kennels, pens, recreational facilities, stables, and show facilities).

(6) Substances having characteristics such as pH less than 6 or greater than 9, or unusual coloration or turbidity, or excessive levels of fecal coliform, or fecal streptococcus, or enterococcus.

Project means all development, redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Pub. Resources Code §21065) (Source: Order No. R4-2012-0175).

Rainfall Harvest and Use means a LID BMP system designed to capture runoff, typically from a roof but can also include runoff capture from elsewhere within the site, and to provide for temporary storage until the harvested water can be used for irrigation or non-potable uses. The harvested water may also be used for potable water uses if the system includes disinfection treatment and is approved for such use by the local building department (Source: Order No. R4-2012-0175).

Receiving Water means "water of the United States" into which waste and/or pollutants are or may be discharged (Source: Order No. R4-2012-0175).

Redevelopment means land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of routine maintenance activity; and land disturbing activity related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Regional Board means the California Regional Water Quality Control Board, Los Angeles Region.

Restaurant means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812) (Source: Order No. R4-2012-0175).

Retail Gasoline Outlet means any facility engaged in selling gasoline and lubricating oils (Source: Order No. R4-2012-0175).

Routine Maintenance
Routine maintenance projects include, but are not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.
4. Update existing lines* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
5. Repair leaks

Routine maintenance does not include construction of new** lines or facilities resulting from compliance with applicable codes, standards and regulations.

* Update existing lines includes replacing existing lines with new materials or pipes.
** New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines (Source: Order No. R4-2012-0175).

Significant Ecological Areas (SEAs) means an area that is determined to possess an example of biotic resources that cumulatively represent biological diversity, for the purposes of protecting biotic diversity, as part of the Los Angeles County General Plan. Areas are designated as SEAs, if they possess one or more of the following criteria:

1. The habitat of rare, endangered, and threatened plant and animal species.
2. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis.
3. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind or are restricted in distribution in Los Angeles County.
4. Habitat that at some point in the life cycle of a species or group of species, serves as a concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or within Los Angeles County.
5. Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent an unusual variation in a population or community.
6. Areas important as game species habitat or as fisheries.
7. Areas that would provide for the preservation of relatively undisturbed examples of natural biotic communities in Los Angeles County.
8. Special areas (Source: Order No. R4-2012-0175).

Site means land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity (Source: Order No. R4-2012-0175).

Storm Drain System means any facilities or any part of those facilities, including streets, gutters, conduits, natural or artificial drains, channels, and watercourses that are used for the purpose of collecting, storing, transporting or disposing of stormwater and are located within the City of Walnut.

Storm Water or Stormwater means water that originates from atmospheric moisture (rain or snow) and that falls onto land, water, or other surfaces. Without any change in its meaning, this term may be spelled or written as one word or two separate words.

Stormwater Runoff means that part of precipitation (rainfall or snowmelt) which travels across a surface to the storm drain system or receiving waters.

SUSMP means the Los Angeles Countywide Standard Urban Stormwater Mitigation Plan. The SUSMP was required as part of the previous Municipal NPDES Permit (Order No. 01-182,

NPDES No. CAS004001) and required plans that designate best management practices (BMPs) that must be used in specified categories of development projects.

Urban Runoff means surface water flow produced by storm and non-storm events. Non-storm events include flow from residential, commercial, or industrial activities involving the use of potable and non-potable water.

CHAPTER 21 ARTICLE IV SECTION 21-80 IS AMENDED TO READ AS FOLLOWS: TITLE V PUBLIC WORKS, CHAPTER 21, ARTICLE IV SECTION 21-80 IS AMENDED IN ITS ENTIRETY TO READ AS FOLLOWS:

SEC. 21-80 STORMWATER POLLUTION CONTROL MEASURES FOR DEVELOPMENT PLANNING AND CONSTRUCTION ACTIVITIES

(A) **Objective.** The provisions of this section contain requirements for construction activities and facility operations of Development and Redevelopment projects to comply with the current "Municipal NPDES permit," lessen the water quality impacts of development by using smart growth practices, and integrate LID design principles to mimic predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use. LID shall be inclusive of SUSMP requirements.

(B) **Scope.** This Section contains requirements for stormwater pollution control measures in Development and Redevelopment projects and authorizes the City of Walnut to further define and adopt stormwater pollution control measures, develop LID principles and requirements, including but not limited to the objectives and specifications for integration of LID strategies, grant waivers from the requirements of the Standard Urban Stormwater Mitigation Plan, and collect funds for projects that are granted waivers. Except as otherwise provided herein, the City of Walnut shall administer, implement and enforce the provisions of this Section.

(C) **Applicability.** The following Development and Redevelopment projects, termed "Planning Priority Projects," shall comply with the requirements of Chapter 21 Article IV Section 21-80.

(1) All development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.

(2) Industrial parks 10,000 square feet or more of surface area.

(3) Commercial malls 10,000 square feet or more of surface area.

(4) Retail gasoline outlets with 5,000 square feet or more of surface area.

(5) Restaurants (Standard Industrial Classification (SIC) of 5812) with 5,000 square feet or more of surface area.

(6) Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.

(7) Strcets and roads construction of 10,000 square feet or more of impervious surface area.

(8) Automotive service facilities (Standard Industrial Classification (SIC) of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.

(9) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:

a. Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and

b. Create 2,500 square feet or more of impervious surface area

(10) Single-family hillside homes.

(11) Redevelopment Projects

a. Land disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.

b. Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, the entire project must be mitigated.

c. Where Redevelopment results in an alteration of less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, only the alteration must be mitigated, and not the entire development.

d. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

e. Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

(D) **Effective Date.** The Planning and Land Development requirements contained in Section 7 of Order No. R4-2012-0175 shall become effective 90 days from the adoption of the Order (February 6, 2013). This includes Planning Priority Projects that are discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals within 90 days of adoption of the Order. Projects that have been deemed complete within 90 days of adoption of the Order are not subject to the requirements Section 7.

(E) **Stormwater Pollution Control Requirements.** The Site for every Planning Priority Project shall be designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention and/or rainfall harvest and use.

(1) A new single-family hillside home development shall include mitigation measures to:

a. Conserve natural areas;

b. Protect slopes and channels;

c. Provide storm drain system stenciling and signage;

d. Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability; and

e. Direct surface flow to vegetated areas before discharge, unless the diversion would result in slope instability.

(2) Street and road construction of 10,000 square feet or more of impervious surface shall follow USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets (December 2008 EPA-833-F-08-009) to the maximum extent practicable.

(3) The remainder of Planning Priority Projects shall prepare a LID Plan to comply with the following:

a. Retain stormwater runoff onsite for the Stormwater Quality Design Volume (SWQDv) defined as the runoff from:

i. The 85th percentile 24-hour runoff event as determined from the Los Angeles County 85th percentile precipitation isohyetal map; or

ii. The volume of runoff produced from a 0.75 inch, 24-hour rain event, whichever is greater.

b. Minimize hydromodification impacts to natural drainage systems as defined in the Municipal NPDES Permit. Hydromodification requirements are further specified in County of Los Angeles Department of Public Work Storm Water Best Management Practices Design and Maintenance Manual.

c. When, as determined by the City of Walnut, 100 percent onsite retention of the SWQDv is technically infeasible, partially or fully, the infeasibility shall be demonstrated in the submitted LID Plan. The technical infeasibility may result from conditions that may include, but are not limited to:

i. The infiltration rate of saturated in-situ soils is less than 0.3 inch per hour and it is not technically feasible to amend the in-situ soils to attain an infiltration rate necessary to achieve reliable performance of infiltration or bioretention BMPs in retaining the SWQDv onsite.

ii. Locations where seasonal high groundwater is within five to ten feet of surface grade;

iii. Locations within 100 feet of a groundwater well used for drinking water;

iv. Brownfield development sites or other locations where pollutant mobilization is a documented concern;

v. Locations with potential geotechnical hazards;

vi. Smart growth and infill or redevelopment locations where the density and/ or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.

d. If partial or complete onsite retention is technically infeasible, the project Site may biofiltrate 1.5 times the portion of the remaining SWQDv that is not reliably retained onsite. Biofiltration BMPs must adhere to the design specifications provided in the Municipal NPDES Permit.

i. Additional alternative compliance options such as offsite infiltration may be available to the project Site. The project Site should contact the City of Walnut to determine eligibility. Alternative compliance options are further specified in County of Los Angeles Department of Public Work Storm Water Best Management Practices Design and Maintenance Manual.

e. The remaining SWQDv that cannot be retained or biofiltered onsite must be treated onsite to reduce pollutant loading. BMPs must be selected and designed to meet pollutant-specific benchmarks as required per the Municipal NPDES Permit. Flow-through BMPs may be used to treat the remaining SWQDv and must be sized based on a rainfall intensity of:

i. 0.2 inches per hour, or
ii. The one year, one-hour rainfall intensity as determined from the most recent Los Angeles County isohyetal map, whichever is greater.

f. A Multi-Phased Project may comply with the standards and requirements of this section for all of its phases by: (a) designing a system acceptable to the City of Walnut to satisfy these standards and requirements for the entire Site during the first phase, and (b) implementing these standards and requirements for each phase of Development or Redevelopment of the Site during the first phase or prior to commencement of construction of a later phase, to the extent necessary to treat the stormwater from such later phase. For purposes of this section, "Multi-Phased Project" shall mean any Planning Priority Project implemented over more than one phase and the Site of a Multi-Phased Project shall include any land and water area designed and used to store, treat or manage stormwater runoff in connection with the Development or Redevelopment, including any tracts, lots, or parcels of real property, whether Developed or not, associated with, functionally connected to, or under common ownership or control with such Development or Redevelopment.

(F) **Validity.** If any provision of this Ordinance is found to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect remaining provisions of this Ordinance are declared to be severable.

(G) **Certification.** The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy.

APPROVED AND ADOPTED this 13th day of November, 2013.

Antonio Cartagena, Mayor

ATTEST:

Teresa De Dios, City Clerk

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF WALNUT)

I, Teresa De Dios, City Clerk of the City of Walnut, do hereby certify that the foregoing Ordinance No. 13-13 being:

AN ORDINANCE AMENDING TITLE V, CHAPTER 21, OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING STANDARD URBAN STORM WATER MITIGATION PLAN REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS

Said Ordinance was duly introduced at a regular meeting held on the 23rd day of October, 2013, and was adopted and passed at a regular meeting of the City Council on the 13th day of November 13, 2013 by the following vote, to wit:

AYES:	COUNCILMEMBER(S):	Cartagena, Ching, Pacheco, Su, Tragarz
NOES:	COUNCILMEMBER(S):	None
ABSENT:	COUNCILMEMBER(S):	None
ABSTAIN:	COUNCILMEMBER(S):	None

Teresa De Dios

Teresa De Dios, City Clerk

Attachment C

City of Walnut

Public Education Materials

Storm Water Pollution Prevention

Construction

Sediment, vehicle fluids, dust and debris from construction sites can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Preventing Erosion
Avoid excavation or grading during wet weather. Plant temporary vegetation or add hydromulch on slopes where construction is not immediately planned, and permanent vegetation once excavation and grading are complete. Construct diversion dikes to channel run-off into a detention basin and around the construction site. Channels can be lined with grass or roughened pavement to reduce runoff velocity.

Maintaining Vehicles & Equipment
Maintain and refuel vehicles and equipment at a single location on-site, away from the street, gutter and storm drains. Perform major equipment repairs and washings off-site. Inspect vehicles and equipment frequently for leaks, and prevent leaks from stored vehicles by draining gas, hydraulic oil, transmission, brake and radiator fluids.

Ordering Materials & Recycling Waste
Reduce waste by ordering only the amounts of materials needed for the job. Use recycled or recyclable materials whenever possible. You can recycle broken asphalt, concrete, wood, and cleared vegetation. Non-recyclable materials should be taken to a landfill or disposed of as hazardous waste. For recycling and disposal information, call the City's exclusive franchise waste hauler, Valley Vista Services (800) 442-6454.

Cleaning & Preventing Spills
Use a drip pan and funnel when draining or pouring fluids. Sweep up dry spills, instead of hosing. Be ready for spills by preparing and using spill containment and cleanup kits that include safety equipment and dry cleanup materials such as kitty litter or sawdust. To report serious spills, call 911.

Store Materials Safely
Keep construction materials and debris away from the street, gutter and storm drains. Cover exposed excavated or stockpiled materials (such as soil, sand or gravel) with plastic sheeting to protect them from rain, wind and runoff.

Recycle Household Hazardous Waste
Household cleaners, paint and other home improvement products like wallpaper and tile adhesives are too toxic to trash. Recycle them instead, at a convenient household hazardous waste collection facility. Call (888) CLEANLA for the facility in your area.

For specific questions on storm water pollution prevention, contact: The City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact: 1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

Home Repair

Toxic dust and debris from home repair and remodeling can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Construction Projects
Keep construction debris away from the street, gutter and storm drains. Schedule grading and excavation projects for dry weather. Cover excavated material and stockpiles of material such as soil, sand or gravel, to protect from rain, wind and runoff. Prevent erosion by planting fast-growing annual and perennial grass, which can shield and bind soil.

Landscaping & Gardening
Avoid applying fertilizers or pesticide near curbs and driveways, and store covered, protected from rain, wind and runoff. Try using organic or nontoxic alternatives. Reduce runoff and lower your water bill by using drip irrigation, soaker hoses or micro-spray systems. Recycle leaves instead of blowing, sweeping or raking them into the street, gutter or storm drain.

Concrete and Masonry
Store bags of cement and plaster away from gutters and storm drains, and cover them to protect against rain, wind and runoff. Sweep or scoop up cement washout or concrete dust instead of hosing into driveways, streets, gutters or storm drains.

Paint Removal & Cleanup
Paint stripping residue (such as chips and dust) from paints containing lead or tributyl tin are hazardous wastes. Sweep them up instead of hosing into the street and dispose of them safely at a household hazardous waste collection facility. Avoid cleaning brushes or rinsing paint containers in the street, gutter or near a storm drain. Clean water-based paints in the sink. Oil-based paints may be cleaned with thinner, which you can filter and reuse. Recycle leftover paint at a household hazardous waste collection facility, save it for touch ups or give it to someone who can use it, like a theatre group, school, or community organization.

Recycle Household Hazardous Waste
Household cleaners, paint and other home improvement products like wallpaper and tile adhesives are too toxic to trash. Recycle them instead, at a convenient household hazardous waste collection facility. Call (888) CLEANLA for the facility in your area.

For specific questions on storm water pollution prevention, contact:
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Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

PAINTING

Improper post-painting cleanup or disposal can lead to chemicals being picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect your health.

Water-Based Paints
When considering paint, use water-based paints whenever possible. They are less toxic than oil-based paints and easier to clean up. Look for products labeled "latex" or "cleans with water."

Paint Removal
Sweep up paint stripping residue (such as chips and dust) instead of hosing into the street. Dispose of them safely at a household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.

Painting Cleanup
Never clean brushes or rinse paint containers in the street, gutter or near a storm drain. Clean water-based paints in the sink. Clean oil-based paints with thinner, which can be reused by putting it in a jar to settle out the paint particles and then pouring off the clear liquid for future use. Wrap dried paint residue in newspaper and dispose of it in the trash.

Exterior Paint Removal
When stripping or cleaning building exteriors with high pressure water, block nearby storm drains and divert wash-water onto a designated dirt area. Ask your local wastewater treatment authority if you can collect building cleaning wastewater and discharge it to the sewer.

Recycling Paint
Recycle leftover paint at a household hazardous waste collection facility, save it for touch ups or give it to someone who can use it, like a theatre group, school, or community organization. Call (800) CLEANUP for the facility in your area.

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

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www.888cleanla.com

Storm Water Pollution Prevention

Auto Maintenance

Oil, grease, anti-freeze and other toxic automotive fluids can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Cleaning Auto Parts
Scrape parts with a wire brush or use a bake oven rather than liquid cleaners. Arrange drip pans, drying racks and drain boards so that fluids are directed back into the parts washer or the fluid holding tank. Do not wash parts or equipment in a shop sink, parking lot, driveway or street.

Metal Grinding and Polishing
Keep a bin under your lathe or grinder to capture metal filings. Send uncontaminated filings to a scrap metal recycler for reclamation. Store metal filings in a covered container or indoors.

Cleaning Spills
Use dry methods for spill cleanup (sweeping, absorbent materials). Follow your hazardous materials response plan, as filed with your local fire department or other hazardous materials authority. Be sure that all employees are aware of the plan and are capable of implementing each phase. To report serious toxic spills, call 911.

Storing Hazardous Waste
Keep your liquid waste segregated. Many fluids can be recycled via hazardous waste disposal companies if they are not mixed. Store all materials under cover with spill containment or inside to prevent contamination of rainwater runoff.

Preventing Leaks and Spills
Place drip pans underneath vehicles to capture any leaking fluids. Use absorbent cleaning agents instead of water to clean work areas.

Proper Disposal of Hazardous Waste
Recycle used motor oil and oil filters, anti-freeze and other hazardous automotive fluids, batteries, tires and metal filings collected from grinding or polishing auto parts. Contact a licensed hazardous waste hauler. For more recycling information, call (888) CLEANLA. Use non-toxic cleaning products whenever possible.

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Storm Water Pollution Prevention

Kitchen: Fats, Oil & Grease

Fats, oil and grease (FOG) from cooking poured into kitchen sinks can build up in sewer pipes causing a sewage spill into the storm drain system which flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Pipes Are For Water Only:
FOG that enters the sewer system from kitchen sinks and drains eventually hardens and coats the inside of sewer pipes. Over a short period of time FOG residues build up in the sewer pipes and begin to restrict flows until the FOG build-up completely blocks the normal flow of sewage.

The blockage causes the flow of sewage to exit from the sanitary sewer system at the nearest outlet that is most commonly a manhole, cleanout, or broken pipe, and flow into the storm drainage system.

A sewage spill due to blocked pipe from a build-up of FOG is costly to both you and the environment. However, with the proper care and attention, it may be avoidable. So do your part for yourself and your community.

To Protect Your Pipes:

1. Do not put oil, grease or greasy foods down the sink, drain or toilet.
2. Solidify cooking oil with an absorbent material such as cat litter or coffee grounds; place it in a sealed container and dispose of it in a trash receptacle.
3. Grease must be hardened in a can or container with a lid before disposing in the trash. If you soak a greasy pan, place a paper towel over the drain basket to catch grease and food particles as you pour the water down the drain.

For large amounts of household oil and grease, place in a sealed container and take it to a local Household Hazardous Waste Collection Center for proper disposal. Call (888) CLEANLA for a collection facility or mobile collection event near your area.

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www.888cleanla.com

Storm Water Pollution Prevention

Food and Restaurant

Restaurant food waste, grease, cleaning fluids, and trash can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Recycle Oil & Grease
Oil and grease wastes can be recycled. Look in the yellow pages for rendering companies, or call (888) CLEANLA for disposal information. Don't pour oil or grease into sinks, floor drains, or onto a parking lot or street. Keep grease bins covered and stored securely. Keep your grease interceptor well maintained to prevent sewer overflows or backups and keep records of grease waste hauling.

Cleaning & Maintenance
Clean your equipment, floor mats, filters and garbage cans in a mop sink, wash rack or floor drain that is connected to the sewer through a grease trap. Don't wash them, or pour wash water, on a parking lot, alley, sidewalk or street. Sweep outside areas and put the debris into a garbage bin, instead of sweeping or hosing them into the parking lot or street.

Managing Spills
Clean food spills in loading and trash areas by first using absorbent materials, followed by sweeping and then mopping (discharge mop water into the sewer through a grease interceptor). Have spill containment and cleanup kits available. To report serious toxic spills, call 911.

Handling Toxic Chemicals
Dispose of all unwanted toxics materials like cleaners, solvents and detergents through a hazardous waste hauler. These items are not trash. For information on hazardous waste pickup, call (888) CLEANLA. Use non-toxic cleaning products

Dumpster Areas
Keep dumpster lids closed and the areas around them clean. Do not fill with liquid waste or hose them out. Call your trash hauler to replace any dumpsters that are damaged or leak.

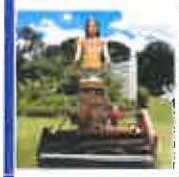
For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

Garden

Yard waste, fertilizers and garden toxics (pesticides) can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.



Yard Waste Disposal
Don't blow, sweep, or hose leaves, grass clippings and other yard waste into the street or gutter. Place all yard waste in your green waste refuse barrel or try grasscycling (leaving grass clippings on your lawn). Grass clippings can act as a natural fertilizer, and because grass is mostly water, it also irrigates your lawn, conserving water.

Use Fertilizers & Pesticides Safely
Fertilizers and pesticides are often carried into the storm drain system by sprinkler runoff. Try using organic or non-toxic alternatives. If you use chemical fertilizers or pesticides, avoid applying near curbs and drive-ways and never apply just before it rains.

Use Water Wisely
Cut your water costs and prevent runoff by controlling the amount of water and direction of sprinklers. The average lawn needs about an inch of water a week, including rainfall, or 10 to 20 minutes of watering. A half-inch per week is enough for fall and spring. Sprinklers should be on long enough to allow water to soak into the ground but not so long as to cause runoff.

There are three water providers serving the residents of Walnut. For links to these water providers and updates on water conservation requirements, visit the City of Walnut's "Go Green With Walnut" webpage at www.ci.walnut.ca.us (Keyword: "Go Green").

Planting in the Yard
Produce less yard waste and save water by planting low maintenance, drought-tolerant trees and shrubs. Use drip irrigation, soaker hoses or micro-spray systems for your landscaping to help reduce your water bill and prevent runoff.

Recycle Household Hazardous Waste
Household products like paint, pesticides, solvents & cleaners are too dangerous to dump and too toxic to trash. Take them to a convenient household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.

For specific questions on storm water pollution prevention, contact:
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21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

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www.888cleanla.com

Storm Water Pollution Prevention

Pet Waste

Pet waste left on lawns, sidewalks and parks can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

What Is Wrong With Pet Waste?
Pet waste, especially dog waste, is a major pollutant and contaminant of water supplies. The Federal Environmental Protection Agency views pet waste a serious source pollution and has placed it in the same category of "nonpoint source pollution" as oil and toxic chemicals.

Pet waste left on the streets, lawns and parks is a serious community health concern. A single gram of dog waste can contain 23 million fecal coliform bacteria, which are known to cause a variety of illnesses and disorders in humans.

Some sources estimate that 1/3 of all water contamination is a result of dog waste entering streams and leaching into underground well water. The average dog can produce 274 pounds of waste each year. Disease from dog waste may spread to other dogs, children, and adults.

Disposing of Pet Waste
All pet waste should be placed in your regular trash/refuse container, preferable in a bag.

Never put dog or animal waste into the green waste container. This will contaminate the entre container, and possible the entire truck load of green waste, which then cannot be reused and must go into a landfill.

Help Keep Our Parks Clean
It is for your health as well as for entire community.

Walking Your Dog: Pet Waste Pick Up Ordinance
The City would like remind pet owners to be courteous and pick up after your pet while walking your dog or animal on City sidewalks, trails, parks or other open spaces. There is an Animal Nuisance Ordinance in Los Angeles County Code (Title 10 Animals, Chapter 10.40.060, B.) which requires that owners pick up and properly dispose of their pet's waste from all public spaces and walking areas for sanitary and health reasons.

To help promote clean up, the City has installed pet waste stations at City parks. These stations provide not only Zero-Waste biodegradable bags with which to pick up your pet's waste, they also provide a sealed container in which to dispose of the waste.

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Storm Water Pollution Prevention

Used Motor Oil

Used motor oil dripped onto driveways and lawns can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

RECYCLE USED OIL

Why Recycle Used Motor Oil and Oil Filters?
Did you know that used motor oil never wears out? It just gets dirty and can be recycled, cleaned, and used again. Recycling used motor oil conserves a natural resource (oil) and is good for the environment too! Motor oil poured onto the ground or into storm drains, or tossed into trash cans (even in a sealed container) can contaminate and pollute the soil, groundwater, streams, and rivers. Recycling your used motor oil reduces this pollution threat.

Where Can I Recycle My Used Motor Oil and Oil Filters?
Walnut residents can take up to five gallons of uncontaminated used oil and oil filters in secured, non-leaking containers to one of the following five certified Used Oil Collection Centers in Walnut (*Please call ahead for hours of operation. Used oil can only be dropped off during working hours):*

- MasterLube, 308 N. Lemon Avenue, 909.598.3881
- Firestone Tires 860 N. Nogales Street, 626.965.2224
- The Oilmen, 856 N. Nogales Street, 626.965.4798
- Kraken Auto Parts, 18724 Amir Road, 626.965.6012
- Mobil Xpress Lube, 762 N. Nogales St., 626.965.8032

Illegal Oil Dumping:
Please do not dispose of your used oil by pouring it into the gutter or onto the ground. It is not only illegal; it is a major source of water contamination. Street gutters drain directly into our local rivers and ocean; and fluid dumped on the ground can seep into rivers and ground water. So if wouldn't want you or your children to drink it, eat it or swim in it; don't pour it out!

RECYCLE USED OIL FILTERS

How to Store/Transport Used Oil: Used motor oil must be stored, transported and delivered to the Collection Centers in secured, non-leaking containers. Used oil may only be dropped off during normal hours of operation. It is not permitted to leave used oil at any Collection Center if the facility is closed. Do not risk contaminating the oil by storing it in a container formerly used for other products such as anti-freeze or paint. Walnut residents may pick up free used oil containers and used oil filter containers at the City's Maintenance and Recreation Facility at 21701 E. Valley Blvd. (proof of residency required).

What About Contaminated Oil? Certified Collection Centers will not accept used motor oil that has been contaminated with other fluids such as antifreeze, solvents, gasoline, or water. So please, don't mix your used oil with anything. Contaminated oil must be taken to a household hazardous waste collection facility. Call (888) CLEANLA for a collection facility or mobile collection event near your area.

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909-595-7543

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1 (888) CLEANLA
www.888cleanla.com

Attachment D

City of Walnut

Legal Authority

December 11, 2013

Mr. Samuel Unger
Executive Officer
Los Angeles Regional Quality Control Board
320 W. 4th Street, Suite 200
Los Angeles, CA 90013
sunger@waterboards.ca.gov

Re: Legal Authority of the City of Walnut to Implement and Enforce the Requirements of 40 CFR 122.26(d)(2)(i)(A-F) and RWQCB Order R4-2012-0175, NPDES Permit CAS004001

Dear Mr. Unger:

The City of Walnut (the "City"), by and through its City Attorney, hereby submits the following certification ("Statement"), pursuant to Section VI.A.2.b of Order R4-2012-0175 (NPDES Permit CAS004001), issued by the California Regional Water Quality Control Board, Los Angeles Region ("RWQCB") on November 8, 2012 and entitled "Waste Discharge Requirements for Municipal Separate Storm Sewer System ("MS4") Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4" (the "Permit").

The City is one of the Permittees under the Permit. Section VI.A.2.b of the Permit requires the City to provide the RWQCB with a statement by its chief legal counsel, certifying that the City has the legal authority to implement and enforce each of the current requirements set forth in 40 C.F.R. § 122.26(d)(2)(i)(A-F) and the Permit. The purpose of this Statement is to describe the City's compliance with Section VI.A.2.b of the Permit. As discussed in further detail herein, it is our opinion that the City has the necessary legal authority to implement the Permit and to control and prohibit discharges of pollutants into the Municipal Separate Storm Sewer System ("MS4"). However, this Statement is not, nor should it be construed as, a waiver of any rights that the City may have relating to the Permit.

1. Legal Authority Statement

In our opinion, the City has the necessary legal authority to comply with the legal requirements imposed upon it under the Permit, consistent with the requirements set forth in the U.S. Environmental Protection Agency's regulations promulgated under the Clean Water Act, and, specifically, 40 C.F.R. § 122.26(d)(2)(i)(A-F), and to the extent permitted by state and federal law and subject to the limitations on municipal action under the California and United States Constitutions, except as noted herein.

The City, as a general law city, has broad general police powers under the California Constitution to enact legislation for health and public welfare of the community to the extent not preempted by federal or state law. In addition, the City adopted ordinances for the purpose of ensuring that it has adequate legal authority to implement and enforce its storm water control program. The City has the authority under the California Constitution and state law to enact and enforce these ordinances, and these ordinances were duly enacted.

2. Ordinances

The City has adopted ordinances related to the regulation of urban runoff to control and prohibit discharges of pollutants into the MS4 and to comply with the requirements of the Permit applicable to it, as well as, to the extent applicable, 40 C.F.R. § 122.26 (d)(2)(i)(A)-(F). The City's Storm Water Management and Discharge Control Ordinance (Ord. No. 593) is the principal City ordinance addressing the control of urban runoff. Under this ordinance and Walnut Municipal Code (WMC) Title V, Chapter 21, Article III, the City has the necessary legal authority to do the following:

i. Control the contribution of pollutants to its MS4 from storm water discharges associated with industrial and construction activity and control the quality of storm water discharged from industrial and construction sites. This requirement applies both to industrial and construction sites with coverage under an NPDES permit, as well as to those sites that do not have coverage under an NPDES permit (WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities);

ii. Prohibit all non-storm water discharges through the MS4 to receiving waters not otherwise authorized or conditionally exempt pursuant to Part III.A (WMC Title V, Chapter 21, Article III, 21-65: Prohibited Activities);

iii. Prohibit and eliminate illicit discharges and illicit connections to the MS4 (WMC Title V, Chapter 21, Article III, 21-65: Prohibited Activities);

iv. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4 (WMC Title V, Chapter 21, Article III, 21-65: Prohibited Activities);

v. Require compliance with conditions in Permittee ordinances, permits, contracts or orders (*i.e.*, hold dischargers to its MS4 accountable for their contributions of pollutants and flows) (WMC Title V, Chapter 21, Article III, 21-69: Enforcement);

vi. Utilize enforcement mechanisms to require compliance with applicable ordinances, permits, contracts, or orders (WMC Title V, Chapter 21, Article III, 21-69: Enforcement);

vii. Carry out all inspections, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with applicable municipal ordinances,

permits, contracts and orders, and with the provisions of this Order, including the prohibition of non-storm water discharges into the MS4 and receiving waters. This means the Permittee must have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from entities discharging into its MS4 (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities);

viii. Require the use of control measures to prevent or reduce the discharge of pollutants to achieve water quality standards/receiving water limitations (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Chapter 21-68: Requirements for Industrial/Commercial and Construction Activities; WMC Title V, Chapter 21, Article III, 21-69: Enforcement; WMC Title V, Chapter 21, Article IV, 21-82: SUSMP Enforcement);

ix. Require that structural BMPs are properly operated and maintained (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities); and

x. Require documentation on the operation and maintenance of structural BMPs and their effectiveness in reducing the discharge of pollutants to the MS4 (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities).

3. Implementation

Some of the City's ordinances are implemented through permit programs and others are implemented as regulatory programs. Under each ordinance, one or more City departments or department directors are authorized and directed in each ordinance to take the actions contemplated by the ordinance (*e.g.*, to consider evidence and make findings, to issue or deny permits, to impose conditions on projects, to inspect, to take enforcement action, etc.).

The City's Storm Water Management and Discharge Control Ordinance (WMC Title V, Chapter 21, Article III) is the principal City ordinance addressing the control of urban runoff. This ordinance is regulatory, and applies to specified new and existing residential and business communities and associated facilities and activities, as well as new development and redevelopment, and all other specified new and existing facilities and activities that threaten to discharge pollutants within the boundaries of the City and within its regulatory jurisdiction, whether or not a City permit or approval is required. The City's Storm Water Management and Discharge Control Ordinance also contains discharge prohibitions and requirements for the implementation of BMPs and other requirements necessary to implement the Permit.

Other City departments require compliance with the City's Storm Water Management and Discharge Control Ordinance as a condition for issuance of relevant City permits. City departments may also impose specific conditions of approval consistent with the City's Storm Water Management and Discharge Control Ordinance. All City environmental ordinances are also implemented, in part, through the application of the CEQA process to proposed projects.

4. Administrative and Judicial/Legal Procedures

In addition to the above authority, the City has in place various legal and administrative procedures to assist in enforcing the various urban runoff related Ordinances, including Administrative, Nuisance, Criminal, Equitable and Other Civil Remedies.

a. Title V, Chapter 21, Article III, 21-69 (Enforcement)
b. Title I, Chapter 3, Article I, 3-2 (General Penalties; Continuing Violations)
c. Title III, Chapter 16A, Article III, 16A-6.17 (Collection of costs - Special assessment)
d. Title III, Chapter 16A, Article II, 16A-6.19 (Cumulative Remedies)
e. Injunctive relief under State law and the Municipal Code (WMC Title V, Chapter 21, Article III, 21-69 (Enforcement).
f. Declaratory relief under State law.
g. Federal law claims (*e.g.*, Clean Water Act and Resource Conservation and Recovery Act Citizen Suits).
h. Remedies under the California Government Code.

Violations of the City's Storm Water Ordinance are deemed a "public nuisance", in which case enforcement actions can be completed administratively, or judicially when necessary.

Please contact me if you have any questions or if you need any additional information regarding the City's legal authority to enforce the Permit.

Very truly yours,

Michael Montgomery
City Attorney

Attachment E

City of Walnut

Exceedance Summary 2004-2014

Los Angeles County Mass Emission Station S14

Los Angeles County Storm Water Monitoring Program

San Gabriel River, Mass Emmisions Staion S-14

(Exceedance/Number of Samples)

	2003-2004		2005-2006		2006-2007		2007-2008		2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014	
	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet
E. Coli																	NF	2/5	0/1	1/3
Fecal Coliform	1/2	2/3	1/2	3/4	2/2	3/3	1/2	3/3	2/3	2/5	2/4	0/4	0/1	1/4	1/2	0/4				
Fecal Enterococcus	2/2	3/3	2/2	3/4	2/2	3/3														
Total Collform	2/2	2/3	2/2	4/4	1/2	3/3														
Dissolved Oxygen																			1/1	1/3
Chloride									1/3	0/5	1/4	0/4							1/1	0/3
Cyanide	1/2	3/3	1/2	1/4	1/2	2/3					1/4	1/4					NF	1/5		
pH									1/3	0/5			0/1	2/3			NF	1/5		
Dissolved Copper															0/2	1/4	NF	2/5		
Total Copper	1/2	2/3	1/2	1/4	2/2	4/4	0/2	2/3												
Dissolved Thallium																	NF	1/5		
Dissolved Zinc											0/4	1/4			0/2	1/4				
Total Zinc			0/2	1/4			2/2	1/3												
Sulfate											1/4	0/4								
Total Dissolved Solids									1/3	0/5										
Total Mercury									1/3	1/5										
Ammonia					2/2	2/4	1/2	1/3												
Total Nickel			1/2	0/4																
Total Aluminum			0/2	1/4			1/2	3/3												
Total Lead			0/2	1/4																

Attachment F

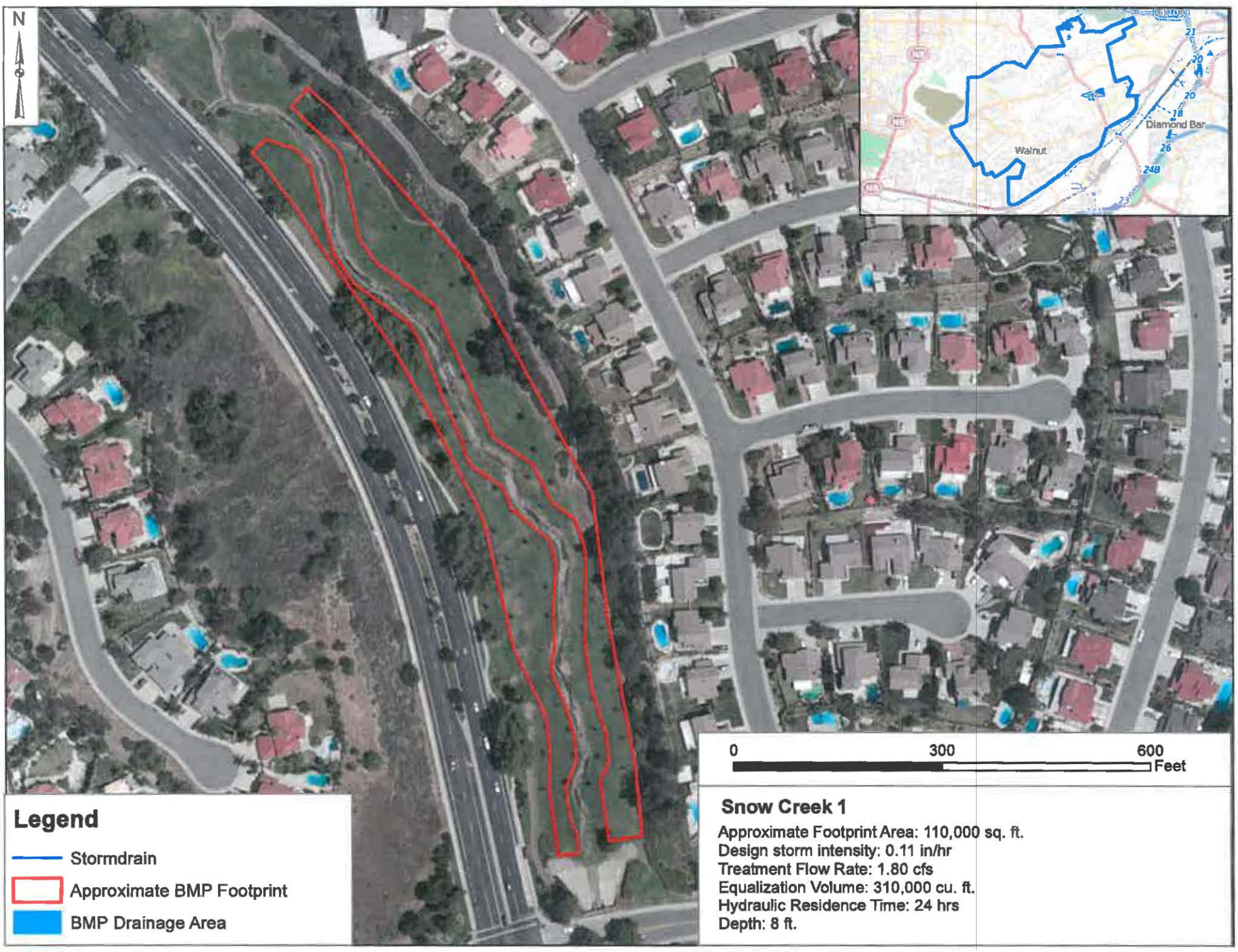
Regional BMP Exhibits


N
Butterfield Park
Butterfield Park
Butterfield Park
Butterfield Park
Walnut
West Covina
Diamond Bar
0
150
300
Feet
Legend
Stormdrain
Approximate BMP Footprint
BMP Drainage Area
Butterfield Park
Approximate Footprint Area: 93,000 sq. ft.
Design storm intensity: 0.06 in/hr
Treatment Flow Rate: 1.57 cfs
Equalization Volume: 270,000 cu. ft.
Hydraulic Residence Time: 24 hrs
Depth: 8 ft.

RB-AR17457


N
Walnut
Diamond Bar
0
200
400
Feet
Legend
Stormdrain
Approximate BMP Footprint
BMP Drainage Area
Lemon Creek
Approximate Footprint Area: 48,000 sq. ft.
Water Quality Design Volume: 53,000 cu. ft.
Design Storm: 0.3 in.
Infiltration Rate: 0.30 in/hr
Depth: 1.3 ft.

RB-AR17458


N
Walnut
Diamond Bar
0
300
600
Feet
Legend
Stormdrain
Approximate BMP Footprint
BMP Drainage Area
Snow Creek 1
Approximate Footprint Area: 110,000 sq. ft.
Design storm intensity: 0.11 in/hr
Treatment Flow Rate: 1.80 cfs
Equalization Volume: 310,000 cu. ft.
Hydraulic Residence Time: 24 hrs
Depth: 8 ft.

RB-AR17459


N
Snow Creek Park
Snow Creek Park
Snow Creek
West Covina
La Puente
Walnut
Diamond Bar
Chino
Pom
0
125
250
Feet
Legend
Stormdrain
Approximate BMP Footprint
BMP Drainage Area
Snow Creek 2
Approximate Footprint Area: 130,000 sq. ft
Water Quality Design Volume: 190,000 cu. ft.
Design Storm: 0.9 in.
Infiltration Rate: 0.77 in/hr
Depth: 2 ft.

RB-AR17460

Watershed Management Plan

City of Walnut

Submitted to:

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Submitted by:

The City of Walnut
21201 La Puente Road
Walnut, CA 91789

April 22, 2015

RB-AR17461

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1.0- Municipal Separate Storm Sewer System Permit

On November 8, 2012 the Los Angeles Regional Water Quality Control Board adopted Order R4-2012-0175 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within Coastal Watersheds of Los Angeles County, except those discharges originating from the City of Long Beach MS4. Order R4-2012-0175 became effective 50 days later on December 28, 2013. Order R4-2012-0175 serves as the National Pollution Discharge Elimination System (NPDES) permit for Coastal Watershed storm water and non-storm water discharges originating from the Los Angeles County Region, excluding the City of Long Beach. The permit covers the land areas of the Los Angeles County Flood Control, unincorporated areas of Los Angeles County and 84 Cities within the County of Los Angeles. Permittees are subject to the requirements set forth in the MS4 permit for all storm water and non- storm water discharges into the MS4. The City of Walnut is located in the Los Angeles Region and is identified in the MS4 Permit as a permittee under Order R4-2012-0175.

The MS4 permit regulates municipal discharges of storm water and non-storm water from the MS4s of the permittees. Storm water and non-storm water discharges have been identified as a transport mechanism for pollutants into the receiving waters of the Los Angeles Region. Pollutants originating from various land uses are mobilized by surface flow of water which is then directed into the MS4 and eventually deposited into receiving water bodies. In many cases pollutant deposition into receiving water bodies has a noticeable impact on the local ecological system of the water body and recreational uses. It is the intent of the MS4 Permit to protect water quality and mitigate existing and potential sources of pollutants that are cause for impairment of receiving water bodies.

Conditions of the MS4 Permit require that all permittees develop a watershed management plan on an individual or joint basis that will address water quality issues with in the permittee's jurisdictional area. The City of Walnut submitted a Notice of Intent to the Los Angeles Regional Water Board on June 28, 2013 identifying the City's selected watershed management plan option. Due to the topographic nature and land use of the City of Walnut, the single permittee Watershed Management Plan (WMP) option was selected. A copy of the NOI is included in Attachment A of this document. The intention of the WMP is to provide a viable plan for implementing water quality improving infrastructure, policies and programs. The end result of the WMP is focused on complying with final effluent limitations and numeric targets for known pollutants in the receiving water.

The WMP is paired with an Integrated Monitoring Plan (IMP) to provide a complete program that will assess and address water quality in the City. The IMP will serve as the method for determining the need for pollutant reductions and ultimate compliance with the established water quality goals. The WMP and IMP were developed by RKA Consulting Group with exception to the Reasonable Assurance Analysis which was developed by Geosyntec Consultants.

1.1- The City of Walnut

The City of Walnut is a General Law city that was incorporated on January 19, 1959, and has a jurisdictional area of 8.9 square miles. Based on the 2010 Census, the City of Walnut has an approximate population of 30,000. One defining feature of the City is its rural charm which is preserved by a well-defined general plan. The City is located in the San Gabriel Valley region of Los Angeles County north of State Route 60 and west of State Route 57. Los Angeles County's map of the San Gabriel River Watershed (Figure 1-1) highlights in green, the City's location with respect to the watershed.

Land use in the City is primarily devoted to residential development consisting of 3,760 acres or 65% of the City. The remaining land use in the City is composed of 1,680 acres of open space or 29% of the jurisdictional area, 255 acres of commercial use or 4.5% of the jurisdictional area, and 86 acres of agricultural use or 1.5% of the jurisdictional area. Figure 1-2 is a map of the City of Walnut's land use. Table 1-1 compares the land uses of the City of Walnut with those of the entire San Gabriel River Watershed.

Table 1-1

Watershed Land Use		
Land Use	City of Walnut	San Gabriel River Watershed
Residential	65%	26%
Open Space	29%	50%
Agriculture/Other	1.5%	9%
Commercial/Industrial	4.5%*	15%

**There are no current industrial land uses in the City of Walnut.*

The City boundary extends from the San Jose Hills north of the City to Valley Boulevard to the south, and from Nogales Street to the west to the easterly boarder of the City with unincorporated areas of Los Angeles County and the City of Pomona. Other cities identified as MS4 Permittees bordering or in close proximity to the City of Walnut include: City of La Puente, City of Industry, City of West Covina, City of Diamond Bar, City of Pomona, and unincorporated areas of Los Angeles County (see Figure 1-1 for San Gabriel River Watershed Map).

1.2- Walnut Watershed Characteristics

The City of Walnut drains to the San Gabriel River Watershed and is part of the San Gabriel River Watershed Management Area (SGRWMA). The City's runoff drains to the San Gabriel River through two tributary water bodies in the SGRWMA. Reach 1 of the San Jose Creek is located to the south of the City and Walnut Creek Wash is located to the north. Both water bodies connect to Reach 3 of the San Gabriel River which runs parallel with State Route 605 and eventually drains directly to the Pacific Ocean. Figure 1-3 shows the City of Walnut and the two drainage areas within the City's jurisdiction.

1.2.1- San Jose Creek Reach 1

Due to the topography and location of the San Jose Hills, approximately 93% of the City drains to the South and is tributary to Reach 1 of the San Jose Creek. Storm water and non-storm water runoff is captured by catch basins and then carried through a network of storm drains and open channels to multiple outfalls connected to Reach 1 of the San Jose Creek.

The San Jose Creek transports runoff for the City of Walnut's outfalls approximately 12 miles to its confluence with San Gabriel River Reach 3 just north of the interchange of State Route 60 and State Route 605. The San Jose Creek is channelized from the area adjacent to the City of Walnut to approximately three quarters of a mile east of Workman Mill Road where the Creek is transitioned to soft bottomed. A number of other upstream and downstream permittees contribute runoff to Reach 1 of the San Jose Creek in addition to the City of Walnut. The Creek extends north east to connect with Thomson Wash which originates at easterly limits of Los Angeles County. Thompson Creek Dam is located at the very top of Thomson Wash.

Figure 1-1: San Gabriel River Watershed Management Area

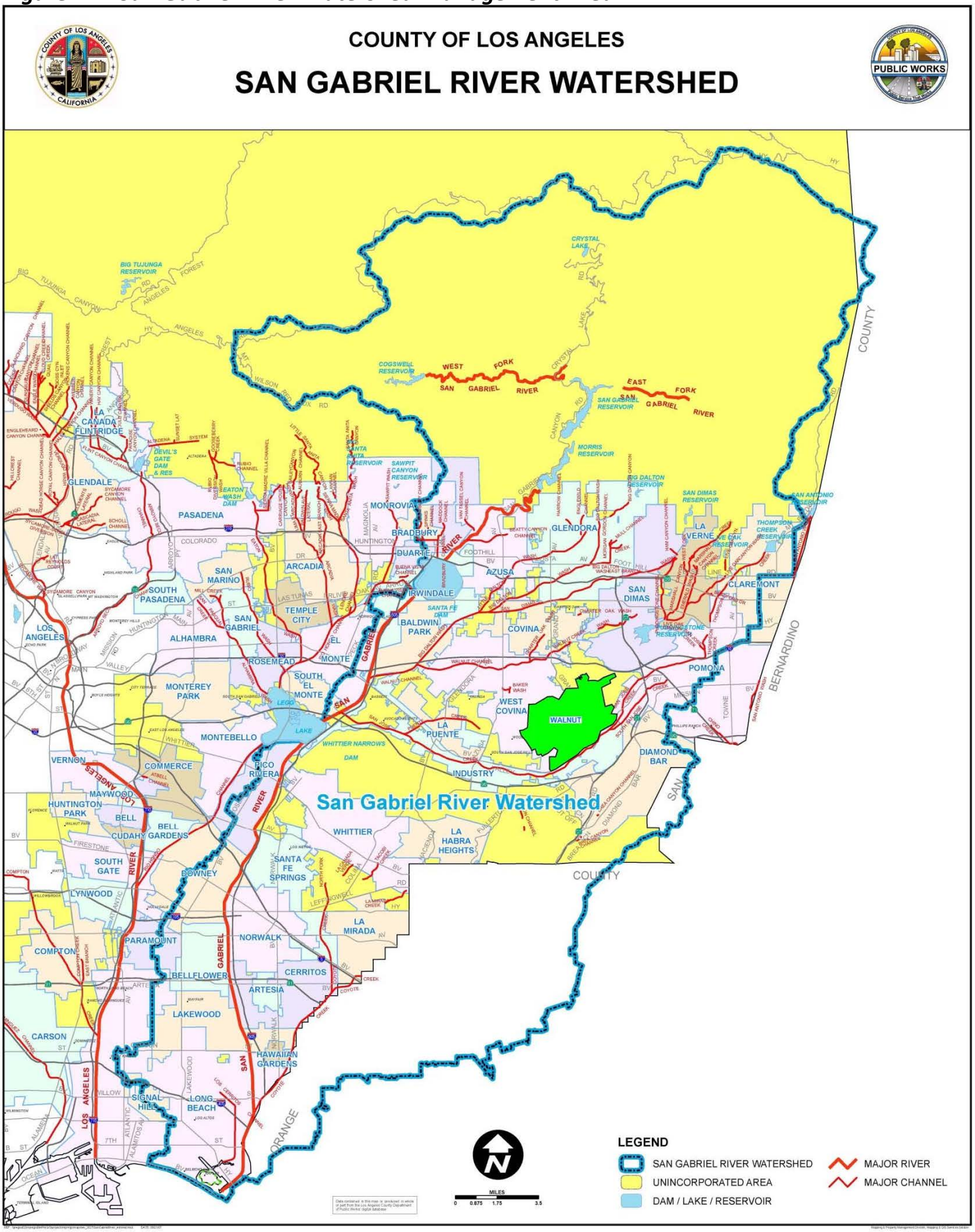
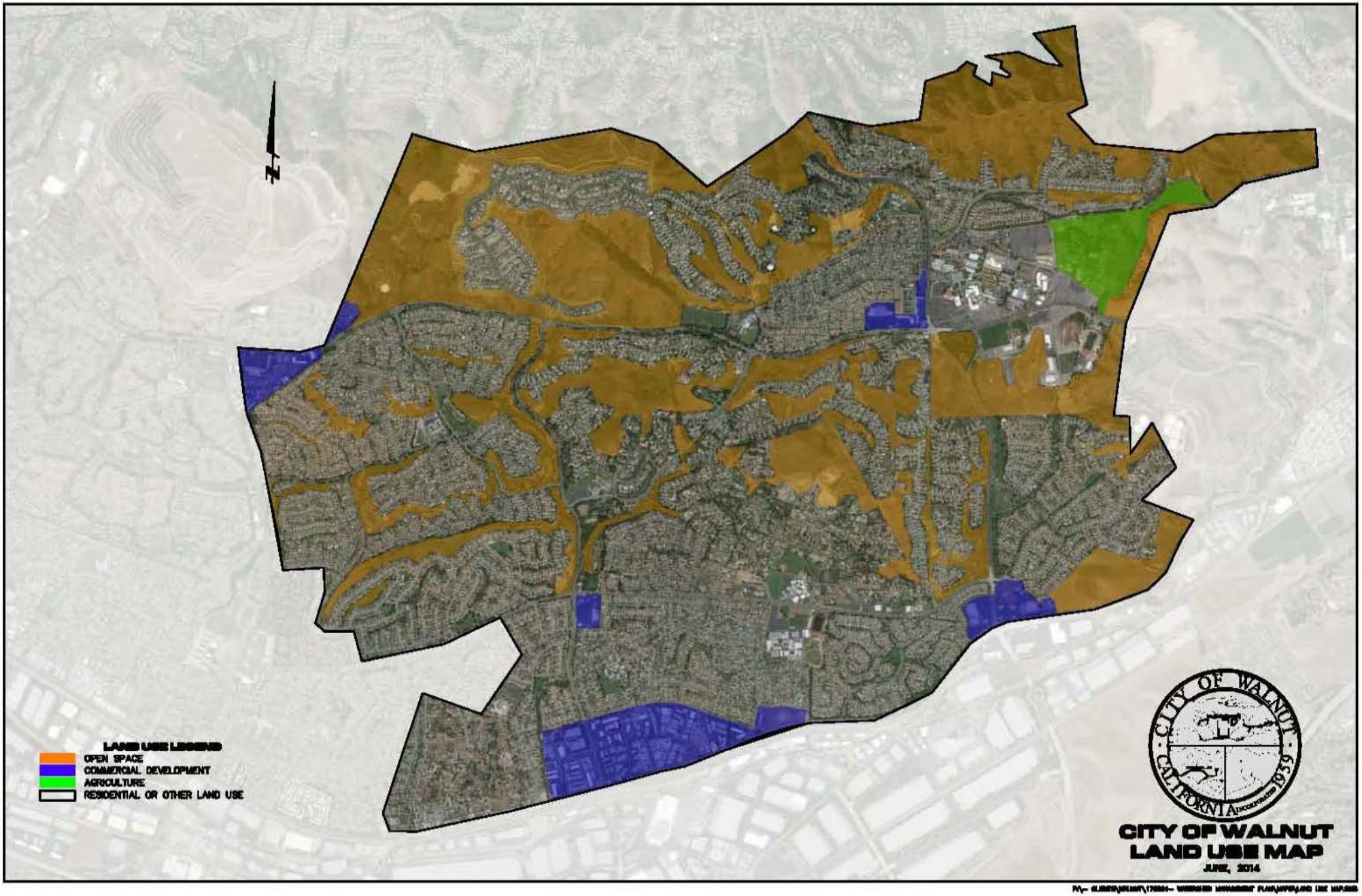


Figure 1-2: City of Walnut Land Use Map



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1.2.2- Walnut Creek Wash

The remaining 7% of the City of Walnut's jurisdictional area drains to the Walnut Creek Wash. A majority of the City's tributary area to Walnut Creek Wash watershed is open space with a small portion of residential development. With a majority of the tributary area land use categorized as open space, MS4 discharges originating from this area are minimal. The existing MS4 flows drain to the north of the City into unincorporated Los Angeles County and eventually into Walnut Creek Wash.

Walnut Creek Wash originates at the Puddingstone Dam, and is soft bottom up to a quarter mile east of Covina Hills Road where it transitions to a channelized wash. The channelized wash returns to a soft bottom channel at Baldwin Park Boulevard and continues as such to confluence with the San Gabriel River. The confluence of Walnut Creek Wash and the San Gabriel River is located south west of the interchange of State Route 10 and State Route 605. The City of Walnut contributes a very small portion of flow to the Walnut Creek Wash which is primarily composed of flow from a number of other permittees in the SGRWMA

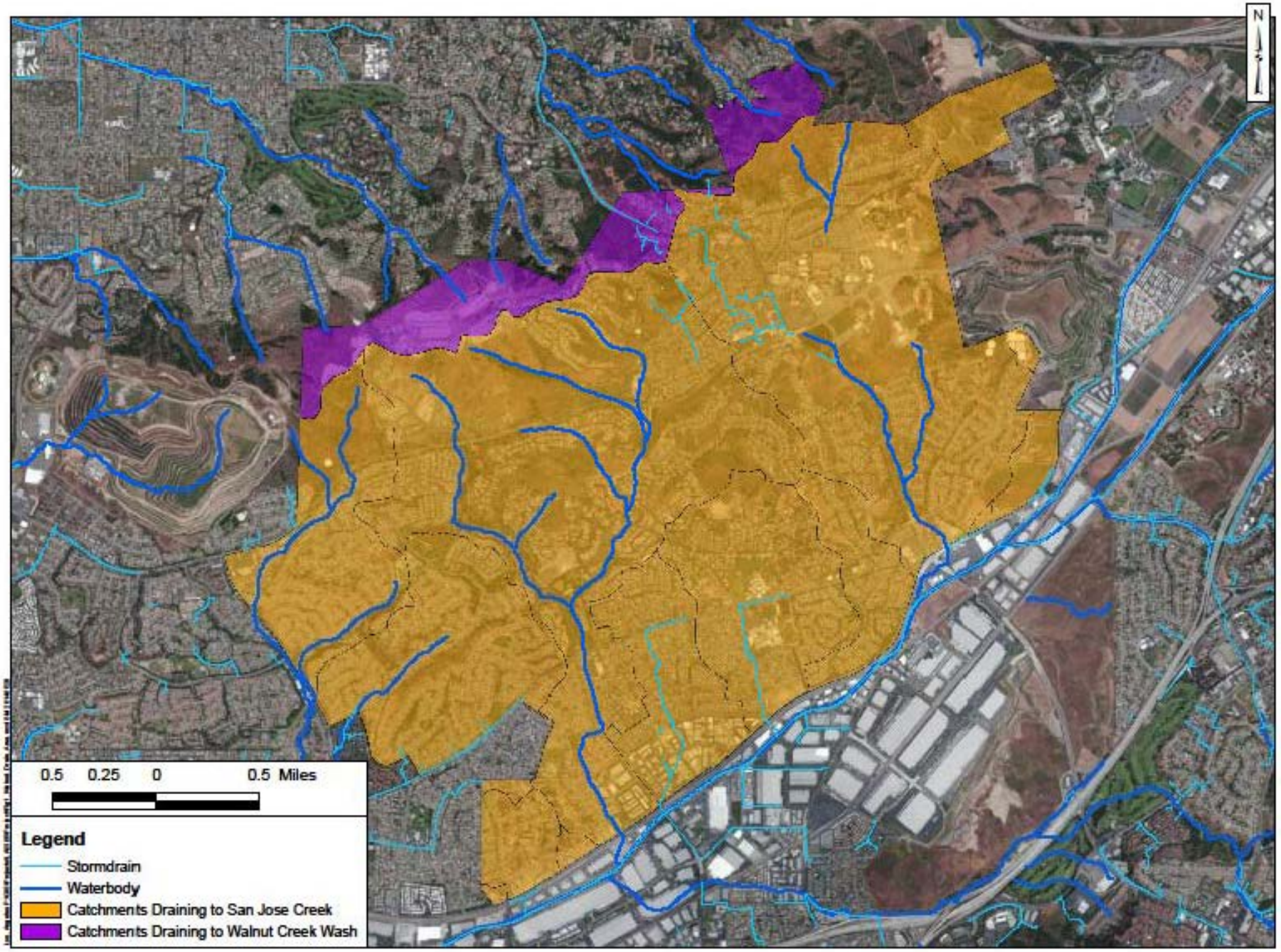
1.2.3- City of Walnut MS4 System

The City of Walnut's storm drain system consists of 644 City owned catch basins and 142 Los Angeles County Flood Control owned catch basins. A majority of the City's storm drain system outlets connect directly to Reach 1 of the San Jose Creek.

There is one storm drain outfall that contains flows originating from the Walnut Creek Wash watershed area of the City of Walnut. This singular outfall is an underground storm drain that drains to the north of the City into unincorporated Los Angeles County and eventually into Walnut Creek Wash. The referenced storm drain carries a relatively small amount of the total City run off and has 13 catch basins connected the line from the City of Walnut.

There are two open soft bottom creeks in the City which for much of their extents run in or adjacent to parks. Lemon Creek drains portions of the western side of the city and begins in the San Jose hills in the Vicinity of the Three Oaks Development and extends south to its confluence with Reach 1 of the San Jose Creek. Snow Creek begins near the intersection of Grand Avenue and Temple Avenue at Mount. San Antonio Community College located in the north eastern section of the City. Snow Creek travels south along Grand Boulevard to just south of Snow Creek Park where it connects to an underground reinforced concrete box (RCB). The RCB eventually connects directly with Reach 1 of San Jose Creek near the intersection of Somerset Drive and Valley Boulevard.

Figure 1-3: City of Walnut Drainage Areas



2.0- Water Quality Priorities

Per section VI.C.5.a.ii of the MS4 Permit, permittees are required to identify and prioritize water body pollutants within each Watershed Management Area (WMA) that overlays their jurisdictional area. The City of Walnut is wholly encompassed by one WMA. Per table K-6 of Attachment K in the MS4 Permit, the City of Walnut is included in the SGRWMA.

2.1- Water Quality Impairments

As described in section 1.2.1 "Watershed Characteristics" of this document, the City of Walnut is tributary to two tributary water bodies of the San Gabriel River. Each of the receiving water bodies that the City of Walnut is tributary to have individual water quality issues that have been established by a TMDL or by the California Clean Water Act Section 303(d) list. Table 2-1 of this document outlines the impairments for each of the receiving waters that the City of Walnut discharges MS4 flows into. These pollutants will be the primary focus for the City of Walnuts WMP.

Table 2-1

Watershed Management Area Impairments			
Water Body	**TMDL**	**303(d) List**	**Other Pollutants of Concern**
San Jose Creek Reach 1	• Selenium	• Ammonia • Coliform Bacteria • pH • Total Dissolved Solids • Toxicity	N/A
San Gabriel River Reach 3	N/A	• Indicator Bacteria	N/A
San Gabriel River Reach 2	• Lead	• Coliform Bacteria • Cyanide • Lead	N/A
Walnut Creek Wash	N/A	• Benthic-Macroinvertebrate Bio-assessments • Indicator Bacteria • pH	N/A

The MS4 Permit's prioritization of pollutants is categorized into three levels. The highest prioritization (Category 1) is reserved for water body pollutant combinations for which water quality based effluent limitations and/or receiving water limitations are established in Part IV.E and Attachments L through R of the MS4 Permit. High prioritization (Category 2) has been defined as including pollutants for which data indicate water quality impairment in the receiving water according to the State's Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (State Listing Policy) and for which MS4 discharges may be causing or contributing to the impairment. Medium Priority Pollutants (Category 3) are defined as pollutants for which insufficient data indicate water quality impairment in the receiving water according to the States Listing Policy, but which exceed applicable receiving water limitations contained in this Order and for which MS4 discharges may be causing or contributing to the exceedance.

The City will maintain the prioritization of pollutants as defined by the categorization priorities. In the event that a pollutant(s) of a category is determined to be within the allowable limit, the City will shift focus to the next tier down. For example, if all the Category 1 pollutants are found to be within allowable limits the City will then focus on the Category 2 pollutants of that receiving water body.

Table 2-2 identifies the prioritization of the individual constituents per the organization method defined in section VI.C.2.a. of the MS4 Permit.

Table 2-2

Water Quality Priorities		
Priority	**Water Body Pollutant**	**Source**
Category 1 (Highest)	Lead	TMDL
	Selenium	TMDL
Category 2 (High)	Ammonia	303(d)
	Benthic Macroinvertebrates	303(d)
	Coliform Bacteria	303(d)
	Cyanide	303(d)
	pH	303(d)
	Total Dissolved Solids	303(d)
	Toxicity	303(d)
Category 3 (Medium)	N/A	N/A

Pollutants identified as Category 1 priority in Table 2-2 have Waste Load Allocations determined by their applicable TMDL. Both Lead and Selenium Waste Load Allocations (WLA) are established by the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL .

Table 2-3 identifies the established WLA for each of the applicable TMDL pollutants. Pollutants identified in Table 2-3 should be referenced against Table 2-1 to determine the applicable WLA for the associated water body.

Table 2-3

Category 1 (Highest Priority) Pollutant Waste Load Allocation		
Pollutant	**Daily Maximum**	**Weather**
Lead	81.34 µg/L X Daily Storm Volume (L)	Wet
Selenium	5 µg/L	Dry

Pollutants identified as Category 2 priority in Table 2-2 have Water Quality Based Effluent Limits (WQBELs) identified in the Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. WQBELs are established based on the beneficial uses also determined in the Basin Plan. Some Category 2 pollutants that are identified in Table 2-4 do not originate from MS4 discharges and will not be included in the Reasonable Assurance Analysis portion of this document.

Table 2-4

Category 2 (High Priority) Pollutant Waste Load Allocation	
Pollutant	**WQBEL**
Ammonia	See LARWQCB Basin Plan Table 3-1 through 3-4
Benthic Macroinvertebrates	See Attachment D for Bio assessment
Coliform Bacteria	See Table 2-5
Cyanide	.005mg/L
Dissolved Oxygen (DO)	Mean Annual 7mg/L, but not less than 5 mg/L
pH	6.5-8.5 Standard Units
Total Dissolved Solids	750mg/L
Toxicity	See Attachment E for Toxicity Assessment

Allowable coliform bacteria loadings are based on the beneficial uses assigned to the impaired water body. As previously discussed in the document, the City of Walnut is tributary to two sub watersheds in the SGRWMA. Each of these sub-watersheds has a different beneficial use assigned for recreational activities. Subsequently the individual sub-watershed areas have different allowable coliform bacteria loadings. Table 2-5 identifies the applicable bacteria WQBEL for each of the sub-watershed receiving water bodies that the City is tributary to.

Table 2-5

Bacteria WQBEL		
Receiving Water Segment	**Recreational Beneficial Use**	**Water Quality Objective E Coli Density**
San Jose Creek	REC1 (potential), REC2 (intermittent) with High Flow Suspension*	Geometric Mean Limit: 126/100 ml Single Sample Limit: 235/100 ml
Walnut Creek Wash	REC1 (intermittent), REC2 (intermittent)	Geometric Mean Limit: 126/100 ml Single Sample Limit: 235/100 ml

REC1 = water contact recreation

REC2 = non-water contact recreation

Existing water quality monitoring data and land use in the City were examined to determine if there was significant evidence identifying the presence of Category 3 pollutants. Los Angeles County Mass Emissions Station S14 was chosen for this analysis.

Most of the pollutants identified as exceeding WQBELs at S14 already have been established as either Category 1 or Category 2 pollutants. The remaining pollutants identified as exceeding the WQBEL over a 10 year period, only had few instances of exceedances. When considering the size of the watershed tributary to the monitoring station it is impossible to truly establish the City of Walnut's potential contribution of the pollutants in question. The limited data available does not provide any clear correlation between the monitored exceedances at station S14 and the City of Walnut's storm drain outfalls.

The City will continue to examine monitoring data made available by other agencies in addition to the data that the City gathers under the City IMP. Under the permit requirements, the City is required the monitor for all of the pollutants identified in Table E-2 of the permit for the first year of the program. The City will utilize future data to determine the presence of Category 3 pollutants. If any pollutants are identified by the City's IMP, they will be added to the WMP during the adaptive management process.

2.2- Pollution Source Assessment

Pollutants identified as causing impairments on the applicable receiving waters originate from various sources in the watershed. MS4 discharges from the City of Walnut are composed of surface runoff from storm events or other non-storm water sources. Pollutants that are mobilized by surface runoff are likely from non-point sources which are difficult to eliminate prior to mobilization.

Existing receiving water monitoring data from within the San Gabriel River watershed was examined to determine the existing water quality conditions. Data from the Los Angeles County monitoring station S14 was selected for this review. Los Angeles County monitoring station S14 is located below San Gabriel River Parkway in Pico Rivera. The upstream tributary area is 450 square miles at this location. The City of Walnut is directly tributary to San Jose Creek Reach 1 which is located upstream of monitoring station S14. The last ten years of data from the Los Angeles County Storm water Monitoring program mass emissions station S14 was compiled and reviewed. A summary of the exceedances is included as Attachment E. The pollutants with exceedances identified by the S14 monitoring data are mostly established on the 303(d) list. Due to vast area that drains to the S14 monitoring station, it is unclear how MS4 flows originating from the City of Walnut impact the San Gabriel River watershed.

This section highlights potential sources of the specific pollutants of concern that have been established as causing or contributing to impairment of the local water bodies that the City is tributary to.

Ammonia

Ammonia has been identified on the 303(d) list as causing impairment in the San Jose Creek Reach 1. The 303(d) list support documents identify that discharges from Publicly Owned Treatment Works (POTWs) as a potential source of most of the ammonia in the Los Angeles Region Watersheds. The City of Walnut is downstream from a POTW facility that discharges to the San Jose Creek.

POTWs have since been issued NPDES permits that include water quality objectives for Ammonia. Based on County monitoring data, it appears that Ammonia exceedances are decreasing in occurrence. Modifications to treatment processes and facilities are expected to yield results that will reduce previously measured amounts of ammonia to acceptable levels. This pollutant does not likely originate from the MS4. The City of Walnut's WMP will not address this pollutant any further other than as required in the monitoring program.

Benthic Macroinvertebrate Bio assessment

The 303(d) listing for bio assessment of benthic macroinvertebrates was established by the State Water Board after recommendation by the LARWQCB. The Walnut Creek Wash has been identified as having pollutant combinations in concentrations that are detrimental to the populations of benthic macro-invertebrates in the water body. MS4 discharges with toxic properties are identified as causing impacts to populations of benthic macroinvertebrates. The jurisdictional area of Walnut that is tributary to Walnut Creek Wash is composed of open space and single family residential land use. A 30" RCP storm

drain coveys all of water contributed to the Walnut Creek Wash. The volume of MS4 discharges contributed by the City of Walnut is relatively small and not likely to contribute pollutants in toxic levels. Water quality conveyed by said storm drain will be monitored as part of the IMP. The runoff that is deposited into the wash is connected to the channelized portion of the wash. It is unclear if this requirement is incorrectly assigned to the City of Walnut based on the beneficial uses applicable to channelized water bodies.

Bacteria

E Coli is used to determine the likelihood of pathogenic bacteria present in surface waters. E. coli and other pathogens that originate from fecal contamination in surface waters. Storm water and non-storm water runoff originating from residential development land uses have been known to contribute to bacteria loading in receiving waters. Potential sources may be natural or from contamination caused by interaction of septic or sanitary sewer system flows with the MS4 or agricultural runoff that is captured by the MS4. Homeless populations and wild life have also been identified a potential sources of coliform bacteria in the Basin Plan.

Cyanide

Cyanides are produced in both natural and manmade processes. The source of cyanide deposition into the receiving waters is not clear. Due to the land uses within the City it is assumed that the MS4 is not a likely source of this pollutant. Further data will be gathered though the City's monitoring program.

Lead

Lead has been identified as a Category 1 priority pollutant per the MS4 permit. Section 4 "Source Assessment" of the Total Maximum Daily Loads for Metals and Selenium San Gabriel River and Impaired Tributaries defines that the sources of metals in the San Gabriel River as originating from either point sources or atmospheric deposition.

The potential sources of lead in the watershed have been identified as natural and manmade. Potential manmade sources identified in the EPA TMDL document as contributing lead to storm water runoff are: automobile brake pads, vehicle wear, building materials, pesticides, erosion of paint, and atmospheric deposition from fuel ignition and industrial facilities.

Within the City of Walnut, it is not likely that potential lead pollution is originating from industrial discharges due to current the land uses. Atmospheric deposition and naturally occurring sources may account for some of the lead loading found in the local watershed. Automobile related sources and urbanized land use are also potential sources within the City of Walnut. Lead deposited on impervious surfaces such as a street is mobilized by surface runoff and transported to the receiving waters.

pH

The CWA 303(d) list identifies pH as causing impairment in both San Jose Creek Reach 1 and Walnut Creek Wash. pH is a measure of acidic or basic chemistry properties of water. The scale is a range from 0 to 14 with 7 being the measurement that reflects pure water at a temperature of 25^{o}C. pH measurements of <7 indicate that the water sample is acidic whereas measurements of >7 are considered to have basic chemistry properties. Natural waters tend to have a pH slightly higher than 7, and are very sensitive to major shifts in either the acidic or basic direction. A number or environmental

conditions can impact the pH of a receiving water including natural or manmade conditions. MS4 discharges may contribute to changes in pH in receiving waters.

Selenium

Selenium has been identified as a Category 1 priority pollutant per the MS4 permit. Selenium in the San Jose Creek is suspected to likely be from a natural source. Limited data is available to verify this assumption. However, because there are no industrial facilities that manufacture products known to utilize selenium in the production process within the City, natural sources are the only apparent remaining potential source. Selenium is an element (Se on the periodic table) that is found naturally in local marine sedimentary soils. The local watershed area is known to have marine sedimentary soils. While the source is natural in nature the possibility that urbanization in the watershed has increased mobilization and deposition of the element in the receiving waters. The source may also be in the soft bottom portion of the San Jose Creek. Further studies are required to better understand the source of selenium. The IMP portion of this plan will be utilized as a tool to determine if the City of Walnut's MS4 discharges are contributing to the Selenium impairment in the San Jose Creek.

Total Dissolved Solids

Total Dissolved Solids (TDS) includes both organic and inorganic particles that are fully suspended in water. TDS identified in the watershed may be naturally occurring but can also be from compounds that a mobilized by urban runoff. Residential development is a known potential source of TDS in storm water and non-storm water runoff.

Toxicity

Toxicity in receiving waters is defined as when chemical properties of water adversely affect organism's ability to normally survive. Chronic Toxicity is identified as a level of toxicity that results in an impact in an organism's ability grow or reproduce, but not result in death. Toxicity at a level that results in death of an organism is classified as acute toxicity. Toxicity is not limited to concentrations of a singular pollutant, and can be caused by a number of pollutants. Urban runoff has been identified as a potential source of toxicity in MS4 discharges.

3.0- Minimum Control Measures

The MS4 Permit requires permittees to implement policies and practices that will aid in the improvement of water quality in the City and WMA. These policies and practices are defined as Minimum Control Measures (MCMs) and are outlined in section VI.D.5 for Non-LACFCD permittees. Many of the City's existing MCMs were implemented under the previous permit, but latest permit has expanded some of the requirements for the existing programs. Per the MS4 Permit, the City of Walnut is required to have the following MCM Programs.

- Public Information and Participation Program
- Industrial/Commercial Facilities Program
- Planning and Land Development Program
- New Development/Re-Development Program
- Development Construction Program
- Public Agency Activities Program
- Illicit Connection and Illicit Discharge Elimination Program

3.1- Public Information and Participation Program

Each permittee is required to implement a Public Information and Participation Program (PIPP) under the MS4 Permit. Improving public education and awareness is likely to have a positive impact on water quality by changing activities or actions of the public that negatively impact water quality. The PIPP encompass a number of outreach and education opportunities and expected to have a positive effect in water quality. The MS4 Permit identifies the primary goals of the PIPP as follows:

- The PIPP shall measurably increase the knowledge of the target audiences about the MS4, and the adverse impacts of storm water pollution on receiving waters and potential solution to mitigate the impacts.

- The PIPP shall also measurably change the waste disposal and storm water pollution generation behavior of target audiences by developing and encouraging the implementation of appropriate alternatives.

- The PIPP shall involve and engage a diversity of socio-economic groups and ethnic communities in Los Angeles County to participate in mitigating the impacts of storm water pollution.

The City of Walnut is approaching compliance with the MS4 Permit as a singular permittee implementing an individual WMP. The City currently maintains a PIPP program that was implemented under the previous MS4 Permit. Much of the same requirements from the previous permit are included in the latest permit, however this document will describe the program moving into the current permit term.

3.1.1- Public Reporting

The City currently contracts with Los Angeles County for maintenance of catch basins, storm drain and sanitary sewer networks. The City of Walnut is a contract city and utilizes the 888-CLEAN-LA hotline for its general public reporting contact in coordination with the Los Angeles County Maintenance Crews.

County hotline and City contact information for the Environmental Department and the Building and Safety Department is made available on the City's Website on the Storm Water pollution Prevention page. Contact information related to public reporting of storm water issues is also provided in pamphlets available at the City Hall and the City's Environmental Services Guide page on the City Website. The City maintains and will continue to maintain current contact information as updates are made necessary.

3.1.2- Public Outreach

The City's Environmental Services department hosts a community outreach booth at the Walnut Family Festival. At this booth, the City provides educational material regarding the importance of Walnut's commitment to storm water pollution prevention as well as specific information on how Walnut residents can help improve or reduce impacts on the local environment. Flyers on the importance of proper pet waste are distributed along with promotional pet waste bag dispensers to promote picking up after pets. The City also provides used oil containers for residents to facilitate the proper disposal of used oil, keeping it out of our storm water system.

In additional to the booth at the Family Festival, the City provides environmental information and storm water education material at all major city events including: Concerts in the Park, National Night Out, Fourth of July, and Arbor Day.

The City of Walnut also conducts two free composting workshops per year through SmartGardening. This workshop covers backyard composting as well as water-wise gardening. An information table and storm water education is provided at these events as well.

3.1.3- Public Education Materials

The City of Walnut develops a recreation brochure on a quarterly basis which has a section dedicated to environmental issues in Walnut. This section highlights environmental topics including storm water pollution. This section also promotes the "Go Green with Walnut" page of the City's website. The "Go Green with Walnut" page is where residents can find educational material related to environmental issues. The City also produces a quarterly mailer that is sent to every resident four times a year.

On the "Go Green with Walnut" page there is a specific page for Storm Water Pollution Prevention. This page provides a brief overview of the storm drain system and the importance of keeping common forms of storm water pollution out of the system. Here residents can find information on ways that they can contribute to Walnut's commitment to protect the environment and water resources. Listed are best management practices (BMPS) that they can implement as residents and business owners.

There are a number of helpful links to information sheets that outline proper procedures for handling and disposal of vehicle waste fluids, household waste materials, construction waste materials, gardening related materials and animal wastes. Copies of these information sheets have been included in Attachment C of this document. These information sheets are also distributed to local auto parts stores, home improvements centers, garden centers and pet supply stores. Additionally, the City includes environmental related education on a City mailer that is sent out quarterly.

The City's storm water pollution prevention page is easily accessible from the City Services tab on the City's website. The page is maintained by City staff and continuously updated with new information as it becomes available. The following is a direct link to the City's storm water pollution prevention page:

http://www.ci.walnut.ca.us/general.asp?id=282

The environmental services department is present at all of the City's special events where material regarding the City's storm water pollution prevention program is handed out. All the city facilities have access to and post the material for patrons. An environmental services brochure was created by the City which contains an overview of the storm water pollution prevention program and is passed out at the City facilities.

3.1.4- Storm Water Education in Schools

City staff works closely with environmental clubs at local educational sites. The City works with student groups at the high school, middle school, and elementary school levels to host park cleanup events twice a year. The City also interacts with other student community groups including the Boy Scouts of America and Girl Scouts of America which have partnered with the City of Walnut to host additional educational events throughout the year. Education material is made available to all of the local environmental clubs and the school district, as well as available at all of the park clean up events.

The City reaches out to the environmental club participants when looking for volunteers for the environmental services booth at the Family Festival. Staff is available for outreach to the local school districts and continuing to foster that partnership.

3.1.5- PIPP Outreach to Multi Cultural Communities

The City of Walnut has a number of culturally diverse communities that live and/or work in the City. Effectively communicating educational materials related to storm water quality can be a challenge when there is a language barrier. To address this hurdle, multilingual City staff located at City Hall are available to translate and answer any questions including environmental issues such as storm water pollution. Members of city staff are fluent in Spanish, Mandarin, Tagalog, German, Japanese, and Korean. All members of the public with questions or concerns relating to storm water or any other topic are encouraged communicate with City staff.

3.2- Industrial/Commercial Facilities Program

The industrial Facilities Program is designed to prevent illicit discharges from industrial and commercial facilities into the MS4 and receiving waters. It will also reduce storm water discharges from industrial and commercial facilities and prevent industrial and commercial discharges from causing or contributing to a violation of receiving water limitations. The MS4 permit identifies the minimum components of this program to include tracking, education, inspection and enforcement.

3.2.1- Industrial/Commercial Facilities Tracking

The City's tracking program will include an electronic based inventory that will identify all qualifying commercial and industrial facilities within the city boundaries. Information regarding the facility location and operations will be logged into the tracking system.

The City land use is primarily dedicated to single family residential and open space, allowing for only a small portion of the City to be utilized for commercial and industrial facilities. The MS4 Permit recommends that a Geographic Information System (GIS) is utilized for this task, however due to the relatively small number of these facilities a spreadsheet program will be utilized to track qualifying facilities. As the city develops its GIS program, the tracking information gathered as part of this plan will be reassessed to determine if adding a GIS element to the tracking program will improve effectiveness of the system.

The MS4 Permit requires that commercial and industrial facilities that are tracked. The following list outlines four categories that tracking is mandatory for.

1. Commercial Facilities
    - Restaurants
    - Automotive service facilities (including facilities located at automotive dealerships)
    - Retail Gasoline
    - Nurseries and Nursery Centers
2. USEPA "Phase I" Facilities [as specified in 40 CFR §122.26(b)(14)(i)-(xi)]
3. Other federally-mandated facilities [as specified in 40 CFR §122.26(d)(2)(vi)(C)]
    - Municipal Landfills
    - Hazardous waste treatment, disposal and recovery facilities
    - Industrial facilities subject to section 313 "Toxic Release Inventory" reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986 (EPCRA) [42 U.S.C. § 11023]
4. All other commercial or industrial facilities that the permittee determines may contribute a substantial pollutant load to the MS4.

The MS4 Permit requires the City to track minimum parameters under the commercial and industrial facilities program. Not all of this information is currently tracked by the City. Although the City has a limited number of commercial facilities and no industrial facilities, gathering and organizing the required data is a demanding task. Upon receipt of the Regional Boards approval of the City's WMP, the City will begin the process of organizing and centralizing all available tracking information.

Outstanding tracking information will be assessed and gathered within a reasonable time frame. Once a complete inventory is developed, the City's Planning department will maintain and update the database on an as needed basis with the frequency of updates occurring at least annually. The information for new Commercial/Industrial site data will be gathered from the City's permitting program and field inspections.

The following list includes the minimum parameters to be included in the tracking program:

- Name of facility
- Name of owner/ operator and contact information
- Address of Facility (physical and mailing)
- North American Industry Classification System (NAICS) code
- Standard Industrial Classification (SIC) code
- A narrative description of the activities performed and/or principal produces produced
- Status of exposure of materials to storm water
- Name of receiving water
- Identification of whether the facility is tributary to a CWA §303(d) listed water body segment or water body segment subject to a TMDL, where the facility generates pollutants for which the water body segment is impaired.
- Ability to denote if the facility is known to maintain coverage under the State Water Board's General NPDES Permit for the Discharge of Storm water Associated with Industrial Activities (Industrial General Permit) or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Water Board pertaining to storm water discharges.
- Ability to denote if the facility has filed a No Exposure Certification with the State Water Board.

3.2.2- Industrial/Commercial Education

Per section VI.D.6.c, the City of Walnut is required to notify commercial and industrial site owners/operators of applicable BMPs based on the activities that take place at the site. City Staff will utilize the commercial and industrial facilities tracking data base to identify sites requiring notice. Notices sent will include a list of BMPs and related BMP implementation information applicable to the commercial site. Notices will be directed to the owner/operator of each of the inventoried commercial and industrial sites. This notice will occur at least once during the five year period of the MS4 permit. The City Environmental Services Department will utilize the commercial/industrial facility tracking database to document when such notification is made.

In coordination with the City's BMP education notice, the City will provide all commercial/industrial facility owners with contact information for a City Business Assistance Program. The program will provide additional information to businesses, upon request, to facilitate their efforts in the reduction of pollutant discharges. The Business Assistance Program will also further target business sectors or small businesses that have been determined as potential sources of pollutant loads to the MS4 or receiving water. The City will utilize the results from the monitoring of MS4 outfalls and receiving waters to better direct efforts in reducing or eliminating pollutant loading.

Additional technical information provided to businesses in the City of Walnut may include the following items listed below:

- Provision of education materials
- Telephone and/or e-mail consultation
- On-site technical assistance

A determination of what will be provided to the business will be made on a case by case basis and will be tailored to the needs of the businesses that fit the criteria for providing additional assistance. All additional information and support provided to will be at the discretion of the City.

3.2.3- Commercial Facility Inspection

Per section VI.D.6.d of the MS4 permit the City of Walnut will implement a commercial facility inspection program. Inspections at all of the facilities identified in the City's database will take place at least twice during the five year term of the MS4 Permit. The first inspection will take place no later than December 28, 2014, two years after the effective date of the permit (December 28, 2013). The second inspection will have a minimum interval of at least six months following the first inspection.

Parameters to be included in the above mentioned inspections are as follows:

- Proper Implementation of storm water and non-storm water BMPs
- Proper maintenance of storm water and non-storm water BMPs
- Verification of effective source control BMP implementation
- Review/Enforcement for proper BMP implementation in areas that drain to a Significant Ecological Areas (SEA), water body subject to a TMDL or CWA § 303(d) listed impaired water body.
- Require additional BMPs if necessary

In the past City inspectors have performed random inspections on commercial businesses that the City has identified as having a higher potential for contributing to storm water pollution. These random inspections were not previously tracked. The City will develop a system to track and log these drop in type inspections for recording purposes.

3.2.4- Industrial Facility Inspection

Per section VI.D.6.e of the MS4 permit the City of Walnut will implement an industrial facility inspection program. Currently, there are no Industrial facilities within the Jurisdictional boundaries of the City. Should that change in the future the following inspection program will be implemented.

Inspections at all of the facilities identified in the City's database will take place at least once during the five year term of the MS4 Permit. The deadline established by the MS4 permit of December 28, 2015 will not apply to the City of Walnut due to the lack of industrial facilities at the time of adoption of this plan. Should that change, the City will inspect the industrial site within a reasonable time period after the site begins normal operations. After the initial inspection, all facilities that have not filed a No Exposure Certification with the State Water board are subject to a second mandatory inspection to take place at least six months after the first inspection.

As part of the first industrial facility inspection, the City will identify if a facility has filed a No Exposure Certification with the State Water Board. Approximately three to four years after the effective date of the MS4 Permit, the City will evaluate its inventory of industrial facilities and perform a secondary inspection for at least 25% of the facilities identified to have a No Exposure Certification if any exist in the City.

Industrial facilities that have been inspected by the Regional Water Board within prior a 24 period are not required to be inspected. The City will review the State Water Board's Storm Water Multiple Application and Report Tracking System (SMARTS) database on an annual basis if an industrial site opened in the City. If a facility is subject to a second inspection, it shall take place approximately four years following the effective date of the MS4 Permit. Similar to the conditions of the first inspection, a second inspection is not required if the Regional Water Board has previously inspected the site within a 24 month period.

Parameters to be included in the above mentioned inspections are as follows:

- Verify Waste Discharge Identification (WDID) number for coverage under the Industrial General Permit.
- Verify that a Storm Water Pollution Prevention Plan (SWPPP) is on site; or
- Verify the site has applied for, and has received a current No Exposure Certification for facilities subject to the requirement
- Verify BMPs are effectively implemented in compliance with municipal ordinances. Facilities must implement the source control BMPs identified in table 3-1 below.

Applicable industrial facilities identified as not having either a current WDID or No Exposure Certification shall be notified that they must obtain coverage under the Industrial General Permit and shall be referred to the Regional Water Board per the Progressive Enforcement Policy identified in part VI.D.2.

Table 3-1

Industrial Facility BMP Applications	
Pollutant-Generating Activity	**BMP Narrative Description**
Unauthorized Non-Storm water Discharges	Effective elimination of non-storm water discharges
Accidental Spills/Leaks	Implementation of effective spills/leaks prevention and response procedures
Vehicle/Equipment Fueling	Implementation of effective fueling source control devices and practices
Vehicle/Equipment Cleaning	Implementation of effective equipment vehicle cleaning practices and appropriate wash water management
Vehicle/Equipment Repair	Implementation of effective vehicle/equipment repair practices and source control devices
Outdoor Liquid Storage	Implementation of effective outdoor liquid storage control devices and practices
Outdoor Equipment Operations	Implementation of effective outdoor equipment source control devices and practices
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices

Table 3-1 (Continued)

Industrial Facility BMP Applications	
Pollutant-Generating Activity	**BMP Narrative Description**
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/handling practices and appropriate control measures
Building and Grounds Maintenance	Implementation of effective facility maintenance practices
Parking/Storage Area Maintenance	Implementation of effective parking /storage area designs and housekeeping/maintenance practices
Storm water conveyance system maintenance practices	Implementation of proper conveyance system operation and maintenance protocols
Sidewalk Washing	Remove trash, debris, and free standing oil/grease spills/leaks (use absorbent material, if necessary) from the area before washing; and Use high pressure, low volume spray washing using only potable water with no cleaning agents at an average usage of 0.006 gallons per square feet of sidewalk area.
Street Washing	Collect and divert wash water to the sanitary sewer – publically owned treatment works (POTW) Note: POTW approval may be needed.

3.3- Planning and Land Development Program

Per section VI.D.7 the City of Walnut will implement a Planning and Land Development Program for all new development and redevelopment projects. The goal of the Planning and Land Development Program is to lessen the potential water quality impact from new or redevelopment through implementation of water quality driven development practices.

The program will promote smart growth practices that minimize adverse impacts from storm water runoff on the biological integrity of Natural Drainage Systems, and the beneficial uses of water bodies in accordance with requirements under the California Environmental Quality Act (CEQA). Future developments will focus on minimizing the percentage of impervious surfaces and utilize Low Impact Development features and BMPs to maintain a site's predevelopment hydrology in accordance with the MS4 Permit requirements.

3.3.1- Low Impact Development Ordinance

On November 13, 2013, the Walnut City Council adopted a Low Impact Development (LID) Ordinance in compliance with the requirements VI.C.4.c.ii. and section VI.D.7 of the MS4 permit. A copy of the adopted ordinance is included in Attachment B of this document. The LID Ordinance is an enforcement

tool the City will utilize when reviewing and permitting development projects that qualify under the triggering requirements of the ordinance.

The list below outlines project parameters that qualify for implementation of LID design requirements under the City of Walnut's LID Ordinance.

- All Development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.
- Industrial parks 10,000 square feet or more of surface area.
- Commercial malls 10,000 square feet or more of surface area.
- Retails gasoline outlets with 5,000 square feet or more of surface area.
- Restaurants (SIC of 5812) with 5,000 square feet or more of surface area.
- Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.
- Streets and roads construction of 10,000 square feet or more of impervious surface area.
- Automotive service facilities (SIC of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.
- Projects located in or directly to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
    - Discharge storm water runoff that is likely to impact a sensitive biological species or habitat; and
    - Create 2,500 square feet or more of impervious surface area
- Single family hillside homes (see ordinance for definition)
- Redevelopment Projects
    - Land Disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.
    - Where redevelopment would result in an alteration to more than 50% of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction storm water quality control requirements, only the alteration must be mitigated, and not the entire development.
    - Where redevelopment results in an alteration of less than 50% of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction storm water quality control requirements, only the alteration must be mitigated, and not the entire development.
    - Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

- Existing single-family dwelling and accessory structures area exempt from the redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

3.3.2- New Development/Redevelopment Project Performance Criteria

Qualifying development projects will be subject to storm water pollution control requirements including retention of all storm water resulting from a specified rain event as outlined in more detail in the City's LID ordinance. The City Planning department will work with developers to ensure that all requirements set forth in the LID ordinance are met.

Should a project applicant find that technical infeasibilities prevent a new or re-development project from meeting the storm water pollution control requirements, they must demonstrate to the City that the project cannot retain 100% of the water resulting from the design storm volume on-site. The technical infeasibility demonstration must include the maximum application of City approved BMPs. Such a demonstration would include a site-specific hydrologic and/or design analysis conducted and endorsed by a registered professional engineer, geologist, architect and/or landscape architect.

Alternative compliance measures are available in instances of technical infeasibility or if there is the opportunity for regional ground water replenishment. These options include on-site biofiltration, offsite infiltration, ground water replenishment projects, and offsite retrofits to existing development.

3.4- Development Construction Program

The MS4 Permit requires that the City of Walnut develop and implement a Development Construction Program. The general nature of construction activities has a high potential for discharges of pollutants and/or sediment from a site. Conditions on construction sites often include potential sources of pollution including but not limited to disturbed soils, stockpiled materials and construction vehicles. General construction activities or storm water surface flow can often result in transport and discharge of these pollutants. It is the internet of the development construction program to prevent discharges from construction sites to the MS4.

The program shall prevent illicit construction-related discharges of pollutants into the MS4, require the implementation and maintenance of structural and non-structural BMPs to reduce pollutants in storm water runoff from construction sites, reduce construction site discharges of pollutants to the MS4 or to the maximum extent practicable, and prevent construction site discharges to the MS4 from causing or contributing to a violation of water quality standards. The Development Construction Program shall also include an enforceable erosion control and sediment control ordinance for all construction sites that disturb soil.

3.4.1- Construction Sites of Less Than One Acre

Construction sites of less than one acre are required to comply with the provisions of this section and section VI.D.8.d of the MS4 Permit. Construction activities covered by this section include but are not limited to grading, vegetation clearing, soil compaction, paving re-paving and linear underground/overhead projects (LUPs).

The City of Walnut will require that all qualifying construction sites implement the BMPs identified in Table 3-2 in an effective manner to prevent erosion and the discharge of construction wastes.

The City will maintain an inventory of construction sites with soil disturbing activities requiring a permit. The City will conduct inspections at these sites on an as-needed basis. When determining the need for inspection the City will take into account factors that may result in the discharge of construction site pollutants. Factors in the construction site assessment may include soil erosion potential, site slope, project size and type, receiving water body sensitivities, past record of construction site compliance by the operator of the construction site. The City will also utilize a progressive enforcement policy to ensure that construction sites found to be out of compliance are brought back into compliance with the requirements of the MS4 Permit.

Table 3-2

Applicable Set of BMPs for All Construction Sites	
BMP Type	**BMP**
Erosion Control	Scheduling
	Preservation of Existing Vegetation
Sediment Controls	Silt Fence
	Sand Bag Barrier
	Stabilized Construction Site Entrance/Exist
Non-Storm Water Management	Water Conservation Practices
	Dewatering Operations
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management
	Concrete Waste Management
	Sanitary/Septic Waste Management

3.4.2- Construction Site Inventory

The City of Walnut will develop and maintain permit tracking data base for all grading, encroachment, demolition, building and construction permits issued by the City. The database will be an electronic system that includes the following site specific information.

- Owner and Contractor Contact Information
- Site location, size, status and disturbed area
- Proximity of Water Bodies to the Construction Site
- Significant threat to water quality status (Appendix 1 of the Construction General Permit)
- Current Phase of Construction
- Required Inspection Frequency
- Start and anticipated end date
- Is the project covered under the Construction General Permit
- Date of City approval of the Erosion and Sediment Control Plan (ESCP)
- Post Construction Structural BMPs subject to operation and maintenance requirements

3.4.3- Construction Plan Review and Approval Procedures

The City of Walnut will review and approve relevant construction documents prior to issuing permits. Each operator of a construction activity within the City's jurisdiction will be required to prepare and submit to the City, for review and approval, an Erosion and Sediment Control Plan (ESCP). An ESCP shall include site specific BMPs that are appropriate for the activities that will take place on the site and elements of a Storm Water Pollution Prevention Plan (SWPPP). SWPPPs that conform to the requirements of the Construction General Permit may be accepted as a project's ESCP.

ESCP Shall include the Following:

- Methods used to minimize the foot print of disturbed area and to prevent soil compaction of outside of the disturbed area
- Methods used to protect native vegetation and trees
- Sediment and Erosion Control
- Controls to prevent tracking on and off site
- Non-storm water controls
- Materials Management
- Spill Prevention and Control
- Waste Management
- Site Risk Level as classified by the Construction General Permit
- BMP Selection Rationale including expected soil loss
- ESCP Developed and certified by QSD
- BMPs are designed by a California licensed Engineer

Additionally the City will require that the landowner or the landowner's agent include and sign the following certification statement on the ESCP:

> *"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/ or inaccurate information, failing to update the ESCP to reflect current conditions or failing to properly and/or adequately implement the ESCP may result in revocation of grading and/ or other permits or other sanctions provided by law."*

Prior to issuing a grading or building permit, The City of Walnut will verify that the construction site operators have existing coverage under applicable permits, including, but not limited to the State Water Board's Construction General Permit, and State Water Board 401 Water Quality Certification.

The City of Walnut will also develop and implement an ESCP checklist for City staff to use when conducting a document review of each ESCP.

3.4.4- BMP Implementation Requirements

The City of Walnut will develop and implement a construction site BMP program that adequately addresses the potential for construction site pollutants reaching the City's MS4. The City will utilize the Los Angeles County Department of Public Works BMP Design Manual as a technical reference for construction site operators to select, design and maintain BMPs on their construction site.

All construction sites shall undergo a risk assessment during the ESCP development process. The risk assessment shall identify a projects risk level on a low risk (Risk 1) to high risk (Risk 3) scale. The project risk assessment will be based on the potential for erosion from the site and the sensitivity of the receiving water. Receiving waters listed on the Clean Water Act (CWA) section 303(d) list for sediment or siltation are considered to be high risk. Receiving water bodies that have beneficial uses of SPWN, COLD and MIGR will also be categorized high risk. The risk assessment shall conform to the procedures defined in Appendix 1 of the California Construction General Permit. Minimum BMPs for high risk construction sites shall include BMPs identified in Table 3-3.

Table 3-3

Enhanced BMPs for High Risk Sites	
BMP Type	**BMP**
Erosion Controls	Hydraulic Mulch
	Hydroseeding
	Soil Binders
	Straw Mulch
	Geotextiles and Mats
	Wood Mulching
	Slope Drains
Sediment Controls	Silt Fence
	Fiber Rolls
	Sediment Basin
	Check Dam
	Gravel Bag Berm
	Street Sweeping and / or Vacuum
	Sand Bag Barrier
	Storm Drain Inlet Protection
Additional Controls	Wind Erosion Controls
	Stabilized Construction Entrance/ Exit
	Stabilized Construction Roadway
	Entrance/ Exit Tire Wash
	Advanced Treatment Systems
Non-Storm Water Management	Water Conservation Practices
	Dewatering Operations (Ground water dewatering only under NPDES Permit No. CAG994004)
	Vehicle and Equipment Washing
	Vehicle and Equipment Fueling
	Vehicle and Equipment Maintenance
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management

BMPs identified in Table 3-4 and the List of Minimum BMPs for Paving Projects shall be utilized for all construction sites of one acre or more and paving projects.

Table 3-4

Applicable Set of BMPs for All Construction Sites	
BMP Type	**BMP**
Erosion Controls	Hydraulic Mulch
	Hydroseeding
	Soil Binders
	Straw Mulch
	Geotextiles and Mats
	Wood Mulching
Sediment Controls	Fiber Rolls
	Gravel Bag Berm
	Street Sweeping and / or Vacuum
	Storm Drain Inlet Protection
	Scheduling
	Check Dam
Additional Controls	Wind Erosion Controls
	Stabilized Construction Entrance/ Exit
	Stabilized Construction Roadway
	Entrance/ Exit Tire Wash
Non-Storm Water Management	Vehicle and Equipment Washing
	Vehicle and Equipment Fueling
	Vehicle and Equipment Maintenance
Waste Management	Material Delivery and Storage
	Spill Prevention and Control

Paving Project Minimum BMPs

- Restrict paving and re-paving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions.
- Install gravel beds and filter fabric or to the equivalent inlet protection at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat.
- Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or receiving waters.
- Minimize non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
- Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
- Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly.
- Cover the “Cold-mix” asphalt (i.e. per-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm.
- Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
- Minimize airborne dust by using water spray or other approved dust suppressants during grinding.

Paving Project Minimum BMPs (continued)

- Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or receiving waters.
- Protect stockpiles with a cover or sediment barriers during rain.

All ESCPs submitted to the City shall include BMP cut sheets, design guidelines and maintenance expectations that are approved by the City of Walnut. BMPs design guidelines shall conform to the Los Angeles County Department of Public Works BMP Design Manual or a City approved equal.

3.4.5- Construction Site Inspection

The construction site inspection program is critical to the Development and Construction Program. Construction site inspections aid the City in verifying and enforcing the requirements of an ESCP or standard practices focused on maintain water quality in the City. The City of Walnut will continue to implement a construction site inspection program and train inspectors on NPDES related concerns that may originate from construction sites.

Inspection frequencies will vary based on construction site size and activities. Sites of one acre or larger that discharge to a receiving water listed on the CWA section 303(d) for sedimentary or turbidity list, or determined to pose a significant threat to water quality shall be inspected at minimum, prior to a rain event of two or more consecutive days with greater than 50% chance of rain fall forecasted by NOAA, within 48 hours of a ½-inch rain event and at least once every two weeks. All other construction sites of one acre or more shall be inspected at least monthly.

The City will inspect construction sites during all phases of construction. The first inspection will take place prior to disturbance of soil to ensure that all required BMPs are in place. Site inspections shall also take place during active construction activities to ensure that all applicable BMPs are in place and properly maintained. A final inspection shall take place as a condition of, and prior to issuing a Certificate of Occupancy. The final inspection will confirm that the site has reached final stabilization and that all temporary erosion and sediment BMPs are removed.

Construction site inspections shall include:

- Verification of active coverage under the Construction General Permit (sites >1 acre)
- Review of applicable ESCP and verification of installation of all selected BMPs
- Assessment of appropriateness of the planned and installed BMPs
- Observation of record keeping of non-storm water discharges
- Development of a written or electronic inspection report
- Tracking of inspections

When a site inspection results in observed deficiencies in an ESCP implementation or other NPDES related requirements, the City will notify the construction site operator of the issues identified. The site operator will be assigned a reasonable time period to fix the issue prior to the enforcement being escalated through the progressive enforcement policy.

3.5- Public Agency Activities

The City of Walnut is required to develop and implement a Public Agency Activities Program. It is the intent of this program to minimize storm water pollution impacts from city owned or operated facilities and activities. The program will also identify opportunities to reduce storm water pollution impacts from areas of existing development.

Requirements for Public Facilities and Activities Program shall include the following:

- Public Construction Activities Management
- Public Facilities Inventory
- Inventory of Existing Development for Retrofitting Opportunities
- Public Facility and Activity Management
- Vehicle and Equipment Wash Areas
- Landscape, Park, and Recreational Facilities Management
- Storm Drain Operational and Maintenance
- Emergency Procedures
- Municipal Employee and Contractor Training

3.5.1- Public Construction Activities Management

The City of Walnut's public construction activities shall conform to the Planning and Development (Section 3.3) and Development Construction Programs (Section 3.4) included in this document. The City will require that all contractors and construction related activities that take place under a City contract will conform to the requirements of the MS4 Permit and the California Construction General Permit.

3.5.2- Public Facility Inventory

The City will develop an inventory of all City owned or operated facilities that are potential sources of storm water pollution within its jurisdiction. Facilities that are required to be tracked are as follows:

- Chemical Storage Facilities
- Composting Facilities
- Equipment Storage and Maintenance Facilities
- Fueling or Fuel Storage Facilities
- Material Storage Yards
- Pesticide Storage Facilities
- Fire Stations
- Public Restrooms
- Public Parking Lots
- Public Pools
- Public Parks
- Public Works Yard
- Vehicle Storage and Maintenance Yards
- Storm Water Management Facilities
- All Other City Owned Facilities

Not all of the facilities listed in the MS4 Permit are included in the above list. City owned facilities excluded from the list are not found within the City's jurisdiction.

Of the facilities identified in this document, the following minimum information shall be tracked by the City:

- Name of the Facility
- Name of the Facility Manager
- Address of the facility (physical and mailing)
- Narrative of the activities performed at the site
- If the site has coverage under the Industrial General Permit

The City will update the inventory at least once during the five year term of the MS4 Permit.

3.5.3- Inventory of Existing Retrofitting Opportunities

The MS4 Permit requires that Permittees develop an inventory of retrofitting opportunities with in the public right of way. The inventory of retrofitting opportunities will be utilized by permittees when considering potential projects. All opportunities considered for retrofitting are required to undergo a screening process. Factors that may be considered when screening a project are outlined below.

- Feasibility
- Cost Effectiveness
- Pollution Removal Effectiveness
- Tributary Area Potentially Treated
- Maintenance Requirements
- Land Owner Cooperation
- Neighborhood Acceptance
- Aesthetic Qualities
- Potential Improvements to Public Health and Safety

Projects determined to have high levels of feasibility and effectiveness in water quality improvement shall be given the highest priority for implementation. High priority projects should be considered when off-site mitigation is required for a re-development or new development project. The City of Walnut will work with residents and land owners to develop and implement an effective retrofitting program. The City will educate residents and landowners of the benefits for implementing BMPs through the education and outreach program. City staff will work with owners of development projects subject to the requirements of the LID Ordinance to ensure that feasible opportunities for water quality improvement are maximized. At the discretion of the City, retrofit projects may also be included in other public infrastructure projects.

3.5.4- Public Agency Facility and Activity Management

Permittees are required to obtain coverage under the Industrial General Permit for all permittee owned or operated facilities that require coverage based on activities that take place at the sites. The City of Walnut does not currently have any public facilities that require separate coverage under the Industrial General Permit.

All other City owned or operated sites shall implement activity based BMPs identified in Table 3-5:

Table 3-5

BMPs for Public Agency Facilities and Activities	
Activity	**BMP**
General BMPs	Scheduling and Planning
	Spill Prevention and Control
	Sanitary/Septic Waste Management
	Material Use
	Safer Alternative products
	Vehicle/Equipment Cleaning, Fueling and Maintenance
	Illicit Connection Detection, Reporting and Removal
	Illegal Spill Discharge Control
	Maintenance Facility Housekeeping Practices
Flexible Pavement	Asphalt Cement Crack and joint Grinding/ Sealing
	Asphalt Paving
	Structural Pavement Failure (Digouts) Pavement Grinding and Paving
	Emergency Pothole Repairs
	Sealing Operations
Rigid Pavement	Portland Cement Crack and Joint Sealing
	Mudjacking and Drilling
	Concrete Slab and Spall Repair
Slope/Drains/ Vegetation	Shoulder Grading
	Non-landscape Chemical Vegetation Control
	Non-landscape Mechanical Vegetation Control/
	Mowing
	Nonlandscape Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal
	Fence Repair
	Drainage Ditch and Channel Maintenance
	Drain and Culvert Maintenance
Litter/ Debris/ Graffiti	Sweeping Operations
	Litter and Debris Removal
	Emergency Response and Cleanup Practices
	Graffiti Removal
Landscaping	Chemical Vegetation Control
	Manual Vegetation Control
	Landscape Mechanical Vegetation Control
	Landscape Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal
	Irrigation Line Repairs
	Irrigation (Watering), Potable and Non-potable
Environmental	Storm Drain Stenciling
	Roadside Slope Inspection
	Roadside Stabilization
	Storm Water Treatment Devices
	Traction Sand Trap Devices

Table 3-5 (Continued)

BMPs for Public Agency Facilities and Activities	
Activity	**BMP**
Bridges	Welding and Grinding
	Sand Blasting, Wet Blast with Sand Injection and Hydroblasting
	Painting
	Bridge Repairs
Other Structures	Pump Station Cleaning
	Tube and Tunnel Maintenance and Repair
	Tow Truck Operations
	Toll Booth Lane Scrubbing Operations
Electrical	Sawcutting and Loop Installation
Traffic Guidance	Thermoplastic Striping and Marking
	Paint Striping and Marking
	Raised/ Recessed Pavement Marker Application and Removal
	Sign Repair and Maintenance
	Median Barrier and Guard Rail Repair
	Emergency Vehicle Energy Attenuation Repair
Storm Maintenance	Minor Slides and Slipouts Cleanup/ Repair
Management and Support	Building and Grounds Maintenance
	Storage of Hazardous Materials (Working Stock)
	Material Storage Control (Hazardous Waste)
	Outdoor Storage of Raw Materials
	Vehicle and Equipment Fueling
	Vehicle and Equipment Cleaning
	Vehicle and Equipment Maintenance and Repair
	Aboveground and Underground Tank Leak and Spill Control

**These BMPs may not all apply to the public facilities and activities that are conducted by the City of Walnut. These have been included in the WMP to conform to the requirements of the MS4 Permit.*

3.5.5- Vehicle and Equipment Washing

All vehicle and equipment washing activities that take place at a City owned or maintained facility will conform to the requirements of the MS4 Permit. Per section VI.D.9.f of the MS4 Permit, the City of Walnut will implement and maintain applicable BMPs identified in table 3-5 of this document.

All vehicles washing of public vehicles and equipment takes place at the City yard. The City retains all runoff from washing activities in an on-site take which is emptied on an as-needed basis. The contents of the tank are hauled off site and disposed outside of the City of Walnut in accordance with all local and state requirements.

No vehicle or equipment maintenance takes place at a City owned or operated facility. City staff are trained to address spills and prevent discharge of pollutants to the MS4. The City also works with Los Angeles County Fire and Public Works to provide spill response for spills that are beyond the City's ability to mitigate.

3.5.6- Landscape, Park, and Recreational Facilities Management

All landscape, park and recreational facilities that are City owned or maintained will conform to the requirements of the MS4 Permit. Per section VI.D.9.g of the MS4 Permit, the City of Walnut will implement and maintain applicable BMPs identified in Table 3-5 of this document.

The MS4 Permit requires that the City implement an Integrated Pest Management (IPM) program. The intent of the IPM is to limit or prevent the impact on water quality from the use of pesticides. The IPM is required to have the following provisions:

- Pesticides are only used if monitoring indicates that they are needed, and pesticides are applied according to applicable permits and established guidelines.
- Treatments are made with the goal of removing only the target organism.
- Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial non-targeted organisms, and the environment.
- The use of pesticides, including Organophosphates and Pyrethroids, does not threaten water quality.
- Partner with other agencies and organizations to encourage the use of IPM.
- Adopt and verifiably implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and encouraging the use of IPM techniques (including beneficial insects) for Public Agency Facilities and Activities.
- Policies, procedures, and ordinances shall include commitments and a schedule to reduce the use of pesticides that cause impairment to surface waters by implementing the following procedures:
    - Prepare and annually update an inventory of pesticides used by all internal departments, divisions, and other operational units.
    - Quantify pesticides use by staff and hired contractors.
    - Demonstrate implementation of IPM alternatives where feasible to reduce pesticide use.

As part of a normal landscaping maintenance program, the City does utilize fertilizers. The City of Walnut does not use pesticides or herbicides on a regular basis. On an as needed basis, pesticides are used to eliminate fire ants and gofers. Pesticides are applied by qualified staff that have been trained on the proper application methods and potential impacts of the pesticides utilized. Pesticides and fertilizers are not applied prior to forecasted rain and irrigation is ceased during the days following application. All use of pesticides is recorded and reported to the Los Angeles County Agriculture Commission.

3.5.7- Storm Drain Operation and Maintenance

The City of Walnut is required to conform to the requirements of the section VI.D.9.h of the MS4 Permit. The City of Walnut will implement and maintain applicable BMPs identified in table 3-5 of this document.

The City has an effective trash management program in place for public events. If required, additional trash receptacles are placed throughout the area that an event is to take place. Following the conclusion of the event trash receptacles are emptied with in one business day after the event.

The City utilizes staff and volunteers in an effort to minimize trash and litter generated at an event. Sites of public events are restored to their daily operation following the conclusion of an event.

The City contracts to Los Angeles County Public Works for maintenance of the City's storm drain system and catch basins. City owned catch basins are cleaned of any trash or debris present on an annual basis prior to the start of the rainy season. Also included in the Los Angeles County Departments maintenance services is the painting of "No Dumping" messages on catch basins. There is no current Trash TMDL for the San Gabriel River thus no Catch Basin Connector Pipe Screens have been installed in the City.

The City of Walnut is required to prevent infiltration from the sanitary sewer system into the MS4. The City of Walnut utilizes the following program controls:

- Adequate plan checking for construction and new development
- Incident response training for its municipal employees that identify sanitary sewer spills
- MS4 maintenance and inspections
- Interagency coordination with sewer agencies
- Proper education of municipal staff and contractors conducting field operations on the sanitary sewer or MS4

The City of Walnut has a Sanitary Sewer management Plan (SSMP) in place to prevent or minimize the effects on receiving waters and public health from a sanitary sewer overflow. One of the measures put in place by the SSMP involves video inspection of the City's Sanitarily Sewer System. The video inspection in addition to the City's plan check and inspection system and clean up response coordination with the Los Angeles County maintenance crews are critical programs that the City utilizes to eliminate sewer leaks from infiltrating into the MS4.

The City owned treatment control BMPs shall be maintained per the requirements of the MS4 Permit. The City shall implement an inspection program that ensures that BMPs are properly maintained. The City will conduct inspections of all City owned Structural BMPs on a quarterly basis or as required by manufacture recommendations or special site conditions.

Any residual water that is produced by a treatment control BMP not being internal to the BMP performance shall be removed by an approved method. The MS4 Permit allows residual water to be hauled away and legally disposed of, applied to the land without runoff, discharged to the sanitary sewer system, or treated/filtered to remove bacteria, sediments, and nutrients to limitations identified in Table 3-6.

Table 3-6

Discharge Limitations for Dewatering Treatment BMPs		
Parameter	**Units**	**Limitation**
Total Suspended Solids	mg/L	100
Turbidity	NTU	50
Oil and Grease	mg/L	10

3.5.8- Streets, Roads and Parking Facilities Maintenance

Streets, Roads and Parking Facilities play a major role in the generation and transportation of pollutants to the MS4. The City of Walnut plans to utilize aggressive programs to limit or reduce the contamination of surface flow water in an effort.

The City of Walnut has classified all of the street segments in the City as "Priority C" streets. The City is predominately single family residential developments which generate low volumes of trash and debris. Priority C streets are required to be swept at least once per year, however the City of Walnut utilizes a bi-monthly street sweeping frequency for all of the streets in the City's jurisdiction.

Road reconstruction shall include the following BMPs:

- Restrict Paving and repaving activity to exclude periods of rainfall of predicted rainfall unless required by emergency conditions.
- Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat.
- Prevent the discharge of release agents including soybean oil, other oils or diesel into the MS4 or receiving waters.
- Prevent non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
- Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
- Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly.
- Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused recycled or disposed of properly.
- Cover the "cold-mix" asphalt with protective sheeting during a rain storm.
- Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
- Minimize airborne dust by using water spray during grinding.
- Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in our near MS4 or receiving waters.
- Protect stockpiles with a cover or sediment barriers during a rain.

City owned or operated parking lots exposed to storm water shall be kept clear of debris and excessive oil buildup and cleaned no less than two times per month on the same schedule as the City's street sweeping.

3.5.9- Emergency Procedures

The City of Walnut is a Contract City and depends on outside agencies or contractors to provide maintenance services. In the event of an NPDES emergency, the City will contact the applicable agency

or contractor that the City contracts with for maintenance services that are related to the emergency. Contact information is distributed to City staff and residents.

NDPES Emergency Contacts- City of Walnut

Emergency Contacts for the City of Walnut:		(909) 595-7543
Los Angeles County Sewer Maintenance District:		(800) 675-HELP
Los Angeles County Department of Public Works:		(888) CLEAN-LA
Los Angeles County Fire Department:	Non-Emergency	(909) 595-3001
	Emergency	911

The MS4 Permit allows for permittees to conduct repairs essential to public service systems and infrastructure in emergency situations with a self-waiver of the provisions of the order as follows:

- The City shall abide by all other regulatory requirements, including notification to other agencies as appropriate.
- Where the self-waiver has been invoked, the City of Walnut shall submit to the Regional Water Board Executive Officer a statement of the occurrence of the emergency, an explanation of the circumstances, and the measures that were implemented to reduce the threat to water quality, no later than 30 business days after the situation of emergency has passed.
- Minor repairs of essential public services systems and infrastructure in emergency situation (that can be completed in less than one week) are not subject to the notification provisions. Appropriate BMPs to reduce the threat to water quality shall be implemented.

3.5.10- Employee and Contractor Training

The City of Walnut has implemented an employee training program that targets job specific and general BMP training to City maintenance staff. City staff receive training on NPDES related topics and procedures at least once per year.

The City's training program address the potential for pesticide-related surface water toxicity, proper use and disposal of pesticides, least toxic methods of pest prevention and control and the reduction of pesticide use.

3.6- Illicit Connection and Illicit Discharge Elimination Program

The City of Walnut is required to develop and implement an illicit connection and illicit discharge elimination program. The program will be utilized by City staff to identify and eliminate illicit connections and discharges to the MS4. MS4 discharges containing illicit connections and discharges have been known to contain pollutants which may cause or contribute to the impairment of a receiving water body. The program shall include the following components:

- Procedures for conducting source investigations for IC/IDs
- Procedures for eliminating the source of IC/IDs
- Procedures for public reporting of illicit discharges

- Spill response plan
- IC/IDs education and training for Permittee staff

3.6.1- Illicit Discharge Source Investigation and Elimination

The City of Walnut will make a reasonable effort to initiate an illicit discharge source investigation as soon as staff receives notification of an event. All reports of illicit discharges will be investigated. As required by the MS4 Permit, the City will initiate an illicit discharge source investigation within 72 hours of becoming aware to the illicit discharge. Investigations will be conducted by available qualified City or County Staff in the applicable department based on the initial details reported.

Illicit discharges suspected to contain sanitary sewage shall be the highest priority for investigation. The source of sanitary sewer discharges should be traced back to the point of origination and stopped immediately if possible. Discharges of sanitary sewage from the sanitary sewer system shall be differed to Los Angeles County Sewer Maintenance District. The City has a Sewer System Management Plan (SSMP) in place to address sanitary sewer overflows (SSOs). The City of Walnut, as a member of the Consolidated Sewer Maintenance District (CSMD) utilizes the County reporting hotline 1-800-675-HELP (4357) for sewer related emergencies. The SMD reporting hotline is posted on the City website for residents should an event occur after business hours. City Staff are also trained to contact SMD if a report is received directly by the City.

The City will track all reports and investigations of illicit discharges that are determined to originate from or enter the jurisdictional area of the City of Walnut. Minimum information included in the City's tracking program is as follows:

- Date and time of observed illicit discharge
- Location of observed illicit discharge
- Results of the investigation
- Date the investigation was closed

Illicit discharge inspection and response procedures shall conform to the following:

1. Following receipt of a reported illicit discharge qualified staff will be directed to investigate as soon as possible but no later than 72 hours after initial receipt of the report.
   a. Suspected discharge from construction site, private residents, or commercial site: Staff shall contact the on call building inspector to conduct an investigation.
   b. Suspected discharge from public works project site: Staff shall contact the City Engineer's office. The project manager will conduct an investigation or coordinate with the public works inspector to investigate.
   c. Suspected Hazmat discharge: Staff shall contact Los Angeles County Fire Department. Station 61 is located at 20011 La Puente Road, Walnut. Phone:(909) 595-3001; Emergency: 911
   d. All other suspected discharges: Staff shall contact Los Angeles Flood Control District at 1-888-CLEAN-LA.
2. Staff dispatched to the reported discharge site shall conduct an investigation and if possible identify the source of the discharge.

3. Dispatched staff shall notify the responsible party of the issue and require that corrective measures are taken to eliminate the illicit discharge. It shall be noted by staff if the illicit discharge has made it to the MS4 by catch basin or other route.
4. The City shall conduct a follow up investigation following the elimination of the illicit discharge to confirm that the illicit discharge is eliminated and that the site has been cleaned to the satisfaction of the City.
5. If the source is determined to be upstream from the City's jurisdiction, staff dispatched to the site shall report back to the City's Community Services Department staff. City staff will provide notice of the illicit discharge to the agency as soon as possible. City staff will notify in writing the upstream agency and the Regional Board of the illicit discharge no later than 30 days following the determination of the discharge origination.
6. If the source of an ongoing illicit discharge is unidentified the City shall proceed with the required actions identified in section VI.D.10.v of the MS4 Permit.

3.6.2- Illicit Connection Source Investigation and Elimination

The City of Walnut will make a reasonable effort to initiate an illicit connection source investigation as soon as staff receives notification. As required by the MS4 Permit, the City will initiate an illicit connection source investigation within 21 days of becoming aware of the illicit connection. Investigations will be conducted by available qualified City or County Staff.

During the initial investigation of a reported or identified illicit connection, Staff shall record the following conditions:

- Source of the connection
- Nature and volume of discharge from the connection
- Responsible party for the connection

Upon confirmation that the reported/identified connection is illicit the City shall ensure that the connection is permitted and documented only if the connection discharges storm water and exempt or conditionally exempt non-storm water discharges allowed under the MS4 Permit or other individual or general NPDEs permits. If the illicit connection does not qualify for undergoing the permitting or documentation option it shall be eliminated within 180 days of completion of the investigation. Formal enforcement authority shall be used if necessary, to eliminate the illicit connection. All illicit connection investigations shall be documented.

3.6.3- Public Reporting of Non-Storm Water Discharges and Spills

The City of Walnut publicizes and promotes the importance of public reporting of illicit discharges on the City's website and through the public outreach and education program. The City participates in the Los Angeles County Reporting hotline, and has made the hotline number available through the City website, quarterly mailers, and education materials. The City of Walnut has also implemented and will continue to maintain signage adjacent to open channels or creeks that display information regarding dumping prohibitions.

City staff will be trained to document all reports of complaint calls received by the City. Complaints will be documented and tracked. The City will investigate all complaints in a timely manner and will include the results and follow up actions if needed on the tracking system selected by the City to document complaints.

3.6.4- Spill Response Plan

The City of Walnut is a Contract City. Upon receipt of a complaint or notice of an illicit discharge during normal business hours the City will determine based on the details reported to either dispatch an inspector to investigate or forward the complaint to Los Angeles County. The County reporting hotline is available to residents and City Staff.

Once reported to Los Angeles County through the reporting hotline. County hotline operators direct the call to the appropriate maintenance crew. The County crew will then be dispatched to the location reported to address the issue identified.

3.6.5- Illicit Connection and Illicit Discharge Education and Training

The City of Walnut will continue to train all City staff on the critical impact that illicit discharges and connections play in MS4 discharge water quality. Field staff will receive annual training to reinforce how to recognize an illicit discharge or connection. Field staff will also receive training on the City's procedures for documenting and reporting illicit discharges and connections.

City field staff will be trained to properly eliminate and cleanup a site of an illicit discharge. City staff will only be trained to address sediment related illicit discharges that have not made it into the MS4. All other illicit discharges will be referred to the Los Angele County Department of Public Works reporting hotline. The City of Walnut is a contract City and relies on the Los Angeles County Department of Public Works for spill response related to illicit discharges that are beyond the City's ability to address.

4.0- Reasonable Assurance Analysis

The Permit allows an agency to customize their storm water programs through the development and implementation of a Watershed Management Program to demonstrate compliance with relevant receiving water limitations through a Reasonable Assurance Analysis. Following the adoption of the Permit, the City of Walnut elected to develop an individual WMP.

The Permit specifies that a viable RAA must identify a suite of best management practices, both structural and non-structural, that demonstrates compliance with appropriate water quality standards as developed through applicable Total Maximum Daily Loads and other Permit limitations (water quality based effluent concentrations, receiving water limitations, and water quality objectives).

This section summarizes the City of Walnut's RAA approach and results of the following steps:

- Setting target load reductions based on Permit limitations;
- Modeling identified structural BMPs and quantifying their associated load reductions;
- Demonstrating, with reasonable assurance, that target load reductions (and therefore Permit limitations) can be met by the final compliance dates; and
- Phasing of structural and non-structural BMPs to achieve interim milestones.

The RAA modeling approach presented herein conforms to Part VI.C.5.b.iv(5) of the Permit, which states:

> *"Permittees shall conduct a Reasonable Assurance Analysis for each water body-pollutant combination addressed by the [WMP]. [The] RAA shall be quantitative and performed using a peer-reviewed model in the public domain. Models to be considered for the RAA, without exclusion, are the Watershed Management Modeling System (WMMS), Hydrologic Simulation Program-FORTRAN (HSPF), and the Structural BMP Prioritization and Analysis Tool (SBPAT)…. The objective of the RAA shall be to demonstrate the ability of [the WMP] to ensure that Permittees' MS4 discharges achieve applicable water quality based effluent limitations and do not cause or contribute to exceedances of receiving water limitations."*

The Regional Board has developed a guidance document titled, "Guidelines for Conducting Reasonable Assurance Analysis in a Watershed Management Program, Including an Enhanced Watershed Management Program (March 25, 2014)." Although the guidance document presents guidelines and not necessarily requirements, the results of the RAA presented in this section have been developed to conform to the Regional Board guidance document where appropriate. The approach outlined in this section was presented to the Regional Board by Geosyntec during meetings on January 30, 2014 and April 9, 2014 (each for other Watershed Management Groups) and was found to be consistent with their guidelines.

4.1- Dry Weather RAA

The City of Walnut's dry weather compliance approach is to eliminate 100% of non-exempt dry weather MS4 discharges using a suite of non-structural source controls (e.g., water conservation incentives, enhanced IC/ID efforts, and enhanced education/outreach and inspection/enforcement to prevent non-sources of storm water flow) and source investigations following dry weather outfall screening. By eliminating flows, this is equivalent to 100% load reduction for all pollutants, thereby demonstrating reasonable assurance of meeting all applicable Permit limitations during dry weather. Elimination of discharges is a pathway for compliance with RWLs and WQBELs in the MS4 permit (per section VI.E.2.e.i.(3)); without discharges there can be no "cause or contribute" to receiving water issues.

The remainder of the RAA addresses wet weather.

4.2- Water Body Pollutant Combinations

Permit Attachment K indicates that the Walnut Watershed Management Area (WMA) drains to two receiving water bodies, San Jose Creek to the south and Walnut Creek Wash to the north, and that the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL applies to both. Both of these receiving waters are tributary to San Gabriel River Reach 3, which is itself tributary to San Gabriel River Reach 2. Permit Attachment P sets a daily waste load allocation (WLA) for lead[1] for San Gabriel River Reach 2 and all tributaries at 81.34 µg/L x daily storm volume (L) for periods when the maximum daily flow of the River is greater than or equal to 260 cfs as measured at USGS station 11085000, which is located at the base of Reach 3 above the Whittier Narrows Dam. Therefore lead in San Jose Creek and Walnut Creek Wash are the only Category 1 (Highest Priority) Water Body Pollutant Combinations (WBPCs) evaluated in this RAA.

San Jose Creek and Walnut Creek Wash are 303(d) listed for indicator bacteria. These water bodies are also listed for other pollutants including ammonia, total dissolved solids, toxicity, pH, and benthic macroinvertebrate bioassessment; however, these pollutants are either not able to be modeled given currently available datasets or are not typically associated with MS4 wet weather discharges. Therefore indicator bacteria in San Jose Creek and Walnut Creek Wash are the only Category 2 (High Priority) WBPCs evaluated in this RAA. Applicable wet weather bacteria water quality objectives used for the RAA are identified in Table 4-1.

There are no Category 3 (Medium Priority, based on other receiving water exceedances) pollutants identified by the City.

[1] For selenium, based on the 1994-2000 LA County land use monitoring dataset, selenium concentrations are below the 5 ug/L detection level – which is equivalent to the applicable CTR freshwater chronic criterion -- in 100% of the 38 single family residential (SFR) samples. These data are available at http://dpw.lacounty.gov/wmd/NPDES/Int_report/Tables/Table_4-12.pdf. In the City of Walnut, SFR is the dominant land use. Therefore we do not believe there is any evidence to link Walnut's MS4 discharges to elevated selenium concentrations that have been observed in the receiving waters, and no further response actions are proposed.

Table 4-1

Bacteria Objectives Used for the Walnut RAA		
Receiving Water Segment	**Recreational Beneficial Use**	**Water Quality Objective**
San Jose Creek	REC1 (potential) and REC2 (intermittent) with High Flow Suspension*	400/100mL fecal coliform* (single sample limit)
Walnut Creek Wash	REC1 (intermittent), REC2 (intermittent)	400/100mL fecal coliform* (single sample limit)

REC1 = water contact recreation

REC2 = non-water contact recreation

* While the REC1 fecal coliform objective was removed from the Los Angeles Basin Plan through Order R10-005, fecal coliform is used in this RAA as the modeling surrogate for *E. coli* due to its more robust modeling input datasets. Therefore, the old REC1 objective for fecal coliform (400 mpn/100mL) is used in this RAA for setting target load reductions, and this objective is considered equally protective of public health to the 235 mpn/100mL REC1 objective for *E. coli* based on illness relationships reported in the 1986 USEPA recreational water quality criteria documents.

There are no Category 3 (Medium Priority, based on other receiving water exceedances) pollutants identified by the City.

4.3- Target load Reductions, Critical Conditions

The Regional Board's RAA guidance document requires that RAAs consider critical conditions when evaluating load removals for structural and non-structural BMPs. For bacteria, the critical condition is defined as the 90th percentile TMDL year (Nov 1-Oct 31, consistent with various Los Angeles region bacteria TMDLs). For lead, the critical condition, based on the metal TMDL WLA, is defined as the 90th percentile daily lead load for metal TMDL wet days (i.e., days with measured flowrates in the river above a certain threshold). The 90th percentile bacteria TMDL year for the Walnut WMA, based on both number of bacteria TMDL wet days (i.e., days with 0.1 inch of rain and the three days that follow, a definition taken from Los Angeles region bacteria TMDLs) and total rainfall depth, is 1993.[2] This is based on the most representative Los Angeles County Flood Control District precipitation gauge, or Mt. San Antonio College Station (D255), for the 1989-2011 period[3]. This gauge location is shown in Figure 4-1. A data summary for this gauge for each year in this period is shown in Table 4-2.

[2] The Regional Board's definition of "TMDL year" (for example, as used in the Los Angeles River Bacteria TMDL), was used throughout this RAA. For 1993, this is November 1, 1992 to October 31, 1993.

[3] The period of Nov 1, 1988 to Oct 31, 2011 (TMDL years 1989-2011) is based on the range of precipitation data available in Los Angeles County's WMMS model. The model contains data between 1/28/1986 and 4/26/2012, but the model requires at least one year of "spin-up" time from initial conditions, and only whole TMDL years were used. Therefore, TMDL years 1989-2011 were chosen as the representative period for model outputs.

Wet days for lead are defined in the San Gabriel River metals TMDL as days in which the maximum daily flow at USGS gauge 11085000 is 260 cfs or greater; this value was set in the TMDL based on the 90th percentile flows at this gauge between 1990 and 2005. The 90th percentile daily lead load for wet days in the November 1, 1989 to October 31, 2011 period was determined based on modeling output as described below. An electronic file with daily model-predicted lead loads for the entire period at the outlets to San Jose Creek and Walnut Creek Wash, as well as at all catchments within the model domain is available .

Table 4-2

Annual Rainfall and Number of Wet Days at Mt. San Antonio College Station Rain Gauge for TMDL years 1989-2011

TMDL Year	Annual Rainfall Depth (inches)	Percentile by Rainfall Depth (%)	Number of Bac. TMDL Wet Days*	Percentile by Number of Wet Days(%)
1989	6.12	5%	68	68%
1990	9.01	23%	49	27%
1991	18.68	68%	45	5%
1992	25.24	86%	70	73%
1993	**26.67**	**91%**	**77**	**91%**
1994	8.81	18%	67	64%
1995	24.74	77%	75	82%
1996	18.12	64%	54	45%
1997	14.61	45%	52	36%
1998	33.23	100%	118	100%
1999	4.76	0%	46	9%
2000	11.12	32%	47	14%
2001	15.6	50%	48	23%
2002	8.69	14%	41	0%
2003	16.33	55%	47	14%
2004	20.11	73%	63	59%
2005	25.13	82%	93	95%
2006	10.47	27%	62	55%
2007	6.34	9%	49	27%
2008	17.56	59%	53	41%
2009	11.52	36%	59	50%
2010	29.88	95%	72	77%
2011	11.88	41%	76	86%

*Wet days for bacteria are days in which 0.1" or greater rainfall occurs plus the three days following as defined in various Los Angeles area Bacteria TMDLs.

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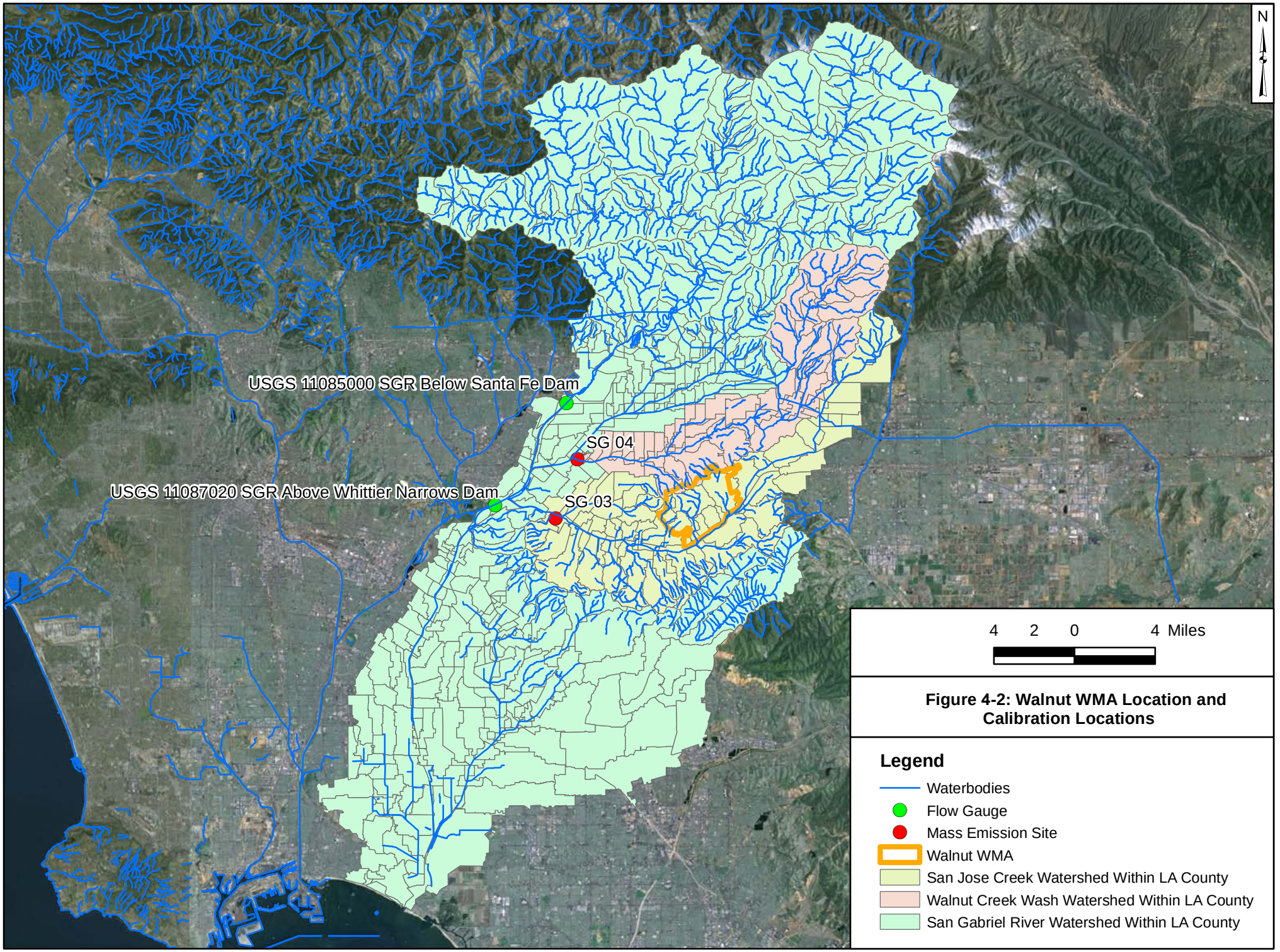

Figure 4-2: Walnut WMA Location and Calibration Locations

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4.4- Baseline Loads, Critical Conditions

The Los Angeles County Loading Simulation Program C++ (LSPC) model was used to compute baseline and allowed loads, and to determine target load reductions for the RAA. The Los Angeles County LSPC model is a publically available watershed model that was developed for Los Angeles County in connection with the greater Watershed Management Modeling System (WMMS) framework. LSPC uses Hydrologic Simulation Program Fortran (HSPF) algorithms to simulate hydrology, sediment transport, water quality, and the fate and transport of pollutants within receiving waters and through a watershed. GIS is used for the spatial component of the analysis as well as general visualization. WMMS' LSPC model has been calibrated for hydrology as well as water quality in the San Gabriel River Watershed. Default model settings and input parameter values were not changed for this project, therefore the original County calibration results still apply and are summarized here to the extent that documentation exists for the San Gabriel River Watershed. Additional documentation regarding the development and calibration of LSPC within the greater WMMS modeling framework can be found in the Los Angeles County Department of Public Works' WMMS portal (Los Angeles County DPW, 2010c).

The original County hydrology calibration of the LSPC model was done by comparing predicted flow rates with measured values at 30 stream gauge locations throughout Los Angeles County including four locations within the San Gabriel River Watershed (Los Angeles County Department of Public Works, 2010a). Areas with a single or dominant land use were calibrated first to establish attributes for that land use throughout the rest of the county. Attributes for other land uses were then calibrated using areas where the previously calibrated land uses had fixed attributes. Point sources and hydromodification features (such as dams and spreading grounds) were then calibrated once all land use attributes were calibrated. Analyses included both graphical and statistical comparisons of model prediction with measured stream gauge data, including comparisons of mean daily, monthly, and seasonal flow as well as flow exceedance probabilities.

The County calibrated the LSPC model for water quality in much the same way, where an area with a dominant land use was calibrated first, then the attributes of that land use were held fixed to calibrate the other land uses (Los Angeles County Department of Public Works, 2010b). Predicted pollutant concentrations were compared with land-use specific water quality data collected by the Southern California Coastal Water Research Project (SCCWRP) (SCCWRP, 2007) in order to adjust model input parameters for each pollutant for each land use. The County water quality calibration report includes visual comparisons only. The model was validated by comparing predicted versus measured water quality data for receiving water mass emission sites, again using measured data collected by SCCWRP.

The Walnut WMA represents 1.3% of the overall San Gabriel River watershed area (Figure 4-2). No stream gauge or mass emission site exists that represents stormwater discharges exclusively from the Walnut WMA. The nearest downstream flow gauge (USGS gauge #11087020 is located 10 miles downstream and drains an area 49 times larger than the Walnut WMA. The County used two San Gabriel River stream gauges for hydrology calibration of the LSPC model: one immediately upstream of the confluence with Walnut Creek Wash (USGS gauge #11085000 San Gabriel River below Santa Fe Dam near Baldwin Park, CA) and one immediately downstream of the confluence with San Jose Creek (USGS gauge #11087020 San Gabriel River above Whittier Narrows) (Figure 4-2). Although both of

these gauges were used for calibration of the model, the calibration statistics are only provided in the County hydrology calibration report for the downstream gauge. At this location, an average difference of 12.4% was computed based on a comparison between predicted and measured total volumes between October 1, 1986 and September 30, 1992 (Los Angeles County Department of Public Works, 2010a). For comparison, the RAA guidelines provided by the Los Angeles Regional Water Quality Control Board (LARWQCB) state that a difference between predicted and measured values of 10-15% is "good" for hydrology and flow (LARWQCB, 2014). An excerpt from the calibration report showing the mean daily and mean monthly flows measured at the stream gauge versus those predicted by the model is shown in Figure 4-3.

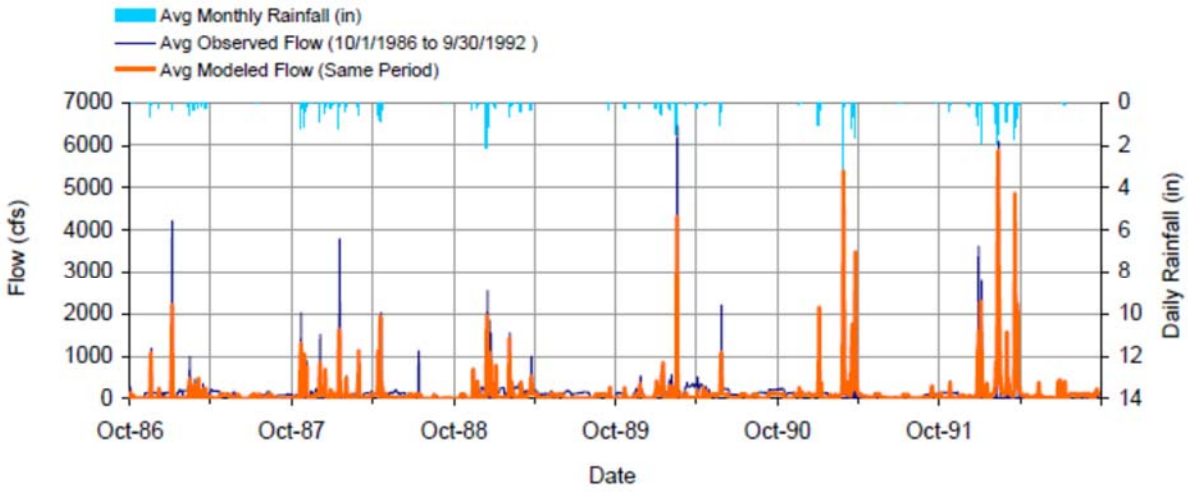

Figure F-1. Mean daily flow: Model Outlet 5156 vs. USGS 11087020 San Gabriel R Ab Whittier Narrows Dam CA

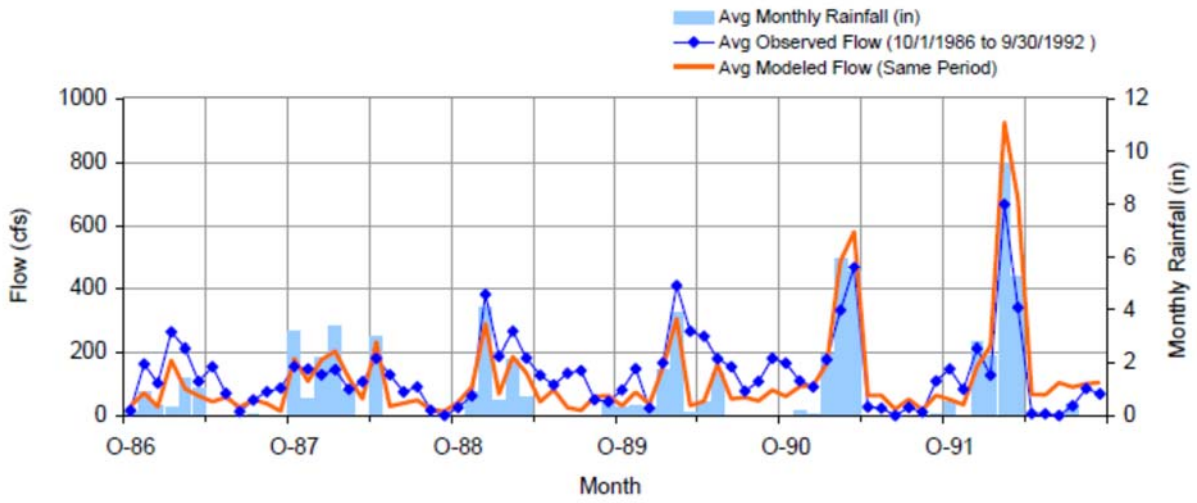

Figure F-2. Mean monthly flow: Model Outlet 5156 vs. USGS 11087020 San Gabriel R Ab Whittier Narrows Dam CA

Figure 4-3: LSPC Predicted vs Measured Stream Flow Rates. (Figure from Los Angeles County Department of Public Works, 2010a)

For water quality calibration, the County's water quality calibration report evaluates four locations in the San Gabriel River Watershed, including mass emission sites on San Jose Creek (SG03) and Walnut Creek Wash (SG04), each located downstream of the WMA (Figure 4-2) (Los Angeles County Department of Public Works, 2010b). SG03 is located approximately 7 miles downstream of the WMA and has a drainage area of 85 square miles, of which the WMA makes up less than 10%. SG04 is located approximately 5.5 miles downstream of the WMA and has a drainage area of 59 square miles, of which the WMA makes up approximately 1%. Each site had 19-20 lead and 27-29 total coliform bacteria samples collected by SCCWRP between 2004 and 2005, which were used for model validation (as described earlier, SCCWRP land use monitoring sites were used for model water quality calibration). A time series of the predicted lead concentrations compared with measured concentrations at these mass emission sites is shown in Figures 4-4 and 4-5.

Through the WMP adaptive management process, as monitoring data from the Walnut WMA become available, the RAA models will be recalibrated – thus better reflecting site specific conditions – and the RAA results will be revised.

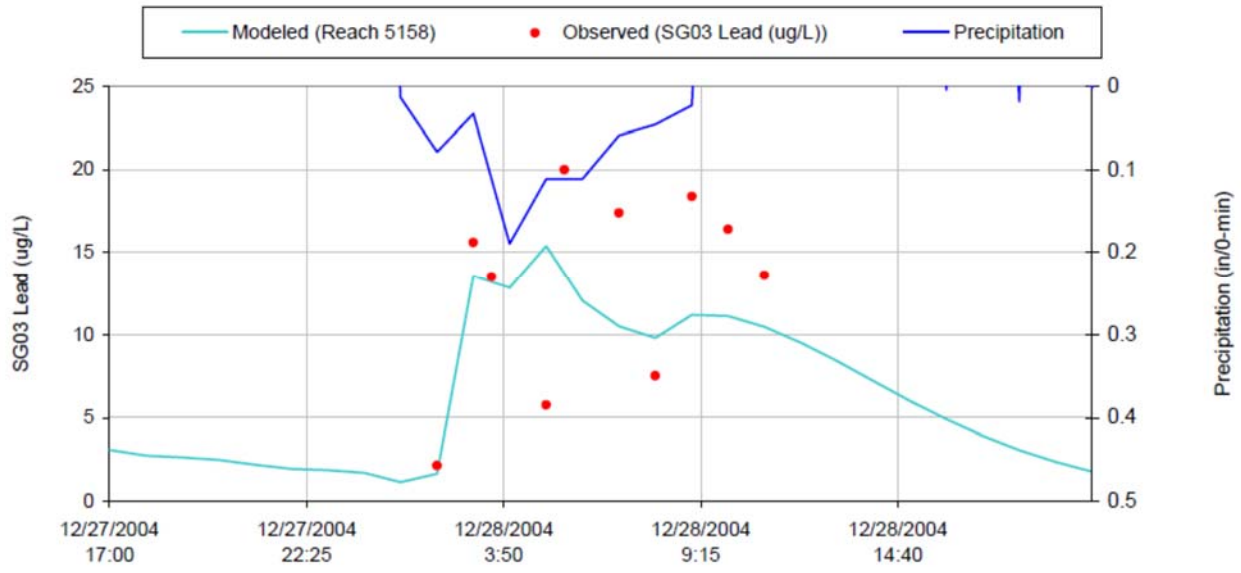

Figure 4-4: LSPC Predicted vs Measured Lead Concentrations at Mass Emission Site SG 03. (Figure from Los Angeles County Department of Public Works, 2010b)

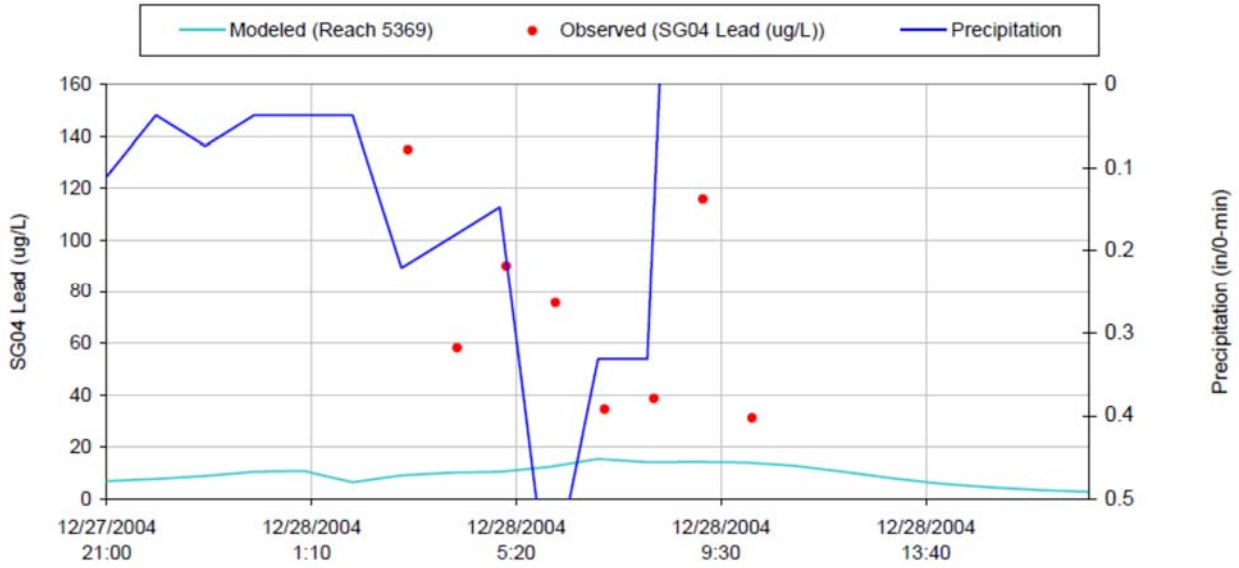

Figure 4-5: LSPC Predicted vs Measured Lead Concentrations at Mass Emission Site SG 04. (Figure from Los Angeles County Department of Public Works, 2010b)

4.4.1- Methodology

The County LSPC model's catchments were clipped to the boundary of the Walnut WMA. Figure 4-6 presents revised LSPC model catchments, storm drains, and receiving waters for the WMA. The majority of the WMA (93%) drains towards San Jose Creek.

LSPC land uses in the San Gabriel River Watershed are unchanged from the County's published LSPC model, and represent 2000 conditions. While new development has occurred in the City since 1996 (and therefore this developed area isn't captured by the existing LSPC model), the stormwater impacts of this development have been at least partially mitigated through Standard Urban Stormwater Management Plan (SUSMP) implementation consistent with requirements from the 2001 MS4 permit.

In order to establish baseline (or existing condition) pollutant loads, pollutant concentrations, and runoff volumes, a single model run without any BMPs or treatment control measures was carried out for both the San Jose Creek and Walnut Creek Wash sides of the WMA. Baseline bacteria loads (modeled using fecal coliform[4]) were predicted for the 90th percentile TMDL year by rainfall. Baseline lead loads were predicted for the 90th percentile lead load wet day, using the metals TMDL definition of wet day where the measured flow at USGS gauge #11085000 was 260 cfs or greater. These dates were found to be 5/10/1998 for both San Jose Creek and Walnut Creek Wash. Baseline predicted loads for both fecal coliforms and lead are shown in Table 4-3. LSPC-predicted daily flows, concentrations, and volumes for individual as well as summed catchments that drain to San Jose Creek and Walnut Creek Wash for the entire November 1, 1989 to October 31, 2011 modeling period, along with the LSPC modeling files, are available.

[4] Fecal coliform is used as the representative indicator bacteria for RAA modeling given its relatively larger land use event mean concentration datasets and given that it is the basis for the REC2 objective, which is the applicable recreational use for the water body that most of the City drains to.

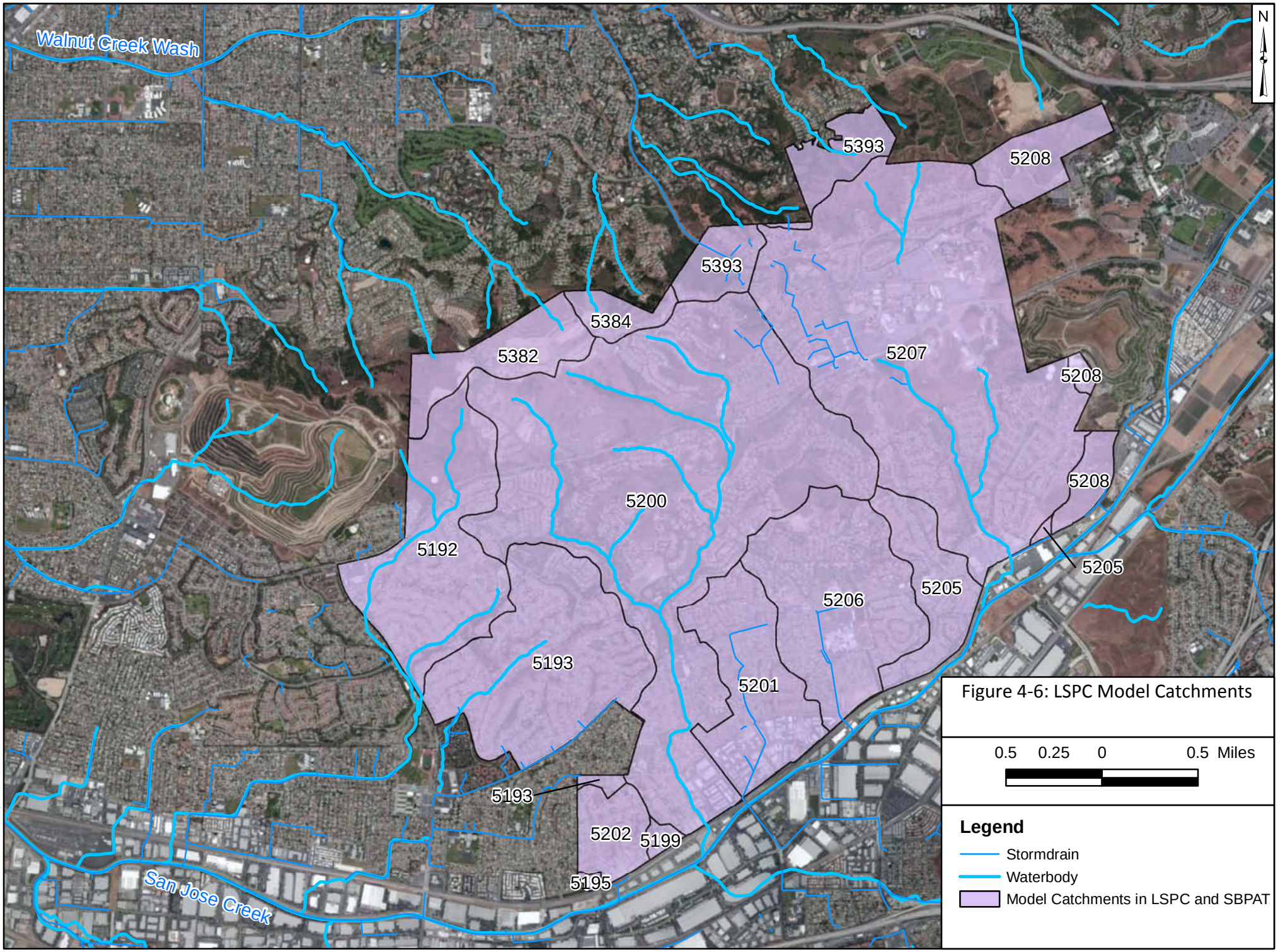

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Table 4-3

Baseline Loads Derived from LSPC for the Critical Condition		
Receiving Water Segment	**90th Percentile Daily Lead Load on Wet Days (lbs)**	**90th Percentile Annual Fecal Coliform Load (MPN*10^12)**
San Jose Creek	0.62 (for 5/10/1998)	436 (for 11/1/1992-10/31/1993)
Walnut Creek Wash	0.018 (for 5/10/1998)	7.4 (for 11/1/1992-10/31/1993)

4.5- Allowable Loads

4.5.1- Lead

The allowable lead load for the WMA was computed by multiplying the concentration-based WQBEL (81.34 µg/L) by LSPC-predicted runoff volumes on the wet day with the 90th percentile lead load for the areas draining to San Jose Creek and Walnut Creek Wash. For both San Jose Creek and Walnut Creek Wash, the allowable load is approximately an order of magnitude greater than the baseline load (Table 4- 4).

Table 4-4

Allowable Daily Lead Loads (Computed for the Baseline Wet Day with the 90th Percentile Lead Load)			
Receiving Water Segment	**Baseline Daily Runoff Volume (acre feet)**	**WQBEL (ug/L)**	**Allowable Daily Lead Load (lb)**
San Jose Creek	26	81.34	5.7
Walnut Creek Wash	0.81	81.34	0.18

4.5.2- Bacteria

Since there is currently no adopted bacteria TMDL for the San Gabriel River Watershed, the bacteria allowable load is based on assumed allowable exceedance day[5] (AED)-based limitations consistent with the Los Angeles River Bacteria TMDL, which allows a 19 percent wet weather exceedance percentage (of REC1 freshwater single sample objectives) based on SCCWRP reference stream monitoring data. The 90th percentile TMDL year (1993) has 77 wet days (i.e., days with 0.1 inch of rain and the three days that follow). In San Jose Creek, 30 of these days are exempt from recreational objectives through the High Flow Suspension (HFS)[6], and 19 percent of the remaining wet days (47) are allowed to exceed REC1 objectives, resulting in 9 AEDs (in addition to the HFS days). The net result for San Jose Creek is

[5] An exceedance day is a day in which bacteria concentrations exceed the applicable recreational objectives.

[6] The HFS applies during days with greater than or equal to 0.5 inches of rain and the following day.

that, of the 77 wet days that occur during 1993, 39 are allowed to exceed recreational objectives (the combination of the HFS and reference-based AEDs). For Walnut Creek Wash, consistent with the Los Angeles region bacteria TMDLs for creeks, 19 percent of the 77 wet days are allowed to exceed REC1 objectives based on average reference stream exceedance rates, resulting in 15 AEDs. For both creeks, these AEDs were used to directly calculate target load reductions through a methodology that is described in the next section. Allowable loads were then calculated by subtracting target load reductions from baseline loads. Table 4-5 summarizes the allowable loads for lead and bacteria for the 90th percentile year.

Table 4-5

Allowable Bacteria Loads for 90th percentile year	
Receiving Water Segment	**Annual Fecal Coliform Load (MPN*10^12)**
San Jose Creek	320
Walnut Creek Wash	3.6

4.6- Target Load Reductions

4.6.1- Lead

Target load reductions (TLRs) are the reduction of baseline loads needed to achieve allowable loads for the critical condition. The TLRs for lead were determined to be zero since baseline loads are already below allowable loads. The zero TLR serves as reasonable assurance demonstration that the lead WQBEL will be met in both receiving water bodies without the need for new BMPs. Therefore, quantification of BMP load reductions for lead are not reported in the BMP sections of this RAA. However, the BMPs proposed for addressing bacteria will also have a substantial load reduction benefit for lead and other metals.

4.6.2- Bacteria

TLRs for bacteria were established as the load reductions from baseline conditions that are required to decrease the number of wet-weather exceedance days (i.e., non-HFS wet days with receiving water concentrations above 400 MPN/100 mL) in the 90th percentile year to the AEDs described earlier. In order to calculate this required load reduction, a single regional retention basin was modeled at the outlets of the San Jose Creek and Walnut Creek Wash drainage areas in LSPC. Each basin was iteratively sized until the number of exceedance days was equivalent to the number of AEDs for the downstream receiving water body. Exceedance days for each basin were calculated as any non-HFS wet day with a predicted fecal coliform concentration in the basin discharge (i.e., during overflow events) that was above the applicable fecal coliform objective. Therefore, it was possible for each retention basin to overflow and not cause an exceedance as long as it either occurred on a dry day or an HFS day, or if concentrations did not exceed the criteria. Once each basin was sized appropriately so that the number of exceedance days did not exceed the allowable number of exceedance days in TMDL year 1993, TLRs

were calculated as the load reductions that were achieved by each infiltration basin. The percent reduction in the bacteria load relative to baseline was calculated by comparing the predicted annual bacteria loads from the WMA with the retention basin in place to the predicted annual bacteria loads from the WMA from the baseline conditions for the 90th percentile TMDL year. Table 4-6 summarizes the TLRs for lead and bacteria as a percentage reduction from the respective baseline loads.

Table 4-6

Target Load Reductions for the Critical Condition (as a percent of baseline load)

Receiving Water Segment	Total Lead*	Fecal Coliforms**
San Jose Creek	0%	27%
Walnut Creek Wash	0%	51%

*Applicable on the 90th percentile lead load wet day where wet days are days where the maximum flow rate at USGS 11085000 is 260 cfs or greater.

**Applicable on the 90th percentile bacteria TMDL year for number of wet days where wet days are days with 0.1" or precipitation or greater plus the next three days

4.7- Modeling assumptions for WMP Control Measures

4.7.1- BMP Model Description

SBPAT, a public domain GIS-based water quality analysis tool was used to evaluate structural BMP performance for the purposes of this RAA. SBPAT links a modified USEPA Storm Water Management Model (SWMM) hydrologic engine to a Monte Carlo analysis capable of repeated random sampling of pollutant event mean concentrations (EMCs) and BMP effectiveness distributions to obtain numerical results regarding the expected performance of a specific BMP configuration (Geosyntec Consultants, 2012). SBPAT was designed specifically for the purpose of identifying structural retrofit BMP opportunities, and quantifying their benefits and costs. Each Monte Carlo analysis typically involves 10,000 iterations of EMC lognormal distributions fitted to Los Angeles region land use EMC datasets (the same datasets that were also used to calibrate LSPC), as well as BMP effluent EMC distributions based on recent data from the International BMP Database. SBPAT's land use EMC log statistics are presented in Table 4-7. SBPAT is capable of quantifying model output variability, which is a component of the Regional Board's RAA guidance. The model:

- Calculates and tracks inflows to BMPs, treated discharge, bypassed flows, evaporation, and infiltration at a user-defined time step (e.g., 15 minutes);
- Distinguishes between individual runoff events by defining six-hour minimum inter-event times in the rainfall record, yet tracks inter-event antecedent conditions;
- Tracks volume treated by BMPs and summarizes and records these metrics by storm event; and
- Produces a table of each BMP's hydrologic performance, including concentration and load metrics by storm event, and consolidates these outputs on an annual basis.

SBPAT is specifically referenced in the MS4 Permit Part VI.C.5.b.iv and was presented at the first two Permit Group Technical Advisory Committee (TAC) RAA Subcommittee meetings. Additional information regarding SBPAT can found in the SBPAT portal at www.SBPAT.net.

Table 4-7

SBPAT Fecal Coliform Event Mean Concentrations for the Walnut WMA – Arithmetic Estimates of the Lognormal Summary Statistics (means with standard deviations in parentheses)[a]

Land Use	Fecal Coliform MPN/100mL
Single Family Residential	31,100[b] (94,200)
Commercial	51,600 (173,400)[c]
Industrial	3,760 (4,860)
Education (Municipal)	11,800[d] (23,700)
Transportation	1,680 (456)
Multi-Family Residential	11,800[e] (23,700)
Agriculture (Row Crop)	60,300 (153,000)
Vacant / Open Space	484 (806)

[a] Fecal coliform EMC statistics are calculated based on 2000-2005 SCCWRP Los Angeles region land use data (SCCWRP, 2007). These EMC datasets are summarized in the SBPAT User's Guide (Geosyntec, 2012).

[b] The fecal coliform EMC for the single-family residential land use is based on SCCWRP's dataset for "low-density residential".

[c] The default log distribution best fit summary statistics for this land use-pollutant combination produced an unreasonably high deviation, therefore the arithmetic estimate of the log mean was held constant while the log summary statistics were recomputed based on the log CoV for SFR (SCCWRP's low-density residential EMC).

[d] Multi-family residential EMC used here since educational land use site not available in the SCCWRP fecal coliform dataset.

[e] The fecal coliform EMC for the multi-family residential land use is based on SCCWRP dataset for "high-density residential". High density single-family residential land use areas are also assigned this EMC.

4.7.1- BMP Model Calibration

The LSPC-derived TLRs were expressed as *percentages* of baseline loads to allow comparison with SBPAT's BMP load reductions even if the LSPC and SBPAT baseline loads didn't exactly match. However, some input parameter adjustments were made to SBPAT to improve the comparability between SBPAT output and the County-calibrated LSPC output for the baseline condition. First, SBPAT-predicted runoff volumes were calibrated to the LSPC-predicted runoff volumes. SBPAT uses the same catchment delineations as LSPC, and the dominant rain gauge used by LSPC (which applies to 93% of the total area in the WMA) is the rain gauge used by SBPAT. SBPAT was calibrated by adjusting the saturated hydraulic conductivity rates (Ksats) of the underlying soils until the predicted annual runoff volumes for the entire 1989-2011 modeling period and for TMDL year 1993 were within 10% of the LSPC-predicted volumes (after removal of base flows), to meet the "very good" threshold from the RAA guidance calibration performance criteria. Base flows were removed from the LSPC results using the Web-based Hydrograph Analysis Tool for porous aquifers with ephemeral streams; this tool was developed by Purdue University to separate base flows and runoff (Lim et al., 2005). Table 4-8 summarizes the annual runoff volume comparisons for the entire modeling period and for TMDL year 1993. In the future, through the WMP adaptive management process, as WMA-specific monitoring data become available, the LSPC and SBPAT calibrations may be updated, and the RAA revisited.

Table 4-8

Annual Runoff Volume Comparison Between LSPC and SBPAT Models

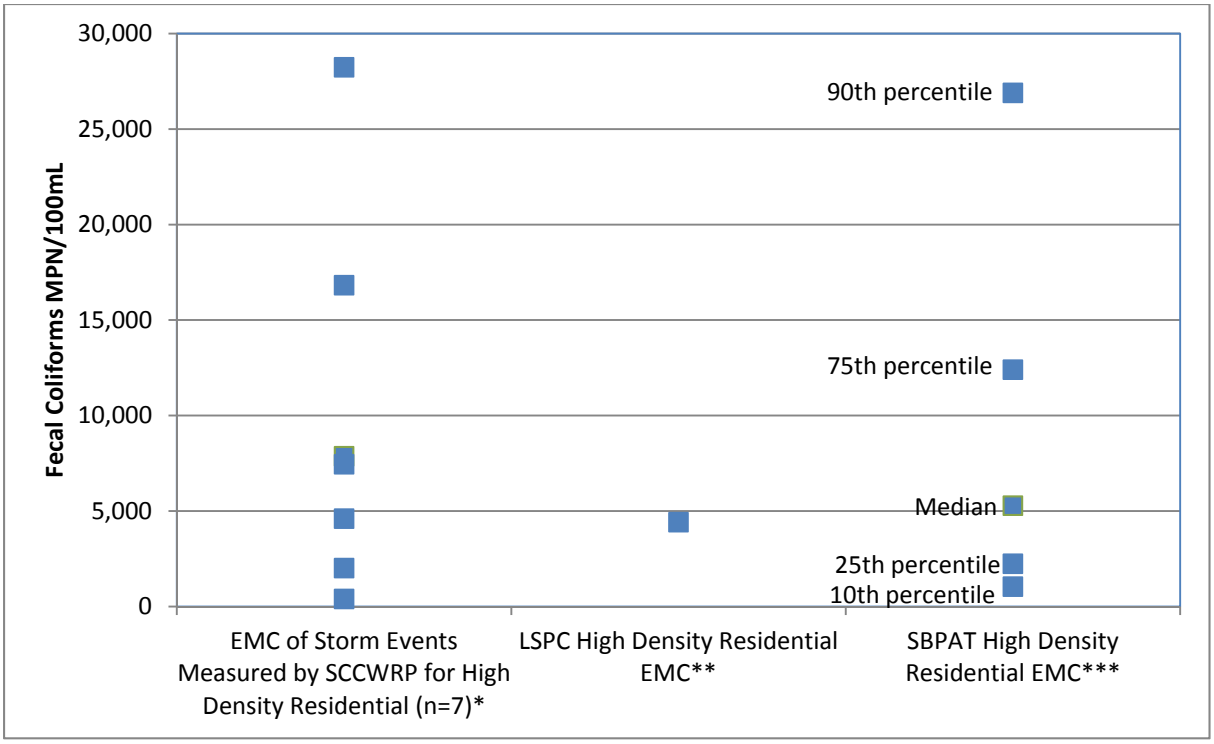
TMDL Year	San Jose Creek			Walnut Creek Wash		
	LSPC Runoff Volume (acre ft)	SBPAT Runoff Volume (acre ft)	Diff (%)	LSPC Runoff Volume (acre ft)	SBPAT Runoff Volume (acre ft)	Diff (%)
1993	6,542	7,156	9%	311	340	9%
1989-2011	61,337	65,501	7%	2,197	2,230	2%

Next, SBPAT's land use pollutant EMC statistics – which are the only water quality parameters used by the model to compute baseline pollutant loads – were compared with raw SCCWRP land use EMC datasets and LSPC's calibrated input values. The EMCs used by SPBAT for fecal coliforms are log-normal distributions calculated directly from the land use-specific monitoring data collected by SCCWRP. These were the same data used by the County to calibrate LSPC. These data are used directly in SBPAT by assigning each storm event a random concentration that is drawn from the log-normal distribution; then the modeling period is repeated for 10,000 iterations, to capture the effect of input variability on the variability of predicted output (a feature that makes SBPAT a "stochastic" model for water quality). While LSPC also used the SCCWRP land use data for calibration, static average land use EMC values are used deterministically, with no adjustment to capture variability.

The model EMC comparison was performed for the most representative urban land use in the WMA. Based on LSPC land use designations, 75% of the developed area in the Walnut WMA is high density single family residential (a land use the was originally calibrated by the County to the SCCWRP "high density residential" data), and 73% of the runoff volume is from this land use. In SBPAT, this areas is labeled "single family residential," but because of its high density classification it is assigned the SCCWRP high density residential EMC distribution. Therefore, this is the land use category that is evaluated in Figure 4-7.

Even though LSPC and SBPAT use the same data to set their EMC input values, the EMCs are used differently in each model. This is illustrated in Figure 4-7, which compares fecal coliform EMC values for the high density residential land use category between the original SCCWRP measured dataset, the volume-weighted EMC used by the County's calibrated LSPC model (extracted based on a runoff volume weighting of the high density residential impervious, urban pervious, and secondary street land use types which make up the whole high density single-family residential area), and the non-parametric summary statistics from the log-normal distribution used by SBPAT. Here it is evident how SBPAT's distributional statistics well represent the variability that is inherent to the measured data. And while both land use EMC inputs used by the models are "correct" and based on the same measured data, it is evident how each model can produce different concentration and load results due to their statistical representations. It was therefore decided not to make changes to SBPAT's land use EMC statistics based on a review of either LSPC concentration or load results or the raw SCCWRP measured land use EMC data.

To account for the difference in land use EMC statistics used by the two models, and to ensure comparability between the LSPC-derived TLRs and SBPAT's BMP load reductions, the TLRs expressed as a *percentage* of the total baseline load for both models. Therefore, even if the resulting baseline loads differed between the models, the relative differences in loads resulting from BMP implementation were similar. The retention basins used in LSPC to determine the TLRs, as well as most of the BMPs chosen for implementation in SBPAT, rely primarily on reducing runoff volume to achieve bacteria load reductions. Therefore, the effect on the loads relative to baseline loads is similar, even with differing land use EMC statistics.



*Values from Table B-14 from Appendix B of SCCWRP, 2007

** Flow-weighted mean from Walnut WMA using high density single family residential, and the portion of urban pervious and secondary roads within the single-family residential land use area.

***Based on a ln mean of 8.38 and the ln standard deviation of 1.24.

Figure 4-7: Comparison of Fecal Coliform High Density Residential EMC Values Between SCCWRP Measurements (n=7), LSPC (only an average value is used by the model), and SBPAT Models (a full log distribution is used by the model, but non-parametric summary statistics are shown for comparison)

The following sections describe the approach for modeling each BMP category. An iterative process was employed to identify the final proposed suite of structural and non-structural BMPs that were found to be capable of achieving the bacteria TLRs.

4.8- Low Impact Development Ordinance

Implementation of Low Impact Development (LID) as a result of redevelopment was modeled uniformly throughout the WMA. Permit Section VI.C.4.c.i(1) requires permittees to develop and implement a LID ordinance applicable to redevelopment meeting minimum criteria thresholds of disturbance. City staff indicated that approximately one residential redevelopment project per year would meet the Permit's post-construction onsite retention applicability requirements. Average residential lots within the Walnut WMA were assumed to be 0.15 acres. The redevelopment of a single lot would therefore account for 0.0053% of the WMA's single family residential land use area. The City's LID ordinance was assumed to become effective in 2014 and the area redeveloped each year was sampled without replacement (i.e., areas that had undergone redevelopment in previous years were not available to undergo redevelopment again in subsequent years). Extrapolating the annual redevelopment rate without replacement for 10 years, or until the 2024 final compliance date, suggests that 1.6 acres or

0.058% of the City's residential land use area would be required to implement onsite retention LID BMPs.

Areas treated by LID as a result of the ordinance were modeled assuming unlined (with infiltration) bioretention systems sized for the 85th percentile, 24 hour storm depth for the WMA, or 0.98 in (Los Angeles County DPW, 2004a), with a saturated hydraulic conductivity (Ksat) of 0.15 in/hr, which is similar in magnitude to the Ksats of the underlying soils throughout the WMA.

4.9- Green Streets

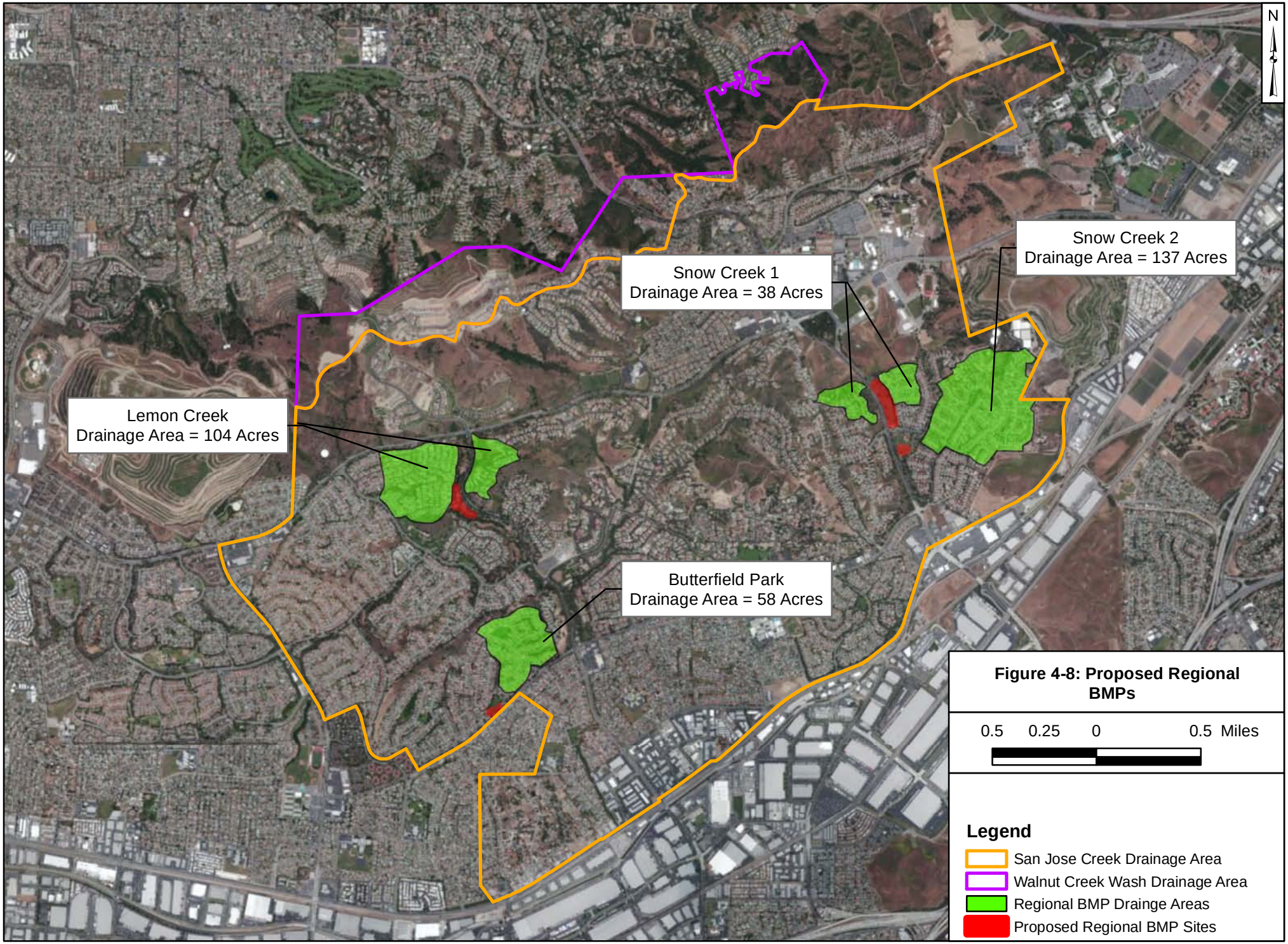
Green streets were applied to treat 30%[7] of commercial and residential land uses in areas that were not tributary to a proposed regional BMP in the San Jose Creek portion of the WMA. A total of 748 acres of residential and 46 acres of commercial land uses were assumed to be treated by green streets on the San Jose Creek side of the WMA for the purposes of this analysis. Green streets were applied to treat 41 acres or 75% of the residential area on the Walnut Creek Wash side of the WMA. Green street treatment was modeled assuming bioretention systems with underdrains sized to treat 150% of the 85th percentile design storm of 0.2 in/hr. The bioretention with underdrain systems were modeled in SBPAT using the volume capture of bioswales and the pollutant effluent EMCs of bioretention systems.

4.10- Regional BMPs

The regional type BMPs described in this section are included in the RAA on the basis of a number of assumptions that include construction feasibility and project funding. For the purpose of this document, only a desktop level investigation was conducted for establishing potential sites and footprints. No field samples of existing soil conditions or underground utility research have been completed.

Four publicly-owned potential regional BMP opportunity parcels have been identified for the purpose of this study. The locations of these regional BMPs and their drainage areas are shown in Figure 4-8. In SBPAT, the catchments were modified to enable modeling of the drainage areas to these regional BMPs, as shown in Figure 4-9. All regional BMPs were sized to the maximum footprint available based on local siting constraints. Side slopes and pre-treatment were assumed to occupy 15% of the available footprint. Infiltration basins and subsurface infiltration structures were assumed to account for the remaining 85% of the available footprint while the remaining subsurface flow wetland footprint is assumed to be comprised of an equalization basin and the wetland itself. Regional BMP conceptual design attributes that were used for SBPAT modeling are summarized in the following subsections. The most effective (for bacteria reduction) implementable regional BMP type was modeled at each project site – i.e., where soil types indicated that infiltration rates might be sufficient for infiltration based BMPs to be feasible, an infiltration basin or a subsurface infiltration system was modeled (infiltration basins were assumed at parks where existing uses could accommodate periodic temporary flooding, whereas subsurface systems were assumed at parks where existing land uses, such as ball fields, were to be maintained); otherwise subsurface flow wetlands (which could alternatively be implemented as any equivalent-performing flow-through or filtration-based BMP type) were assumed.

[7] The percent of area that drains to green street BMPs was iteratively determined based on meeting the TLRs.



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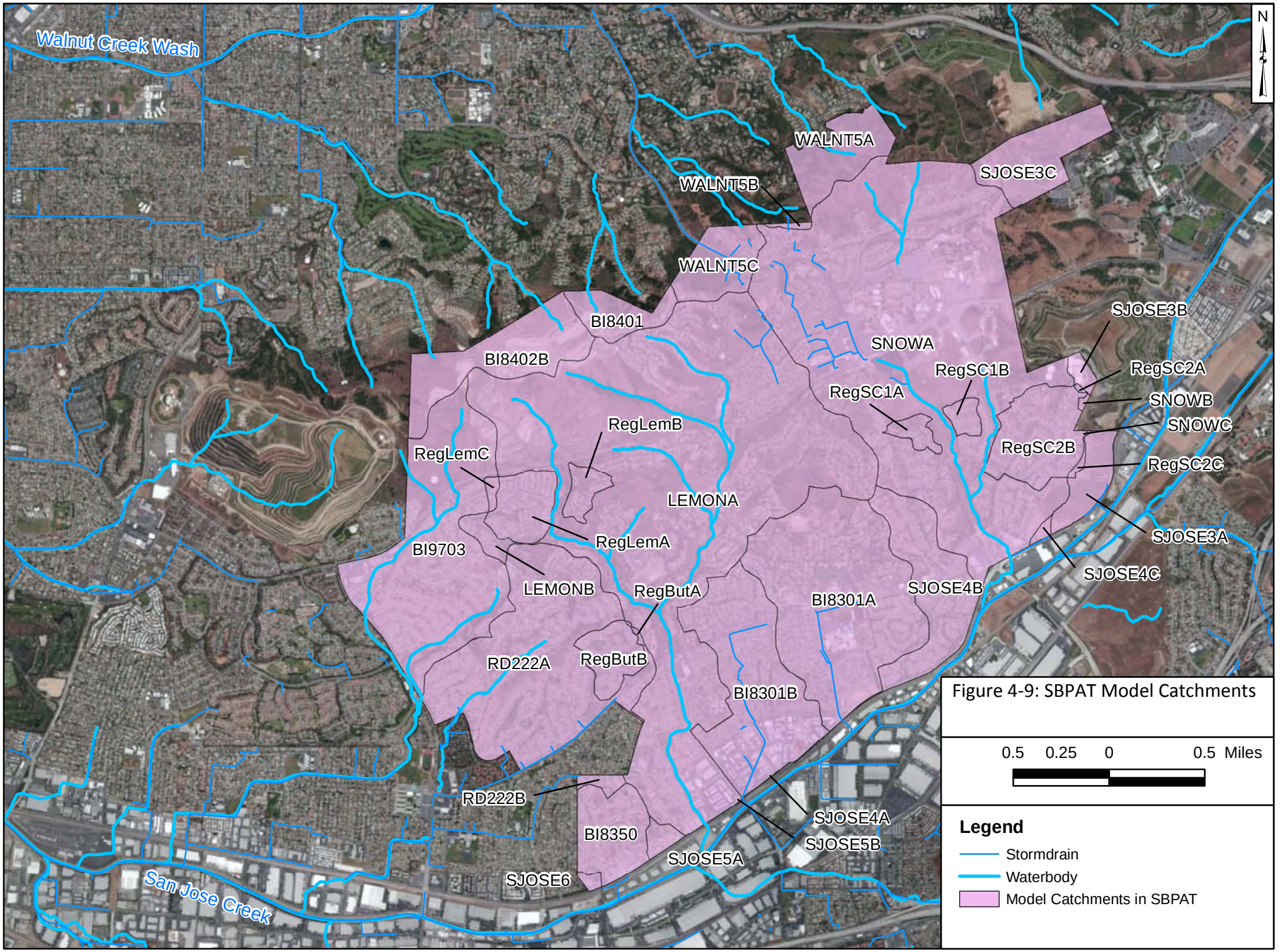

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The project details in this section demonstrate a potential route to establish reasonable assurance as required by the Los Angeles Regional Water Quality Control Board adopted Order R4-2012-0175. The inclusion of these projects in this document does not assume that they will be constructed as identified in this document. No regional funding sources have been identified for these projects. Design and construction timelines cannot be estimated at this time.

4.10.1- Butterfield Creek Subsurface Flow Wetland

A subsurface flow wetland project opportunity was identified at Butterfield Park on the southwest portion of the WMA. A schematic representation of the regional BMP footprint is presented in Attachment F. This regional BMP was modeled in SBPAT using the following design parameters and assumptions:

- Approximate Footprint Area: 93,000 sq ft
- Drainage Area: 58 acres
- Design Storm Intensity: 0.06 in/hr
- Treatment Flow Rate: 1.6 cfs
- Equalization Volume[8]: 270,000 cu ft
- Hydraulic Residence Time: 24 hrs
- Infiltration Rate: [no infiltration modeled]
- Depth: 8 ft
- Treatment Assumption: Concentration[9] and volume reduction

4.10.2- Lemon Creek Infiltration Basin

An infiltration basin project opportunity was identified in open space adjacent to North Lemon Avenue. A schematic representation of the regional BMP footprint is presented in Attachment F. This proposed facility was modeled as an infiltration basin in SBPAT using the following design parameters and assumptions:

- Approximate Footprint Area: 48,000 sq ft
- Drainage Area: 104 acres
- Water Quality Design Volume: 53,000 cu ft
- Design Storm: 0.3 in
- Infiltration Rate[10]: 0.30 in/hr
- Depth: 1.3 ft[11]
- Treatment Assumption: Volume reduction

[8] The equalization volume is the total volume required to attenuate peak flows after pretreatment occurs and before entering the SSF wetland.

[9] Subsurface flow wetlands are not well represented by BMP categories in the International BMP Database, which is used as the basis for SBPAT's BMP performance statistics. Therefore, a percent removal of 90 percent (1 log removal) was conservatively estimated for fecal coliform, consistent with methodologies documented in Geosyntec's Combined Load Reduction Plans from the San Diego region (which can be found here: www.sbpat.net/example.html). FC based on review of various SSF wetland studies

[10] Infiltration rate extracted from Los Angeles County Department of Public Works Soil Types dataset for the footprint area (Los Angeles County DPW, 2004b).

[11] Infiltration basin depth limited by infiltration rate and 48 hour drawdown limit for vector control.

4.10.3- Snow Creek 1 Subsurface Flow Wetland

A subsurface flow wetland project opportunity was identified north of the intersection of Grand Ave. and Snow Creek Dr. in the eastern portion of the WMA. A schematic representation of the regional BMP footprint is presented in Attachment F. This regional BMP was modeled in SBPAT using the following design parameters and assumptions:

- Approximate Footprint Area: 110,000 sq ft
- Drainage Area: 38 acres
- Design Storm Intensity: 0.11 in/hr
- Treatment Flow Rate: 1.8 cfs
- Equalization Volume: 310,000 cu ft
- Hydraulic Residence Time: 24 hrs
- Infiltration rate: [no infiltration modeled]
- Depth: 8 ft
- Treatment Assumption: Concentration and volume reduction

4.10.4- Snow Creek 2 Subsurface Infiltration System

A subsurface infiltration project opportunity was identified at the baseball field in Snow Creek Park. A schematic representation of the regional BMP footprint is presented in Attachment F. The water quality design volume of this subsurface infiltration facility was modeled as an infiltration basin in SBPAT using the following design parameters and assumptions:

- Approximate Footprint Area: 130,000 sq ft
- Drainage Area: 137 acres
- Water Quality Design Volume: 190,000 cu ft
- Design Storm: 0.9 in
- Infiltration Rate[12]: 0.77 in/hr
- Depth: 2 ft[13]
- Treatment Assumption: Volume reduction

4.11- Non-Modeled Non-Structural BMPs

A range of load reductions derived from non-modeled non-structural BMPs were assumed based on Geosyntec discussion with Regional Board staff during an RAA meeting on April 9, 2014. A total of 8% of the baseline fecal coliform load was assumed to be removed for the average load reduction scenario, and a range of 5% to 10% was assumed for the "low" and "high" load reduction scenarios, respectively. These non-structural BMPs will include the following program enhancements (i.e., beyond the Permit minimum), with an emphasis on those BMPs that most effectively target urban stormwater bacteria sources:

[12] Infiltration rate extracted from Los Angeles County Department of Public Works Soil Types dataset for the footprint area (Los Angeles County DPW, 2004b).

[13] BMP depth is based on approximate capture of the 85th percentile, 24 hour storm event. Alternatively, equivalent load reduction could be achieved by a larger depth and smaller area, as long as total volume is maintained.

- enhanced street sweeping,
- enhanced catch basin and stormdrain cleaning,
- enhanced commercial and food outlet inspection,
- enhanced pet waste controls,
- enhanced education and outreach,
- septic inspection/enforcement, and
- enhanced Illicit Discharge Detection Elimination (IDDE)

4.12- Final Milestone Load Reductions

The following tables present individual and summed BMP load reductions for fecal coliform for the San Jose Creek and Walnut Creek Wash drainage areas as a percentage of the baseline loads for the 90th percentile year. Bacteria load reduction results (Tables 4-9 and 4-10) are shown for the final wet weather bacteria TMDL compliance date of 2024 (based on an assumed compliance schedule of 10 years from the WMP submittal date), modeled using rainfall data from the 90th percentile year (1993). Average (mean) load reduction results are shown, as well as the interquartile ranges (25th to 75th percentiles, to reflect the Monte Carlo-derived variability of these model output. A total BMP load reduction that exceeds the TLR indicates that reasonable assurance (of meeting the Permit limits) has been demonstrated for that drainage area.

Lead load reductions are not quantified here since target load reductions were determined to be zero, however lead loads will be reduced considerably through implementation of the proposed non-structural and structural BMPs.

Table 4-9

Fecal Coliform Load Reductions as a Percentage of Total Baseline Load for the San Jose Creek Drainage Area for the 90th Percentile Year

BMP Program	Average	Low (25th %ile)*	High (75th %ile)*
Non-Structural BMPs			
LID Ordinance	0.01%	0.01%	0.02%
Other non-modeled	8%	5%	10%
Regional BMPs			
Butterfield (RBMP_01)	0.9%	0.6%	1.0%
Lemon Creek (RBMP_02)	0.3%	0.3%	0.4%
Snow Creek 1 (RBMP_03)	0.7%	0.4%	0.8%
Snow Creek 2 (RBMP_04)	1.3%	0.9%	1.3%
Distributed BMPs			
Green Streets	12.1%	7.7%	14.4%
Target Load Reduction	**27%**		
Total BMP Load Reduction	**23%**	**15%**	**28%**

*All percentages shown are percentages of the average baseline load

Table 4-10

Fecal Coliform Load Reductions as a Percentage of Total Baseline Load for the Walnut Creek Wash Drainage Area for the 90th Percentile Year			
BMP Program	**Average**	**Low (25th %ile)***	**High (75th %ile)***
Non-Structural BMPs			
LID Ordinance	0.02%	0.01%	0.02%
Other non-modeled	8%	5%	10%
Distributed BMPs			
Green Streets	35.4%	20%	42%
Target Load Reduction	**51%**		
Total BMP Load Reduction	**43.4%**	**25%**	**52%**

*All percentages shown are percentages of the average baseline load

4.13- Interim Milestones

Fecal coliform bacteria is a Category 2 pollutant; therefore, a compliance schedule and interim milestones must be developed in the WMP. An interim milestone date was set as the end of the Permit term, or December 2017. The interim target for this date is assumed to be the estimated load reduction resulting from the BMPs that will be implemented by that date based on the City's proposed phasing of BMPs. The final compliance date is set to 2036 consistent with the Draft San Gabriel River Bacteria TMDL.

Table 4-11 identifies the proposed BMP implementation schedule, based on City input. The resulting bacteria load reductions for the interim and final milestones are presented in Figures 4-14 and 4-15 for the San Jose Creek and Walnut Creek Wash drainage areas, respectively.

Table 4-11

Assumed BMP Implementation Schedule	
BMP Program	**Assumed Date BMP is Implemented by:**
LID Ordinance	June, 2024*
Non-Modeled Non-Structural BMPs	December, 2017*
Butterfield (RBMP_01)**	TBD
Lemon Creek (RBMP_02)**	TBD
Snow Creek 1 (RBMP_03)**	TBD
Snow Creek 2 (RBMP_04)**	TBD
Green Streets	June, 2036

* Non-structural program implementation may be continuous and ongoing, however the estimated load reduction for this BMP category is applied to this date for the purpose of this phasing analysis.

** The Regional BMPs identified in this section are major projects with no current or potential funding source identified at this time. The City has not established an implementation schedule for these projects due to the unforeseeable future of funding for projects of this magnitude. If a funding is established this schedule will be updated as part of the Adaptive Management Process.

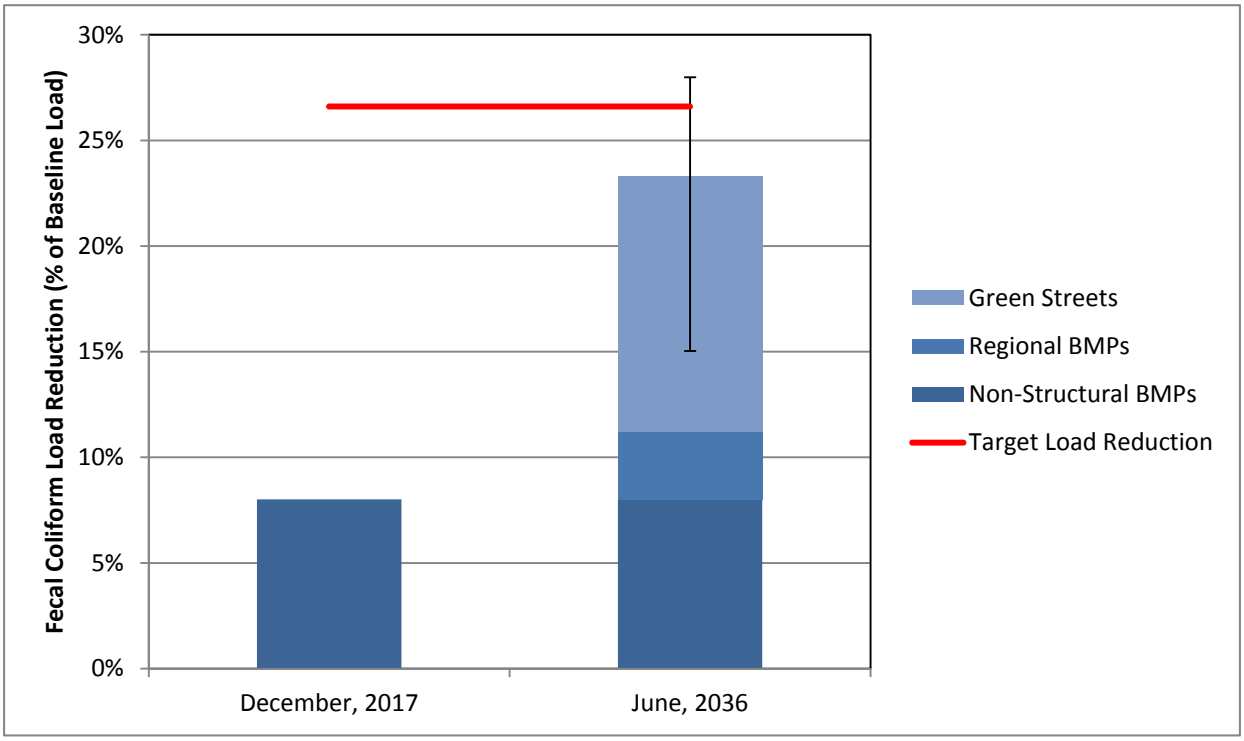

Figure 4-14: Fecal Coliform Interim and Final Load Reductions for the San Jose Creek Drainage Area. Bars Represent the Average Predicted Load Reduction and the Whiskers Represent the High and Low Estimates Using the Range of Load Reductions Non-Structural BMPs and the 75th and 25th Percentile Load Reductions from Modeled BMPs

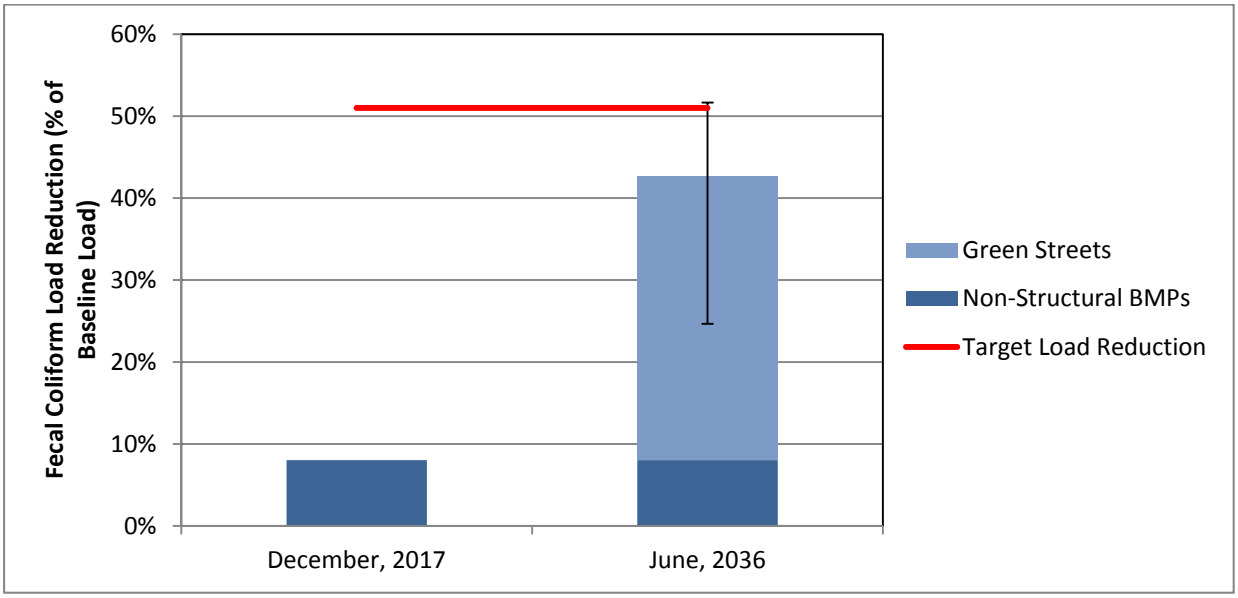

Figure 4-15: Fecal Coliform Interim and Final Load Reductions for the Walnut Creek Wash Drainage Area. Bars Represent the Average Predicted Load Reduction and the Whiskers Represent the High and Low Estimates Using the Range of Load Reductions Non-Structural BMPs and the 75th and 25th Percentile Load Reductions from Modeled BMPs.

4.14- Conditions for RAA Revision

As part of the WMP adaptive management process, as outfall and/or receiving water data specific to the Walnut WMA are accumulated, the RAA models will be recalibrated and/or validated, and the RAA will be updated as appropriate. This has the potential to result in modification of the proposed suite of structural and non-structural BMPs. Similarly, if the applicable recreational uses or bacteria objectives change, then relevant modeling assumptions and/or TLRs, and the resulting suite of structural and non-structural BMPs, will be adjusted accordingly. For example, during the compliance period, the City may elect to perform special studies to refine any Waste Load Allocations (WLAs) that become effective through the San Gabriel River Bacteria TMDL. Various pathways will be available to reopen the TMDL and modify the WLAs, including use of microbial source tracking to support a natural source exclusion, quantitative microbial risk assessment to develop site specific objectives, and/or use attainability analysis (or equivalent procedures) to support a high flow suspension of recreational uses on Walnut Creek Wash, all of which are procedures that may be clarified through the pending statewide bacteria objectives update. Therefore, through the WMP adaptive management process, this RAA may be reevaluated after any changes to the water quality objectives, TMDL WLAs, and/or MS4 Permit limits become effective.

4.15- Reasonable Assurance Demonstration

Lead TLRs were found to be zero for both drainage areas of the WMA, therefore new BMPs were not needed to demonstrate reasonable assurance of compliance with the applicable lead WQBEL. However, lead loads will be reduced considerably through implementation of the proposed non-structural and structural BMPs for bacteria. For bacteria in San Jose Creek and Walnut Creek Wash, total estimated BMP load reductions, using 75th percentile values[14], meet or exceed the TLRs. Therefore, reasonable assurance has been demonstrated for both pollutants for both water bodies based on the proposed suite of non-structural and structural BMPs for the Walnut WMA.

[14] In the future, through the adaptive management process, as the RAA models are revisited, different load reduction output statistics may be used to demonstrate compliance; for example, as compliance deadlines approach, the City's risk tolerance may narrow and therefore BMPs may be added to increase the average load reductions above the TLRs (whereas currently only the 75th percentile load reductions exceed the TLRs).

5.0- Proposed WMP Implementation Plan

The City of Walnut has developed an approach for complying with the MS4 Permit water quality requirements that includes a combination of Source Control BMPs and Structural BMPs in coordination with the MCMs outlined in section 3.0 of this document. The City's proposed BMP plan has been confirmed through the RAA process to be effective in reducing the modeled pollutant loads to the allowable levels established by applicable TMDLs and the Basin Plan. Source control BMPs proposed by the City include policies, programs and ordnances that support practices that improve or prevent additional pollution from being deposited into the local rivers and creeks. A majority of the pollutant reductions will come from the proposed structural BMP plan.

The City's planned structural BMPS include Regional and Local approaches. The combination of structural BMPs has been formulated to reach the water quality goals established by the Basin Plan and applicable TMDLs through the treatment of wet weather runoff originating from the City.

5.1- MCM Implementation

The City has proposed the implement an enhanced MCM program that will aid in the protection and improvement of water quality in the City. Much of the MCM program is prescribed by the MS4 Permit, but the City has elected to focus additional resources in some areas. Table 5-1 highlights the enhancements to the MCM program.

Table 5-1

MCM Program Enhancements	
Public Information and Participation Program	• Storm water education available at community events • Focused education materials provided to key businesses for distribution to public
Commercial Tracking and Inspections	• Random commercial site inspections of critical potential sources
Streets, Roads and parking Facilities Maintenance	• Streets are swept bi-monthly
Landscape, Park, and Recreational Facilities Management	• Installation of Pet waste stations

5.2- Regional BMPs

The City has identified four potential regional BMPs to be located at existing parks modeled as sub-surface wetlands. The proposed regional BMPs will be complimentary to existing park uses after construction. As described in previous sections, no funding source for the design and construction of these BMPs has been identified. The City will continue to study potential funding opportunities for these projects during the duration of the Permit. Should a regional funding source be established, the project implementation schedule for these BMPs will be updated during the adaptive management process.

5.3- Local BMPs

In coordination with the regional BMPS, the City has developed a plan for local BMPs that has been demonstrated in the RAA portion of this document to provide adequate treatment for the City's storm water. As identified in the Section 4.9, the RAA calls for Green Streets BMPs to be implemented on a scale that covers a specified area summarized in Table 5-2. Bio filtration and bio retention BMPs will be utilized in the local BMP program, but other localized BMPs may be considered in the future.

Table 5-2

Green Streets BMPs	
San Jose Creek Watershed	
Land Use	**Acreage Treated by BMPs**
Residential	748
Commercial	46
Walnut Creek Wash	
Residential	41

Implementation of the local BMP program will be dependent on the results of the IMP. The monitoring results will help establish where the greatest need is within the City. If the local BMPs are necessitated through the results of the IMP, the City will initiate an annual CIP program over the remaining life of the permit to ensure the BMPs are cost feasible and contribute to pollutant load reductions. This stepped approach will enable the City to implement the BMPs with the most effective approach.

Pending the results of the IMP the City has established a planned implementation schedule. In an effort to maximize the programs initial impact, the City will review at least two years of monitoring data from the integrated monitoring plan to prioritize the potential Green Streets Project locations. Following the development of the prioritized projects schedule the City will begin implementation of an annual CIP program that will include the construction of Green Street type BMPs. The projected schedule for first 10 years of the WMP is identified in Table 5-3. Projects will continue on an annual schedule beyond 2025 as necessitated by monitoring results with the goal of meeting 100% compliance requirements by 2036.

Table 5-3

City of Walnut Green Streets Interim Implementation Schedule		
Task	Design Completion Date	Construction Completion Date
Project No. 1	December 31, 2018	December 31, 2019
Project No. 2	December 31, 2019	December 31, 2020
Project No. 3	December 31, 2020	December 31, 2021
Project No. 4	December 31, 2021	December 31, 2022
Project No. 5	December 31, 2022	December 31, 2023
Project No. 6	December 31, 2023	December 31, 2024
Project No. 7	December 31, 2024	December 31, 2025

5.4- Dry Weather Flow Elimination Program

The City of Walnut is proposing to eliminate manmade dry weather discharges to prevent exceedances in the receiving waters. The City will coordinate this program with the IMP and wet weather BMP program to maximize efficacy of available resources.

5.4.1- Dry Weather Water Quality Considerations

As outlined in Section 2.0 ”Water Quality Priorities” the City is subject to a dry weather WAL for Category 1 pollutant Selenium. The source of selenium in the watershed is suspected to be natural. The man made dry weather flows originating from residential land uses are not expected to be a source of selenium with in the City.

Bacteria will be regarded as the primary Category 2 pollutant receiving focus during dry weather conditions. To reach the WQBEL established for bacteria the City proposes to utilize the dry weather source elimination program outline in this section. Eliminating all dry weather flows will also carry over to meet WQBELs for all of the other established Category 2 pollutants.

5.4.2- Dry Weather Flow Elimination Program Implementation

The IMP includes a dry weather flow source investigation program that will include water quality testing and field source investigations. The City will utilize City staff and contractors to assess the sources of dry weather flows. Additionally, City field staff will be utilized to identify upstream dry weather flows within the City. Flows identified in the gutter, day lighted channel connections and a city outfall will be tracked during the first two years of the WMP implementation.

All the available data will be gathered and analyzed to best determine how to address the identified flows. The City of Walnut will utilize education, legal jurisdiction and BMP programs to eliminate dry weather flows. Table 5-4 highlights how the City will address the anticipated dry weather flows once a source is identified.

Table 5-4

Dry Weather Flow Elimination Program	
Over Irrigation	Illicit Discharge program / Education
Pool Draining	Illicit Discharge program / Education
Driveway/Sidewalk Walking	Illicit Discharge program / Education
Vehicle Washing	Education
Commercial Discharge	Illicit Discharge program / Education

Land use within the City of Walnut is primarily single family residential development. Dry weather flows are anticipated to be relatively small in volume and inconsistent in frequency. Dry weather flows within the City may also include conditionally exempt discharges. Should a flow be determined conditionally exempt or of an unidentifiable manmade source the City may consider structural BMPs to mitigate the

dry weather flow. These considerations will also be included in the prioritization of the Green Streets Projects to address wet weather conditions.

Natural spring flows are known to exist within the City's two soft bottom streams. Separating natural spring flows from man-made discharges will be a formidable task. The City will rely on the IMP results to confirm the water quality of dry weather flows. Additionally, the City will utilize staff to inspect storm drain connections to the streams for flows.

5.4.3- Implementation Schedule

The source tracking portion of program will be partially implemented upon the approval of the WMP. The remainder of the source tracking will be implemented with the dry weather source assessment conducted under the IMP. The City will take action on easily identified dry weather sources following identification. The more difficult sources to identify will be address later on in the program once a better understanding of the dry weather discharges form the city has been established. The following schedule highlights the interim implementation schedule (Table 5-5):

Table 5-5

Dry Weather Flow Elimination Program Implementation Schedule	
Task	**Start Date**
Develop Source Tracking Program	June 1, 2015
Field Staff Training	June 30, 2015
Establish Data Gathering Procedures	June 1, 2015
Coordinate IMP Dry weather flow Data	30 days following start of dry weather monitoring
Eliminate Identified Dry Weather Flow Sources	Ongoing during dry seasons starting 2015
Establish Potential Structural BMP Locations	Include in considerations for 2019 Green Streets

6.0- Interim and Final Compliance Schedule

The City of Walnut is subject to the interim TMDL compliance schedule established by Regional Board Resolution R13-004. The MS4 Permit requirements the City develop a compliance schedule for all categories of pollutants as part of the WMP. Source control BMPs will begin implementation during the remaining term of the MS4 Permit. The planning and cost required for the implementation of structural BMPs pushes actual implementation of structural water treatment options farther into and beyond the current MS4 Permit's term.

Implementing a program of this size and cost requires that the City fully understand the nature of storm water quality within the City's boundaries. The City has proposed that data gathering and source investigations take place during the first two years of the program. Following that period the City plans to begin scheduling design and construction of phased projects that will ensure the best application of available resources. The funding need that this program represents is also a considerable encumbrance that the City has been required to assume. Establishing and funding this program and its subsequent projects is a major task that will take time and planning. Currently there is no substantial funding source that has been identified to aid the City in implementing this program.

The City holds water quality in high regard. While the program demands are great, the City also recognizes that impacts on the watershed need to be address in a timely fashion. In consideration of the proposed San Gabriel River Bacterial TMDL currently in development and in an effort to balance budgetary demands, the City is proposing a 21 year compliance term associated with the proposed BMP implementation schedule. Results from the RAA process indicate that the City's existing category 1 pollutants have a zero load reduction necessary for compliance. Thus the next priority pollutant of concern is bacteria. It is also anticipated that the San Gabriel River Bacteria TMDL will be approved in the near future which would elevate the pollutant to a category 1 level. The use of a 21 year compliance schedule is in anticipation of the adoption of the proposed Bacteria TMDL.

Table 4-8 outlines the City's proposed BMP implementation schedule. Table 5-6 outline the proposed compliance schedules for all TMDL and 303(d) listed pollutants that the City is currently subject to.

Table 5-6

Compliance Schedule											
Selenium Waste Load Allocation (5µg/L) Compliance Schedule – Dry Weather TMDL											
Watershed	**2017**		**2020**		**2023**						
San Jose Creek Reach 1	30%		70%		100%						
Lead Waste Load Allocation (81.34µg/L) Compliance Schedule – Wet Weather TMDL											
City of Walnut	**2017**	**2020**		**2023**		**2026**					
	10%	35%		65%		100%					
E Coli WQBEL Compliance Schedule											
Watershed	**2016**	**2018**	**2020**	**2022**	**2024**	**2026**	**2028**	**2030**	**2032**	**2034**	**2036**
San Jose Creek Reach 1	-	5%	10%	20%	30%	40%	50%	60%	70%	80%	100%
Walnut Creek Wash	-	5%	10%	20%	30%	40%	50%	60%	70%	80%	100%
pH WQBEL Compliance Schedule											
City of Walnut	**2016**	**2018**	**2020**	**2022**	**2024**	**2026**	**2028**	**2030**	**2032**	**2034**	**2036**
	-	5%	10%	20%	30%	40%	50%	60%	70%	80%	100%

Total Dissolved Solids WQBEL Compliance Schedule											
City of Walnut	**2016**	**2018**	**2020**	**2022**	**2024**	**2026**	**2028**	**2030**	**2032**	**2034**	**2036**
	-	5%	10%	20%	30%	40%	50%	60%	70%	80%	100%
Toxicity WQBEL Compliance Schedule											
City of Walnut	**2016**	**2018**	**2020**	**2022**	**2024**	**2026**	**2028**	**2030**	**2032**	**2034**	**2036**
	-	5%	10%	20%	30%	40%	50%	60%	70%	80%	100%
Cyanide WQBEL Compliance Schedule											
City of Walnut	**2016**	**2018**	**2020**	**2022**	**2024**	**2026**	**2028**	**2030**	**2032**	**2034**	**2036**
	-	5%	10%	20%	30%	40%	50%	60%	70%	80%	100%
Benthic- Macroinvertebrates WQBEL Compliance Schedule											
City of Walnut	**2016**	**2018**	**2020**	**2022**	**2024**	**2026**	**2028**	**2030**	**2032**	**2034**	**2036**
	-	5%	10%	20%	30%	40%	50%	60%	70%	80%	100%

7.0- Adaptive Management Process

The City of Walnut will utilize the MS4 Permit required adaptive management process to review and potentially modify the WMP in an effort to improve the effectiveness of the plan. The adaptive management process will take place every two years from the date of approval by the Regional Water Quality Control Board. The review process of the plan will include consideration of the following items:

- Progress toward achieving interim and/or final water quality-based effluent limitations and/or receiving water limitations in Part VI.E and Attachment L through R, according to established compliance schedules.
- Progress toward achieving improved water quality in MS4 discharges and achieving receiving water limitations through implementation of the watershed control measures based on an evaluation of outfall-based monitoring data and receiving water monitoring data.
- Achievement of interim milestones.
- Re-evaluation of water quality priorities identified for the WMA based on more recent water quality data for discharges from the MS4 and the receiving water(s) and a reassessment of sources of pollutants in MS4 discharges.
- Availability of new information and data from sources other than the monitoring program with in the WMA that informs the effectiveness of the actions implemented by the WMP.
- Regional Water Board recommendations.
- Recommendations for modifications to the Watershed Management Program solicited through a public participation process.

The findings of the adaptive management review process can result in modifications to the WMP including changes to compliance deadlines, interim milestones necessary to improve the effectiveness of the program. Modifications to compliance deadlines established by TMDLs will not be allowed through the adaptive management process. Proposed modifications to the WMP shall be reported by the City of Walnut in the Annual Report. Proposed modifications identified through the adaptive management process shall be implemented upon approval by the Regional Board Executive Officer within 60 days of their submittal if the Regional Board Executive has not expressed any objections to the modifications.

8.0- References

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Los Angeles County Department of Public Works, 2010b. Los Angeles County Watershed Model Configuration and Calibration-Part II: Water Quality. Submitted by Tetra Tech, Inc. August 6, 2010

SCCWRP. 2007. Technical Report 510 Sources, Patterns, and Mechanisms of Storm Water Pollutant Loading from Watersheds and Land Uses of the Greater Los Angeles Area, California, USA. Written by E.D. Stien, L.L. Tiefenthaler, and K.C. Schiff. March 2007.

Attachment A

City of Walnut

Notice of Intent

P.O. Box 682, Walnut, CA 91788-0682
21201 La Puente Road
Walnut, CA 91789-2018
Telephone (909) 595-7543
FAX (909) 595-6095
www.ci.walnut.ca.us

CITY OF WALNUT

June 26, 2013

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Regional Board Staff:

Enclosed please find the Notice of Intent (NOI) for the City of Walnut required as part of the new National Pollution Discharge Elimination System Municipal Separate Storm Sewer Systems Permit. As stated in the NOI, the City of Walnut will be developing a Watershed Management Plan and associated Integrated Monitoring Plan.

Please do not hesitate to contact me should you require any additional information. Thank you in advance for your time and assistance.

Sincerely,

Alicia Jensen

Alicia Jensen
Senior Management Analyst
City of Walnut
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Notice of Intent

City of Walnut

Watershed Management Plan

Submitted to:

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Submitted by:

The City of Walnut
21201 La Puente Road
Walnut, CA 91789

June 28, 2013

Notice of Intent to Develop a Watershed Management Plan and Integrated Monitoring Plan
The City of Walnut hereby notifies the Los Angeles Regional Water Quality Control Board (LARWQCB) of the City's intent to proceed with the development of a Watershed Management Plan (WMP). Per Order No. R-2012-0175, NPDES Permit No. CAS 004001, Section VI.C.4.b.i. The City of Walnut will develop a Draft WMP and submit the plan for the Regional Board's review by June 28, 2014. Draft versions of the Low Impact Development Ordinance and Green Streets Policy are included in Appendix A and B. As required in Section VI.C.7 of NPDES Permit No. CAS 004001, the City will develop and submit an Integrated Monitoring Plan (IMP) in conjunction with the WMP.

Total Maximum Daily Loads (TMDL) & Water Quality Based Effluent Limitations (WQBEL)
In accordance with Section VI.C.4.b.ii of NPDES Permit CAS004001, the jurisdictional area of the City of Walnut discharges to tributaries subject to the TMDLs listed in Table A. Currently, the City is not subject to any interim or final Water Quality Based Effluent Limitations (WQBELs), however, the City will continue its existing programs and Minimum Control Measures until the WMP is approved and implemented.

Table A TMDLs Applicable to the City of Walnut

TMDL	Resolution Number	Effective Date	EPA Approval Date	Water Body	Impairment
San Gabriel River and Impaired Tributaries Metals and Selenium	2006-014	July 13, 2006	TBD	San Jose Creek	Dry Weather WLA for Selenium*

**As noted at the Board's June 6, 2013, LA Basin Plan Public Hearing, Walnut objects to the inclusion of the San Gabriel River Metals TMDL in the LA Basin Plan amendment since Selenium was removed as a TMDL on the USEPA's 2010 303(d) list.*

City Contact Information

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Attachment A

Draft LID Ordinance
City of Walnut

DRAFT LID ORDINANCE

ORDINANCE NO._____

AN ORDINANCE AMENDING [MUNICIPAL CODE SECTION REFERENCE(S)] OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING [NAME OF POST-CONSTRUCITON REQUIREMENTS – LIKELY "SUSMP" FOR MOST MUNICIPALITIES] REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

CITY COUNCIL OF THE CITY OF WALNUT HEREBY ORDAINS THE FOLLOWING:

(A) The City of Walnut is authorized by Article XI, §5 and §7 of the State Constitution to exercise the police power of the State by adopting regulations to promote public health, public safety and general prosperity.

(B) The City of Walnut has authority under the California Water Code to adopt and enforce ordinances imposing conditions, restrictions and limitations with respect to any activity which might degrade the quality of waters of the State.

(C) The city is a permittee under the "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," issued by the California Regional Water Quality Control Board--Los Angeles Region," (Order No. R4-2012-0175) which also serves as an NPDES Permit under the Federal Clean Water Act (NPDES No. CAS004001), as well as Waste Discharge Requirements under California law (the "Municipal NPDES permit"). In order to participate in a Watershed Management Program and/or Enhanced Watershed Management Program, the Municipal NPDES permit requires permittees to develop and implement a LID Ordinance.

(D) The City of Walnut has applied an integrated approach to incorporate wastewater, stormwater and runoff, and recycled water management into a single strategy through its (_____) Plan.

(E) The City of Walnut is committed to a stormwater management program that protects water quality and water supply by employing watershed-based approaches that balance environmental, social, and economic considerations.

(F) It is the intent of the City of Walnut to expand the applicability of the existing Standard Urban Stormwater Mitigation Plan (SUSMP) requirements by providing stormwater and rainwater LID strategies for Development and Redevelopment projects as defined under "Applicability."

[MUNICIPAL CODE SECTION REFERENCE(S)] of the [CITY NAME] Municipal Code is amended in its entirety to read as follows:

Definitions.

Except as specifically provided herein, any term used in this [SECTION REFERENCE] shall be defined as that term in the current Municipal NPDES permit, or if it is not specifically defined in either the Municipal NPDES permit, then as such term is defined in the Federal Clean Water Act, as amended, and/or the regulations promulgated thereunder. If the definition of any term contained in this chapter conflicts with the definition of the same term in the current Municipal NPDES permit, then the definition contained in the Municipal NPDES permit shall govern. The following words and phrases shall have the following meanings when used in this chapter:

Automotive Service Facility means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. For inspection purposes, Permittees need not inspect facilities with SIC codes 5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to stormwater (Source: Order No. R4-2012-0175).

Basin Plan means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments (Source: Order No. R4-2012-0175).

Best Management Practice (BMP) means practices or physical devices or systems designed to prevent or reduce pollutant loading from stormwater or non-stormwater discharges to receiving waters, or designed to reduce the volume of stormwater or non-stormwater discharged to the receiving water (Source: Order No. R4-2012-0175).

Biofiltration means a LID BMP that reduces stormwater pollutant discharges by intercepting rainfall on vegetative canopy, and through incidental infiltration and/or evapotranspiration, and filtration. Incidental infiltration is an important factor in achieving the required pollutant load reduction. Therefore, the term "biofiltration" as used in this Ordinance is defined to include only systems designed to facilitate incidental infiltration or achieve the equivalent pollutant reduction as biofiltration BMPs with an underdrain (subject to approval by the Regional Board's Executive Officer). Biofiltration BMPs include bioretention systems with an underdrain and bioswales (Modified from: Order No. R4-2012-0175).

Bioretention means a LID BMP that reduces stormwater runoff by intercepting rainfall on vegetative canopy, and through evapotranspiration and infiltration. The bioretention system typically includes a minimum 2-foot top layer of a specified soil and compost mixture underlain by a gravel-filled temporary storage pit dug into the in-situ soil. As defined in the Municipal NPDES permit, a bioretention BMP may be designed with an overflow drain, but may not include an underdrain. When a bioretention BMP is designed or constructed with an underdrain it is regulated by the Municipal NPDES permit as biofiltration (Modified from: Order No. R4-2012-0175).

Bioswale means a LID BMP consisting of a shallow channel lined with grass or other dense, low-growing vegetation. Bioswales are designed to collect stormwater runoff and to achieve a uniform sheet flow through the dense vegetation for a period of several minutes (Source: Order No. R4-2012-0175).

City means the City of Walnut.

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted in 1972, by Public Law 92-500, and amended by the Water Quality Act of 1987. The Clean Water Act prohibits the discharge of pollutants to Waters of the United States unless the discharge is in accordance with an NPDES permit.

Commercial Malls means any development on private land comprised of one or more buildings forming a complex of stores which sells various merchandise, with interconnecting walkways enabling visitors to easily walk from store to store, along with parking area(s). A commercial mall includes, but is not limited to: mini-malls, strip malls, other retail complexes, and enclosed shopping malls or shopping centers (Source: Order No. R4-2012-0175).

Construction Activity means any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that result in land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain the original line and grade, hydraulic capacity, or original purposes of the facility. See "Routine Maintenance" definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage by the State of California General Permit for Storm Water Discharges Associated with Industrial Activities or for Stormwater Discharges Associated with Construction Activities is required if more than one acre is disturbed or the activities are part of a larger plan (Source: Order No. R4-2012-0175).

Control means to minimize, reduce or eliminate by technological, legal, contractual, or other means, the discharge of pollutants from an activity or activities (Source: Order No. R4-2012-0175).

Development means construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail, and other non-residential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Directly Adjacent means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area (Source: Order No. R4-2012-0175).

Discharge means any release, spill, leak, pump, flow, escape, dumping, or disposal of any liquid, semi-solid, or solid substance.

Disturbed Area means an area that is altered as a result of clearing, grading, and/or excavation (Source: Order No. R4-2012-0175).

Flow-through BMPs means modular, vault type "high flow biotreatment" devices contained within an impervious vault with an underdrain or designed with an impervious liner and an underdrain (Modified from: Order No. R4-2012-0175).

General Construction Activities Storm Water Permit (GCASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from construction activities under certain conditions.

General Industrial Activities Storm Water Permit (GIASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from certain industrial activities under certain conditions.

Green Roof means a LID BMP using planter boxes and vegetation to intercept rainfall on the roof surface. Rainfall is intercepted by vegetation leaves and through evapotranspiration. Green roofs may be designed as either a bioretention BMP or as a biofiltration BMP. To receive credit as a bioretention BMP, the green roof system planting medium shall be of sufficient depth to provide capacity within the pore space volume to contain the design storm depth and may not be designed or constructed with an underdrain (Source: Order No. R4-2012-0175).

Hazardous Material(s) means any material(s) defined as hazardous by Division 20, Chapter 6.95 of the California Health and Safety Code.

Hillside means a property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is 25% or greater and where grading contemplates cut or fill slopes (Source: Order No. R4-2012-0175).

Impervious Surface means any man-made or modified surface that prevents or significantly reduces the entry of water into the underlying soil, resulting in runoff from the surface in greater quantities and/or at an increased rate, when compared to natural conditions prior to development. Examples of places that commonly exhibit impervious surfaces include parking lots, driveways, roadways, storage areas, and rooftops. The imperviousness of these areas commonly results from paving, compacted gravel, compacted earth, and oiled earth.

Industrial Park means land development that is set aside for industrial development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry (Source: Order No. R4-2012-0175).

Infiltration BMP means a LID BMP that reduces stormwater runoff by capturing and infiltrating the runoff into in-situ soils or amended onsite soils. Examples of infiltration BMPs include infiltration basins, dry wells, and pervious pavement (Source: Order No. R4-2012-0175).

LID means Low Impact Development. LID consists of building and landscape features designed to retain or filter stormwater runoff (Source: Order No. R4-2012-0175).

MS4 means Municipal Separate Storm Sewer System (MS4). The MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying stormwater;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

(40 CFR § 122.26(b)(8)) (Source: Order No. R4-2012-0175)

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA §307, 402, 318, and 405. The term includes an "approved program" (Source: Order No. R4-2012-0175).

Natural Drainage System means a drainage system that has not been improved (e.g., channelized or armored). The clearing or dredging of a natural drainage system does not cause the system to be classified as an improved drainage system (Source: Order No. R4-2012-0175).

New Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision (Source: Order No. R4-2012-0175).

Non-Stormwater Discharge means any discharge to a municipal storm drain system that is not composed entirely of stormwater (Source: Order No. R4-2012-0175).

Parking Lot means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use, with a lot size of 5,000 square feet or more of surface area, or with 25 or more parking spaces (Source: Order No. R4-2012-0175).

Person means any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, state, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine and the singular shall include the plural where indicated by the context.

Planning Priority Projects means development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution, prior to completion of the project(s) (Modified from: Order No. R4-2012-0175).

Pollutant means any "pollutant" defined in Section 502(6) of the Federal Clean Water Act or incorporated into the California Water Code Sec. 13373. Pollutants may include, but are not limited to the following:

(1) Commercial and industrial waste (such as fuels, solvents, detergents, plastic pellets, hazardous substances, fertilizers, pesticides, slag, ash, and sludge).

(2) Metals (such as cadmium, lead, zinc, copper, silver, nickel, chromium, and non- metals such as phosphorus and arsenic).

(3) Petroleum hydrocarbons (such as fuels, lubricants, surfactants, waste oils, solvents, coolants, and grease).

(4) Excessive eroded soil, sediment, and particulate materials in amounts that may adversely affect the beneficial use of the receiving waters, flora, or fauna of the State.

(5) Animal wastes (such as discharge from confinement facilities, kennels, pens, recreational facilities, stables, and show facilities).

(6) Substances having characteristics such as pH less than 6 or greater than 9, or unusual coloration or turbidity, or excessive levels of fecal coliform, or fecal streptococcus, or enterococcus.

Project means all developmen , redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Pub. Resources Code §21065) (Source: Order No. R4-2012-0175).

Rainfall Harvest and Use means a LID BMP system designed to capture runoff, typically from a roof but can also include runoff capture from elsewhere within the site, and to provide for temporary storage until the harvested water can be used for irrigation or non-potable uses. The harvested water may also be used for potable water uses if the system includes disinfection treatment and is approved for such use by the local building department (Source: Order No. R4-2012-0175).

Receiving Water means "water of the United States" into which waste and/or pollutants are or may be discharged (Source: Order No. R4-2012-0175).

Redevelopment means land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of routine maintenance activity; and land disturbing activity related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Regional Board means the California Regional Water Quality Control Board, Los Angeles Region.

Restaurant means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812) (Source: Order No. R4-2012-0175).

Retail Gasoline Outlet means any facility engaged in selling gasoline and lubricating oils (Source: Order No. R4-2012-0175).

Routine Maintenance

Routine maintenance projects include, but are not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.
4. Update existing lines* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
5. Repair leaks

Routine maintenance does not include construction of new** lines or facilities resulting from compliance with applicable codes, standards and regulations.

* Update existing lines includes replacing existing lines with new materials or pipes.

** New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines (Source: Order No. R4-2012-0175).

Significant Ecological Areas (SEAs) means an area that is determined to possess an example of biotic resources that cumulatively represent biological diversity, for the purposes of protecting biotic diversity, as part of the Los Angeles County General Plan. Areas are designated as SEAs, if they possess one or more of the following criteria:

1. The habitat of rare, endangered, and threatened plant and animal species.
2. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis.
3. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind or are restricted in distribution in Los Angeles County.

4. Habitat that at some point in the life cycle of a species or group of species, serves as a concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or within Los Angeles County.
5. Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent an unusual variation in a population or community.
6. Areas important as game species habitat or as fisheries.
7. Areas that would provide for the preservation of relatively undisturbed examples of natural biotic communities in Los Angeles County.
8. Special areas (Source: Order No. R4-2012-0175).

Site means land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity (Source: Order No. R4-2012-0175).

Storm Drain System means any facilities or any part of those facilities, including streets, gutters, conduits, natural or artificial drains, channels, and watercourses that are used for the purpose of collecting, storing, transporting or disposing of stormwater and are located within the City of Walnut.

Storm Water or Stormwater means water that originates from atmospheric moisture (rain or snow) and that falls onto land, water, or other surfaces. Without any change in its meaning, this term may be spelled or written as one word or two separate words.

Stormwater Runoff means that part of precipitation (rainfall or snowmelt) which travels across a surface to the storm drain system or receiving waters.

SUSMP means the Los Angeles Countywide Standard Urban Stormwater Mitigation Plan. The SUSMP was required as part of the previous Municipal NPDES Permit (Order No. 01-182, NPDES No. CAS004001) and required plans that designate best management practices (BMPs) that must be used in specified categories of development projects.

Urban Runoff means surface water flow produced by storm and non-storm events. Non-storm events include flow from residential, commercial, or industrial activities involving the use of potable and non-potable water.

[MUNICIPAL CODE SECTION REFERENCE(S)] is amended to read as follows:

SEC. [X]. STORMWATER POLLUTION CONTROL MEASURES FOR DEVELOPMENT PLANNING AND CONSTRUCTION ACTIVITIES

(A) **Objective**. The provisions of this section contain requirements for construction activities and facility operations of Development and Redevelopment projects to comply with the current "Municipal NPDES permit," lessen the water quality impacts of development by using smart growth practices, and integrate LID design principles to mimic

predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use. LID shall be inclusive of SUSMP requirements.

(B) Scope. This Section contains requirements for stormwater pollution control measures in Development and Redevelopment projects and authorizes the City of Walnut to further define and adopt stormwater pollution control measures, develop LID principles and requirements, including but not limited to the objectives and specifications for integration of LID strategies, grant waivers from the requirements of the Standard Urban Stormwater Mitigation Plan, and collect funds for projects that are granted waivers. Except as otherwise provided herein, the City of Walnut shall administer, implement and enforce the provisions of this Section.

(C) Applicability. The following Development and Redevelopment projects, termed "Planning Priority Projects," shall comply with the requirements of [SECTION NUMBER]:

(1) All development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.

(2) Industrial parks 10,000 square feet or more of surface area.

(3) Commercial malls 10,000 square feet or more of surface area.

(4) Retail gasoline outlets with 5,000 square feet or more of surface area.

(5) Restaurants (Standard Industrial Classification (SIC) of 5812) with 5,000 square feet or more of surface area.

(6) Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.

(7) Streets and roads construction of 10,000 square feet or more of impervious surface area.

(8) Automotive service facilities (Standard Industrial Classification (SIC) of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.

(9) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:

a. Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and

b. Create 2,500 square feet or more of impervious surface area

(10) Single-family hillside homes.

(11) Redevelopment Projects

a. Land disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.

b. Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, the entire project must be mitigated.

c. Where Redevelopment results in an alteration of less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, only the alteration must be mitigated, and not the entire development.

d. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

e. Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

(D) **Effective Date.** The Planning and Land Development requirements contained in Section 7 of Order No. R4-2012-0175 shall become effective 90 days from the adoption of the Order (February 6, 2013). This includes Planning Priority Projects that are discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals within 90 days of adoption of the Order. Projects that have been deemed complete within 90 days of adoption of the Order are not subject to the requirements Section 7.

(E) **Stormwater Pollution Control Requirements.** The Site for every Planning Priority Project shall be designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention and/or rainfall harvest and use.

(1) A new single-family hillside home development shall include mitigation measures to:

a. Conserve natural areas;

b. Protect slopes and channels;

c. Provide storm drain system stenciling and signage;

d. Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability; and

e. Direct surface flow to vegetated areas before discharge, unless the diversion would result in slope instability.

(2) Street and road construction of 10,000 square feet or more of impervious surface shall follow USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets (December 2008 EPA-833-F-08-009) to the maximum extent practicable.

(3) The remainder of Planning Priority Projects shall prepare a LID Plan to comply with the following:

a. Retain stormwater runoff onsite for the Stormwater Quality Design Volume (SWQDv) defined as the runoff from:

i. The 85th percentile 24-hour runoff event as determined from the Los Angeles County 85th percentile precipitation isohyetal map; or

ii. The volume of runoff produced from a 0.75 inch, 24-hour rain event, whichever is greater.

b. Minimize hydromodification impacts to natural drainage systems as defined in the Municipal NPDES Permit. Hydromodification requirements are further specified in [NAME OF POST-CONSTRUCITON BMP HANDBOOK].

c. When, as determined by the City of Walnut, 100 percent onsite retention of the SWQDv is technically infeasible, partially or fully, the infeasibility shall be demonstrated in the submitted LID Plan. The technical infeasibility may result from conditions that may include, but are not limited to:

i. The infiltration rate of saturated in-situ soils is less than 0.3 inch per hour and it is not technically feasible to amend the in-situ soils to attain an infiltration rate necessary to achieve reliable performance of infiltration or bioretention BMPs in retaining the SWQDv onsite.

ii. Locations where seasonal high groundwater is within five to ten feet of surface grade;

iii. Locations within 100 feet of a groundwater well used for drinking water;

iv. Brownfield development sites or other locations where pollutant mobilization is a documented concern;

v. Locations with potential geotechnical hazards;

vi. Smart growth and infill or redevelopment locations where the density and/ or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.

d. If partial or complete onsite retention is technically infeasible, the project Site may biofiltrate 1.5 times the portion of the remaining SWQDv that is not reliably retained onsite. Biofiltration BMPs must adhere to the design specifications provided in the Municipal NPDES Permit.

i. Additional alternative compliance options such as offsite infiltration may be available to the project Site. The project Site should contact the City of Walnut to determine eligibility. Alternative compliance options are further specified in [NAME OF POST-CONSTRUCITON BMP HANDBOOK].

e. The remaining SWQDv that cannot be retained or biofiltered onsite must be treated onsite to reduce pollutant loading. BMPs must be selected and designed to meet pollutant-specific benchmarks as required per the Municipal NPDES Permit. Flow-through BMPs may be used to treat the remaining SWQDv and must be sized based on a rainfall intensity of:

i. 0.2 inches per hour, or
ii. The one year, one-hour rainfall intensity as determined from the most recent Los Angeles County isohyetal map, whichever is greater.

f. A Multi-Phased Project may comply with the standards and requirements of this section for all of its phases by: (a) designing a system acceptable to the City of Walnut to satisfy these standards and requirements for the entire Site during the first phase, and (b) implementing these standards and requirements for each phase of Development or Redevelopment of the Site during the first phase or prior to commencement of construction of a later phase, to the extent necessary to treat the stormwater from such later phase. For purposes of this section, "Multi-Phased Project" shall mean any Planning Priority Project implemented over more than one phase and the Site of a Multi-Phased Project shall include any land and water area designed and used to store, treat or manage stormwater runoff in connection with the Development or Redevelopment, including any tracts, lots, or parcels of real property, whether Developed or not, associated with, functionally connected to, or under common ownership or control with such Development or Redevelopment.

(F) **Validity.** If any provision of this Ordinance is found to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect remaining provisions of this Ordinance are declared to be severable.

(G) **Certification.** The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy.

APPROVED AND ADOPTED this __th day of _____, 20__.

_____

Mayor_____

ATTEST:

_____

Teresa De Dios, City Clerk

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF WALNUT)

I, Teresa De Dios, City Clerk of the City of Walnut, do hereby certify that the foregoing Ordinance _____ being:

AN ORDINANCE AMENDING [MUNICIPAL CODE SECTION REFERENCE(S)] OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING [NAME OF POST-CONSTRUCITON REQUIREMENTS – LIKELY "SUSMP" FOR MOST MUNICIPALITIES] REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

Said Ordinance was duly introduced at a regular meeting held on the __th day of _____, 20__, and was adopted and passed at a regular meeting of the City Council on the _____ day of _____, 20__ by the following vote, to wit:

AYES: COUNCILMEMBER(S):
NOES: COUNCILMEMBER(S):
ABSENT: COUNCILMEMBER(S):
ABSTAIN: COUNCILMEMBER(S):

ATTEST:

_____

Teresa De Dios, City Clerk

Attachment B

City of Walnut

LID Ordinance

ORDINANCE NO. 13-13

AN ORDINANCE AMENDING TITLE V, CHAPTER 21, OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING STANDARD URBAN STORM WATER MITIGATION PLAN REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

CITY COUNCIL OF THE CITY OF WALNUT HEREBY ORDAINS THE FOLLOWING:

(A) The City of Walnut is authorized by Article XI, §5 and §7 of the State Constitution to exercise the police power of the State by adopting regulations to promote public health, public safety and general prosperity.

(B) The City of Walnut has authority under the California Water Code to adopt and enforce ordinances imposing conditions, restrictions and limitations with respect to any activity which might degrade the quality of waters of the State.

(C) The city is a permittee under the "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," issued by the California Regional Water Quality Control Board--Los Angeles Region," (Order No. R4-2012-0175) which also serves as an NPDES Permit under the Federal Clean Water Act (NPDES No. CAS004001), as well as Waste Discharge Requirements under California law (the "Municipal NPDES permit"). In order to participate in a Watershed Management Program and/or Enhanced Watershed Management Program, the Municipal NPDES permit requires permittees to develop and implement a LID Ordinance.

(D) The City of Walnut has applied an integrated approach to incorporate wastewater, stormwater and runoff, and recycled water management into a single strategy through its Integrated Resources Plan.

(E) The City of Walnut is committed to a stormwater management program that protects water quality and water supply by employing watershed-based approaches that balance environmental, social, and economic considerations.

(F) It is the intent of the City of Walnut to expand the applicability of the existing Standard Urban Stormwater Mitigation Plan (SUSMP) requirements by providing stormwater and rainwater LID strategies for Development and Redevelopment projects as defined under "Applicability."

TITLE V PUBLIC WORKS, CHAPTER 21, ARTICLE III STORM WATER AND URBAN RUNOFF POLLUTION CONTROL, SECTION 21-61 PARAGRAPH C IS AMENDED IN ITS ENTIRETY TO READ AS FOLLOWS:

The City of Walnut is a permittee under the "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," issued by the California Regional Water Quality Control Board--Los Angeles Region," (Order No. R4-2012-0175) which also serves as an NPDES Permit under the Federal Clean Water Act (NPDES No. CAS004001), as well as Waste Discharge Requirements under California law (the "Municipal NPDES permit").

TITLE V PUBLIC WORKS, CHAPTER 21, ARTICLE III STORM WATER AND URBAN RUNOFF POLLUTION CONTROL, SECTION 21-63 DEFINITIONS OF THE CITY OF WALNUT MUNICIPAL CODE IS AMENDED IN ITS ENTIRETY TO READ AS FOLLOWS:

Definitions.

Except as specifically provided herein, any term used in this Section 21-63 shall be defined as that term in the current Municipal NPDES permit, or if it is not specifically defined in either the Municipal NPDES permit, then as such term is defined in the Federal Clean Water Act, as amended, and/or the regulations promulgated thereunder. If the definition of any term contained in this chapter conflicts with the definition of the same term in the current Municipal NPDES permit, then the definition contained in the Municipal NPDES permit shall govern. The following words and phrases shall have the following meanings when used in this chapter:

Automotive Service Facility means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. For inspection purposes, Permittees need not inspect facilities with SIC codes 5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to stormwater (Source: Order No. R4-2012-0175).

Basin Plan means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments (Source: Order No. R4-2012-0175).

Best Management Practice (BMP) means practices or physical devices or systems designed to prevent or reduce pollutant loading from stormwater or non-stormwater discharges to receiving waters, or designed to reduce the volume of stormwater or non-stormwater discharged to the receiving water (Source: Order No. R4-2012-0175).

Biofiltration means a LID BMP that reduces stormwater pollutant discharges by intercepting rainfall on vegetative canopy, and through incidental infiltration and/or evapotranspiration, and filtration. Incidental infiltration is an important factor in achieving the required pollutant load reduction. Therefore, the term "biofiltration" as used in this Ordinance is defined to include only systems designed to facilitate incidental infiltration or achieve the equivalent pollutant reduction as biofiltration BMPs with an underdrain (subject to approval by the Regional Board's Executive

Officer). Biofiltration BMPs include bioretention systems with an underdrain and bioswales (Modified from: Order No. R4-2012-0175).

Bioretention means a LID BMP that reduces stormwater runoff by intercepting rainfall on vegetative canopy, and through evapotranspiration and infiltration. The bioretention system typically includes a minimum 2-foot top layer of a specified soil and compost mixture underlain by a gravel-filled temporary storage pit dug into the in-situ soil. As defined in the Municipal NPDES permit, a bioretention BMP may be designed with an overflow drain, but may not include an underdrain. When a bioretention BMP is designed or constructed with an underdrain it is regulated by the Municipal NPDES permit as biofiltration (Modified from: Order No. R4-2012-0175).

Bioswale means a LID BMP consisting of a shallow channel lined with grass or other dense, low-growing vegetation. Bioswales are designed to collect stormwater runoff and to achieve a uniform sheet flow through the dense vegetation for a period of several minutes (Source: Order No. R4-2012-0175).

City means the City of Walnut.

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted in 1972, by Public Law 92-500, and amended by the Water Quality Act of 1987. The Clean Water Act prohibits the discharge of pollutants to Waters of the United States unless the discharge is in accordance with an NPDES permit.

Commercial Malls means any development on private land comprised of one or more buildings forming a complex of stores which sells various merchandise, with interconnecting walkways enabling visitors to easily walk from store to store, along with parking area(s). A commercial mall includes, but is not limited to: mini-malls, strip malls, other retail complexes, and enclosed shopping malls or shopping centers (Source: Order No. R4-2012-0175).

Construction Activity means any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that result in land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain the original line and grade, hydraulic capacity, or original purposes of the facility. See "Routine Maintenance" definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage by the State of California General Permit for Storm Water Discharges Associated with Industrial Activities or for Stormwater Discharges Associated with Construction Activities is required if more than one acre is disturbed or the activities are part of a larger plan (Source: Order No. R4-2012-0175).

Control means to minimize, reduce or eliminate by technological, legal, contractual, or other means, the discharge of pollutants from an activity or activities (Source: Order No. R4-2012-0175).

Development means construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail, and other non-residential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Directly Adjacent means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area (Source: Order No. R4-2012-0175).

Discharge means any release, spill, leak, pump, flow, escape, dumping, or disposal of any liquid, semi-solid, or solid substance.

Disturbed Area means an area that is altered as a result of clearing, grading, and/or excavation (Source: Order No. R4-2012-0175).

Flow-through BMPs means modular, vault type "high flow biotreatment" devices contained within an impervious vault with an underdrain or designed with an impervious liner and an underdrain (Modified from: Order No. R4-2012-0175).

General Construction Activities Storm Water Permit (GCASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from construction activities under certain conditions.

General Industrial Activities Storm Water Permit (GIASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from certain industrial activities under certain conditions.

Green Roof means a LID BMP using planter boxes and vegetation to intercept rainfall on the roof surface. Rainfall is intercepted by vegetation leaves and through evapotranspiration. Green roofs may be designed as either a bioretention BMP or as a biofiltration BMP. To receive credit as a bioretention BMP, the green roof system planting medium shall be of sufficient depth to provide capacity within the pore space volume to contain the design storm depth and may not be designed or constructed with an underdrain (Source: Order No. R4-2012-0175).

Hazardous Material(s) means any material(s) defined as hazardous by Division 20, Chapter 6.95 of the California Health and Safety Code.

Hillside means a property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is 25% or greater and where grading contemplates cut or fill slopes (Source: Order No. R4-2012-0175).

Impervious Surface means any man-made or modified surface that prevents or significantly reduces the entry of water into the underlying soil, resulting in runoff from the surface in greater quantities and/or at an increased rate, when compared to natural conditions prior to development. Examples of places that commonly exhibit impervious surfaces include parking lots, driveways, roadways, storage areas, and rooftops. The imperviousness of these areas commonly results from paving, compacted gravel, compacted earth, and oiled earth.

Industrial Park means land development that is set aside for industrial development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry (Source: Order No. R4-2012-0175).

Infiltration BMP means a LID BMP that reduces stormwater runoff by capturing and infiltrating the runoff into in-situ soils or amended onsite soils. Examples of infiltration BMPs include infiltration basins, dry wells, and pervious pavement (Source: Order No. R4-2012-0175).

LID means Low Impact Development. LID consists of building and landscape features designed to retain or filter stormwater runoff (Source: Order No. R4-2012-0175).

MS4 means Municipal Separate Storm Sewer System (MS4). The MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
(ii) Designed or used for collecting or conveying stormwater;
(iii) Which is not a combined sewer; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

(40 CFR § 122.26(b)(8)) (Source: Order No. R4-2012-0175)

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA §307, 402, 318, and 405. The term includes an "approved program" (Source: Order No. R4-2012-0175).

Natural Drainage System means a drainage system that has not been improved (e.g., channelized or armored). The clearing or dredging of a natural drainage system does not cause the system to be classified as an improved drainage system (Source: Order No. R4-2012-0175).

New Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision (Source: Order No. R4-2012-0175).

Non-Stormwater Discharge means any discharge to a municipal storm drain system that is not composed entirely of stormwater (Source: Order No. R4-2012-0175).

Parking Lot means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use, with a lot size of 5,000 square feet or more of surface area, or with 25 or more parking spaces (Source: Order No. R4-2012-0175).

Person means any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, state, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine and the singular shall include the plural where indicated by the context.

Planning Priority Projects means development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution, prior to completion of the project(s) (Modified from: Order No. R4-2012-0175).

Pollutant means any "pollutant" defined in Section 502(6) of the Federal Clean Water Act or incorporated into the California Water Code Sec. 13373. Pollutants may include, but are not limited to the following:

(1) Commercial and industrial waste (such as fuels, solvents, detergents, plastic pellets, hazardous substances, fertilizers, pesticides, slag, ash, and sludge).

(2) Metals (such as cadmium, lead, zinc, copper, silver, nickel, chromium, and non- metals such as phosphorus and arsenic).

(3) Petroleum hydrocarbons (such as fuels, lubricants, surfactants, waste oils, solvents, coolants, and grease).

(4) Excessive eroded soil, sediment, and particulate materials in amounts that may adversely affect the beneficial use of the receiving waters, flora, or fauna of the State.

(5) Animal wastes (such as discharge from confinement facilities, kennels, pens, recreational facilities, stables, and show facilities).

(6) Substances having characteristics such as pH less than 6 or greater than 9, or unusual coloration or turbidity, or excessive levels of fecal coliform, or fecal streptococcus, or enterococcus.

Project means all development, redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Pub. Resources Code §21065) (Source: Order No. R4-2012-0175).

Rainfall Harvest and Use means a LID BMP system designed to capture runoff, typically from a roof but can also include runoff capture from elsewhere within the site, and to provide for temporary storage until the harvested water can be used for irrigation or non-potable uses. The harvested water may also be used for potable water uses if the system includes disinfection treatment and is approved for such use by the local building department (Source: Order No. R4-2012-0175).

Receiving Water means "water of the United States" into which waste and/or pollutants are or may be discharged (Source: Order No. R4-2012-0175).

Redevelopment means land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of routine maintenance activity; and land disturbing activity related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Regional Board means the California Regional Water Quality Control Board, Los Angeles Region.

Restaurant means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812) (Source: Order No. R4-2012-0175).

Retail Gasoline Outlet means any facility engaged in selling gasoline and lubricating oils (Source: Order No. R4-2012-0175).

Routine Maintenance
Routine maintenance projects include, but are not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.
4. Update existing lines* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
5. Repair leaks

Routine maintenance does not include construction of new** lines or facilities resulting from compliance with applicable codes, standards and regulations.

* Update existing lines includes replacing existing lines with new materials or pipes.
** New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines (Source: Order No. R4-2012-0175).

Significant Ecological Areas (SEAs) means an area that is determined to possess an example of biotic resources that cumulatively represent biological diversity, for the purposes of protecting biotic diversity, as part of the Los Angeles County General Plan. Areas are designated as SEAs, if they possess one or more of the following criteria:

1. The habitat of rare, endangered, and threatened plant and animal species.
2. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis.
3. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind or are restricted in distribution in Los Angeles County.
4. Habitat that at some point in the life cycle of a species or group of species, serves as a concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or within Los Angeles County.
5. Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent an unusual variation in a population or community.
6. Areas important as game species habitat or as fisheries.
7. Areas that would provide for the preservation of relatively undisturbed examples of natural biotic communities in Los Angeles County.
8. Special areas (Source: Order No. R4-2012-0175).

Site means land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity (Source: Order No. R4-2012-0175).

Storm Drain System means any facilities or any part of those facilities, including streets, gutters, conduits, natural or artificial drains, channels, and watercourses that are used for the purpose of collecting, storing, transporting or disposing of stormwater and are located within the City of Walnut.

Storm Water or Stormwater means water that originates from atmospheric moisture (rain or snow) and that falls onto land, water, or other surfaces. Without any change in its meaning, this term may be spelled or written as one word or two separate words.

Stormwater Runoff means that part of precipitation (rainfall or snowmelt) which travels across a surface to the storm drain system or receiving waters.

SUSMP means the Los Angeles Countywide Standard Urban Stormwater Mitigation Plan. The SUSMP was required as part of the previous Municipal NPDES Permit (Order No. 01-182,

NPDES No. CAS004001) and required plans that designate best management practices (BMPs) that must be used in specified categories of development projects.

Urban Runoff means surface water flow produced by storm and non-storm events. Non-storm events include flow from residential, commercial, or industrial activities involving the use of potable and non-potable water.

CHAPTER 21 ARTICLE IV SECTION 21-80 IS AMENDED TO READ AS FOLLOWS: TITLE V PUBLIC WORKS, CHAPTER 21, ARTICLE IV SECTION 21-80 IS AMENDED IN ITS ENTIRETY TO READ AS FOLLOWS:

SEC. 21-80 STORMWATER POLLUTION CONTROL MEASURES FOR DEVELOPMENT PLANNING AND CONSTRUCTION ACTIVITIES

(A) **Objective.** The provisions of this section contain requirements for construction activities and facility operations of Development and Redevelopment projects to comply with the current "Municipal NPDES permit," lessen the water quality impacts of development by using smart growth practices, and integrate LID design principles to mimic predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use. LID shall be inclusive of SUSMP requirements.

(B) **Scope.** This Section contains requirements for stormwater pollution control measures in Development and Redevelopment projects and authorizes the City of Walnut to further define and adopt stormwater pollution control measures, develop LID principles and requirements, including but not limited to the objectives and specifications for integration of LID strategies, grant waivers from the requirements of the Standard Urban Stormwater Mitigation Plan, and collect funds for projects that are granted waivers. Except as otherwise provided herein, the City of Walnut shall administer, implement and enforce the provisions of this Section.

(C) **Applicability.** The following Development and Redevelopment projects, termed "Planning Priority Projects," shall comply with the requirements of Chapter 21 Article IV Section 21-80.

(1) All development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.

(2) Industrial parks 10,000 square feet or more of surface area.

(3) Commercial malls 10,000 square feet or more of surface area.

(4) Retail gasoline outlets with 5,000 square feet or more of surface area.

(5) Restaurants (Standard Industrial Classification (SIC) of 5812) with 5,000 square feet or more of surface area.

(6) Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.

(7) Strcets and roads construction of 10,000 square feet or more of impervious surface area.

(8) Automotive service facilities (Standard Industrial Classification (SIC) of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.

(9) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:

a. Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and

b. Create 2,500 square feet or more of impervious surface area

(10) Single-family hillside homes.

(11) Redevelopment Projects

a. Land disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.

b. Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, the entire project must be mitigated.

c. Where Redevelopment results in an alteration of less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, only the alteration must be mitigated, and not the entire development.

d. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

e. Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

(D) **Effective Date.** The Planning and Land Development requirements contained in Section 7 of Order No. R4-2012-0175 shall become effective 90 days from the adoption of the Order (February 6, 2013). This includes Planning Priority Projects that are discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals within 90 days of adoption of the Order. Projects that have been deemed complete within 90 days of adoption of the Order are not subject to the requirements Section 7.

(E) **Stormwater Pollution Control Requirements.** The Site for every Planning Priority Project shall be designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention and/or rainfall harvest and use.

(1) A new single-family hillside home development shall include mitigation measures to:

a. Conserve natural areas;

b. Protect slopes and channels;

c. Provide storm drain system stenciling and signage;

d. Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability; and

e. Direct surface flow to vegetated areas before discharge, unless the diversion would result in slope instability.

(2) Street and road construction of 10,000 square feet or more of impervious surface shall follow USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets (December 2008 EPA-833-F-08-009) to the maximum extent practicable.

(3) The remainder of Planning Priority Projects shall prepare a LID Plan to comply with the following:

a. Retain stormwater runoff onsite for the Stormwater Quality Design Volume (SWQDv) defined as the runoff from:

i. The 85th percentile 24-hour runoff event as determined from the Los Angeles County 85th percentile precipitation isohyetal map; or

ii. The volume of runoff produced from a 0.75 inch, 24-hour rain event, whichever is greater.

b. Minimize hydromodification impacts to natural drainage systems as defined in the Municipal NPDES Permit. Hydromodification requirements are further specified in County of Los Angeles Department of Public Work Storm Water Best Management Practices Design and Maintenance Manual.

c. When, as determined by the City of Walnut, 100 percent onsite retention of the SWQDv is technically infeasible, partially or fully, the infeasibility shall be demonstrated in the submitted LID Plan. The technical infeasibility may result from conditions that may include, but are not limited to:

i. The infiltration rate of saturated in-situ soils is less than 0.3 inch per hour and it is not technically feasible to amend the in-situ soils to attain an infiltration rate necessary to achieve reliable performance of infiltration or bioretention BMPs in retaining the SWQDv onsite.

ii. Locations where seasonal high groundwater is within five to ten feet of surface grade;

iii. Locations within 100 feet of a groundwater well used for drinking water;

iv. Brownfield development sites or other locations where pollutant mobilization is a documented concern;

v. Locations with potential geotechnical hazards;

vi. Smart growth and infill or redevelopment locations where the density and/ or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.

d. If partial or complete onsite retention is technically infeasible, the project Site may biofiltrate 1.5 times the portion of the remaining SWQDv that is not reliably retained onsite. Biofiltration BMPs must adhere to the design specifications provided in the Municipal NPDES Permit.

i. Additional alternative compliance options such as offsite infiltration may be available to the project Site. The project Site should contact the City of Walnut to determine eligibility. Alternative compliance options are further specified in County of Los Angeles Department of Public Work Storm Water Best Management Practices Design and Maintenance Manual.

e. The remaining SWQDv that cannot be retained or biofiltered onsite must be treated onsite to reduce pollutant loading. BMPs must be selected and designed to meet pollutant-specific benchmarks as required per the Municipal NPDES Permit. Flow-through BMPs may be used to treat the remaining SWQDv and must be sized based on a rainfall intensity of:

i. 0.2 inches per hour, or
ii. The one year, one-hour rainfall intensity as determined from the most recent Los Angeles County isohyetal map, whichever is greater.

f. A Multi-Phased Project may comply with the standards and requirements of this section for all of its phases by: (a) designing a system acceptable to the City of Walnut to satisfy these standards and requirements for the entire Site during the first phase, and (b) implementing these standards and requirements for each phase of Development or Redevelopment of the Site during the first phase or prior to commencement of construction of a later phase, to the extent necessary to treat the stormwater from such later phase. For purposes of this section, "Multi-Phased Project" shall mean any Planning Priority Project implemented over more than one phase and the Site of a Multi-Phased Project shall include any land and water area designed and used to store, treat or manage stormwater runoff in connection with the Development or Redevelopment, including any tracts, lots, or parcels of real property, whether Developed or not, associated with, functionally connected to, or under common ownership or control with such Development or Redevelopment.

(F) **Validity.** If any provision of this Ordinance is found to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect remaining provisions of this Ordinance are declared to be severable.

(G) **Certification.** The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy.

APPROVED AND ADOPTED this 13th day of November, 2013.

A. Cartagena

Antonio Cartagena, Mayor

ATTEST:

Teresa De Dios

Teresa De Dios, City Clerk

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF WALNUT)

I, Teresa De Dios, City Clerk of the City of Walnut, do hereby certify that the foregoing Ordinance No. 13-13 being:

AN ORDINANCE AMENDING TITLE V, CHAPTER 21, OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING STANDARD URBAN STORM WATER MITIGATION PLAN REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS

Said Ordinance was duly introduced at a regular meeting held on the 23rd day of October, 2013, and was adopted and passed at a regular meeting of the City Council on the 13th day of November 13, 2013 by the following vote, to wit:

AYES:	COUNCILMEMBER(S):	Cartagena, Ching, Pacheco, Su, Tragarz
NOES:	COUNCILMEMBER(S):	None
ABSENT:	COUNCILMEMBER(S):	None
ABSTAIN:	COUNCILMEMBER(S):	None

Teresa De Dios, City Clerk

Attachment C

City of Walnut

Public Education Materials

Storm Water Pollution Prevention

Construction

Sediment, vehicle fluids, dust and debris from construction sites can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Preventing Erosion
Avoid excavation or grading during wet weather. Plant temporary vegetation or add hydromulch on slopes where construction is not immediately planned, and permanent vegetation once excavation and grading are complete. Construct diversion dikes to channel run-off into a detention basin and around the construction site. Channels can be lined with grass or roughened pavement to reduce runoff velocity.

Maintaining Vehicles & Equipment
Maintain and refuel vehicles and equipment at a single location on-site, away from the street, gutter and storm drains. Perform major equipment repairs and washings off-site. Inspect vehicles and equipment frequently for leaks, and prevent leaks from stored vehicles by draining gas, hydraulic oil, transmission, brake and radiator fluids.

Ordering Materials & Recycling Waste
Reduce waste by ordering only the amounts of materials needed for the job. Use recycled or recyclable materials whenever possible. You can recycle broken asphalt, concrete, wood, and cleared vegetation. Non-recyclable materials should be taken to a landfill or disposed of as hazardous waste. For recycling and disposal information, call the City's exclusive franchise waste hauler, Valley Vista Services (800) 442-6454.

Cleaning & Preventing Spills
Use a drip pan and funnel when draining or pouring fluids. Sweep up dry spills, instead of hosing. Be ready for spills by preparing and using spill containment and cleanup kits that include safety equipment and dry cleanup materials such as kitty litter or sawdust. To report serious spills, call 911.

Store Materials Safely
Keep construction materials and debris away from the street, gutter and storm drains. Cover exposed excavated or stockpiled materials (such as soil, sand or gravel) with plastic sheeting to protect them from rain, wind and runoff.

Recycle Household Hazardous Waste
Household cleaners, paint and other home improvement products like wallpaper and tile adhesives are too toxic to trash. Recycle them instead, at a convenient household hazardous waste collection facility. Call (888) CLEANLA for the facility in your area.

For specific questions on storm water pollution prevention, contact: The City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact: 1 (888) CLEANLA
www.888cleanla.com

RB-AR17575

Storm Water Pollution Prevention

Home Repair

Toxic dust and debris from home repair and remodeling can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Construction Projects
Keep construction debris away from the street, gutter and storm drains. Schedule grading and excavation projects for dry weather. Cover excavated material and stockpiles of material such as soil, sand or gravel, to protect from rain, wind and runoff. Prevent erosion by planting fast-growing annual and perennial grass, which can shield and bind soil.

Landscaping & Gardening
Avoid applying fertilizers or pesticide near curbs and driveways, and store covered, protected from rain, wind and runoff. Try using organic or nontoxic alternatives. Reduce runoff and lower your water bill by using drip irrigation, soaker hoses or micro-spray systems. Recycle leaves instead of blowing, sweeping or raking them into the street, gutter or storm drain.

Concrete and Masonry
Store bags of cement and plaster away from gutters and storm drains, and cover them to protect against rain, wind and runoff. Sweep or scoop up cement washout or concrete dust instead of hosing into driveways, streets, gutters or storm drains.

Paint Removal & Cleanup
Paint stripping residue (such as chips and dust) from paints containing lead or tributyl tin are hazardous wastes. Sweep them up instead of hosing into the street and dispose of them safely at a household hazardous waste collection facility. Avoid cleaning brushes or rinsing paint containers in the street, gutter or near a storm drain. Clean water-based paints in the sink. Oil-based paints may be cleaned with thinner, which you can filter and reuse. Recycle leftover paint at a household hazardous waste collection facility, save it for touch ups or give it to someone who can use it, like a theatre group, school, or community organization.

Recycle Household Hazardous Waste
Household cleaners, paint and other home improvement products like wallpaper and tile adhesives are too toxic to trash. Recycle them instead, at a convenient household hazardous waste collection facility. Call (888) CLEANLA for the facility in your area.

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

PAINTING

Improper post-painting cleanup or disposal can lead to chemicals being picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect your health.

Water-Based Paints
When considering paint, use water-based paints whenever possible. They are less toxic than oil-based paints and easier to clean up. Look for products labeled "latex" or "cleans with water."

Paint Removal
Sweep up paint stripping residue (such as chips and dust) instead of hosing into the street. Dispose of them safely at a household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.

Painting Cleanup
Never clean brushes or rinse paint containers in the street, gutter or near a storm drain. Clean water-based paints in the sink. Clean oil-based paints with thinner, which can be reused by putting it in a jar to settle out the paint particles and then pouring off the clear liquid for future use. Wrap dried paint residue in newspaper and dispose of it in the trash.

Exterior Paint Removal
When stripping or cleaning building exteriors with high pressure water, block nearby storm drains and divert wash-water onto a designated dirt area. Ask your local wastewater treatment authority if you can collect building cleaning wastewater and discharge it to the sewer.

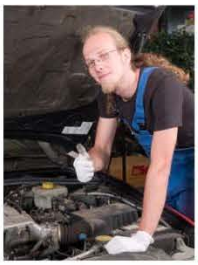
Recycling Paint
Recycle leftover paint at a household hazardous waste collection facility, save it for touch ups or give it to someone who can use it, like a theatre group, school, or community organization. Call (800) CLEANUP for the facility in your area.

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

Auto Maintenance



Oil, grease, anti-freeze and other toxic automotive fluids can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Cleaning Auto Parts
Scrape parts with a wire brush or use a bake oven rather than liquid cleaners. Arrange drip pans, drying racks and drain boards so that fluids are directed back into the parts washer or the fluid holding tank. Do not wash parts or equipment in a shop sink, parking lot, driveway or street.

Metal Grinding and Polishing
Keep a bin under your lathe or grinder to capture metal filings. Send uncontaminated filings to a scrap metal recycler for reclamation. Store metal filings in a covered container or indoors.

Cleaning Spills
Use dry methods for spill cleanup (sweeping, absorbent materials). Follow your hazardous materials response plan, as filed with your local fire department or other hazardous materials authority. Be sure that all employees are aware of the plan and are capable of implementing each phase. To report serious toxic spills, call 911.

Storing Hazardous Waste
Keep your liquid waste segregated. Many fluids can be recycled via hazardous waste disposal companies if they are not mixed. Store all materials under cover with spill containment or inside to prevent contamination of rainwater runoff.

Preventing Leaks and Spills
Place drip pans underneath vehicles to capture any leaking fluids. Use absorbent cleaning agents instead of water to clean work areas.

Proper Disposal of Hazardous Waste
Recycle used motor oil and oil filters, anti-freeze and other hazardous automotive fluids, batteries, tires and metal filings collected from grinding or polishing auto parts. Contact a licensed hazardous waste hauler. For more recycling information, call (888) CLEANLA. Use non-toxic cleaning products whenever possible.

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Storm Water Pollution Prevention

Kitchen: Fats, Oil & Grease

Fats, oil and grease (FOG) from cooking poured into kitchen sinks can build up in sewer pipes causing a sewage spill into the storm drain system which flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Pipes Are For Water Only:
FOG that enters the sewer system from kitchen sinks and drains eventually hardens and coats the inside of sewer pipes. Over a short period of time FOG residues build up in the sewer pipes and begin to restrict flows until the FOG build-up completely blocks the normal flow of sewage.

The blockage causes the flow of sewage to exit from the sanitary sewer system at the nearest outlet that is most commonly a manhole, cleanout, or broken pipe, and flow into the storm drainage system.

A sewage spill due to blocked pipe from a build-up of FOG is costly to both you and the environment. However, with the proper care and attention, it may be avoidable. So do your part for yourself and your community.

To Protect Your Pipes:

1. Do not put oil, grease or greasy foods down the sink, drain or toilet.
2. Solidify cooking oil with an absorbent material such as cat litter or coffee grounds; place it in a sealed container and dispose of it in a trash receptacle.
3. Grease must be hardened in a can or container with a lid before disposing in the trash. If you soak a greasy pan, place a paper towel over the drain basket to catch grease and food particles as you pour the water down the drain.

For large amounts of household oil and grease, place in a sealed container and take it to a local Household Hazardous Waste Collection Center for proper disposal. Call (888) CLEANLA for a collection facility or mobile collection event near your area.

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www.888cleanla.com

Storm Water Pollution Prevention

Food and Restaurant

Restaurant food waste, grease, cleaning fluids, and trash can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Recycle Oil & Grease
Oil and grease wastes can be recycled. Look in the yellow pages for rendering companies, or call (888) CLEANLA for disposal information. Don't pour oil or grease into sinks, floor drains, or onto a parking lot or street. Keep grease bins covered and stored securely. Keep your grease interceptor well maintained to prevent sewer overflows or backups and keep records of grease waste hauling.

Cleaning & Maintenance
Clean your equipment, floor mats, filters and garbage cans in a mop sink, wash rack or floor drain that is connected to the sewer through a grease trap. Don't wash them, or pour wash water, on a parking lot, alley, sidewalk or street. Sweep outside areas and put the debris into a garbage bin, instead of sweeping or hosing them into the parking lot or street.

Managing Spills
Clean food spills in loading and trash areas by first using absorbent materials, followed by sweeping and then mopping (discharge mop water into the sewer through a grease interceptor). Have spill containment and cleanup kits available. To report serious toxic spills, call 911.

Dumpster Areas
Keep dumpster lids closed and the areas around them clean. Do not fill with liquid waste or hose them out. Call your trash hauler to replace any dumpsters that are damaged or leak.

Handling Toxic Chemicals
Dispose of all unwanted toxics materials like cleaners, solvents and detergents through a hazardous waste hauler. These items are not trash. For information on hazardous waste pickup, call (888) CLEANLA. Use non-toxic cleaning products

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

Garden

Yard waste, fertilizers and garden toxics (pesticides) can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Yard Waste Disposal
Don't blow, sweep, or hose leaves, grass clippings and other yard waste into the street or gutter. Place all yard waste in your green waste refuse barrel or try grasscycling (leaving grass clippings on your lawn). Grass clippings can act as a natural fertilizer, and because grass is mostly water, it also irrigates your lawn, conserving water.

Use Fertilizers & Pesticides Safely
Fertilizers and pesticides are often carried into the storm drain system by sprinkler runoff. Try using organic or non-toxic alternatives. If you use chemical fertilizers or pesticides, avoid applying near curbs and drive-ways and never apply just before it rains.

Use Water Wisely
Cut your water costs and prevent runoff by controlling the amount of water and direction of sprinklers. The average lawn needs about an inch of water a week, including rainfall, or 10 to 20 minutes of watering. A half-inch per week is enough for fall and spring. Sprinklers should be on long enough to allow water to soak into the ground but not so long as to cause runoff.

There are three water providers serving the residents of Walnut. For links to these water providers and updates on water conservation requirements, visit the City of Walnut's "Go Green With Walnut" webpage at www.ci.walnut.ca.us (Keyword: "Go Green").

Planting in the Yard
Produce less yard waste and save water by planting low maintenance, drought-tolerant trees and shrubs. Use drip irrigation, soaker hoses or micro-spray systems for your landscaping to help reduce your water bill and prevent runoff.

Recycle Household Hazardous Waste
Household products like paint, pesticides, solvents & cleaners are too dangerous to dump and too toxic to trash. Take them to a convenient household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.

For specific questions on storm water pollution prevention, contact:
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www.888cleanla.com

Storm Water Pollution Prevention

Pet Waste

Pet waste left on lawns, sidewalks and parks can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

What is Wrong With Pet Waste?
Pet waste, especially dog waste, is a major pollutant and contaminant of water supplies. The Federal Environmental Protection Agency views pet waste a serious source pollution and has placed it in the same category of "nonpoint source pollution" as oil and toxic chemicals.

Pet waste left on the streets, lawns and parks is a serious community health concern. A single gram of dog waste can contain 23 million fecal coliform bacteria, which are known to cause a variety of illnesses and disorders in humans.

Some sources estimate that 1/3 of all water contamination is a result of dog waste entering streams and leaching into underground well water. The average dog can produce 274 pounds of waste each year. Disease from dog waste may spread to other dogs, children, and adults.

Disposing of Pet Waste
All pet waste should be placed in your regular trash/refuse container, preferable in a bag.

Never put dog or animal waste into the green waste container. This will contaminate the entre container, and possible the entire truck load of green waste, which then cannot be reused and must go into a landfill.

Help Keep Our Parks Clean
It is for your health as well as for entire community.

Walking Your Dog: Pet Waste Pick Up Ordinance
The City would like remind pet owners to be courteous and pick up after your pet while walking your dog or animal on City sidewalks, trails, parks or other open spaces. There is an Animal Nuisance Ordinance in Los Angeles County Code (Title 10 Animals, Chapter 10.40.060, B.) which requires that owners pick up and properly dispose of their pet's waste from all public spaces and walking areas for sanitary and health reasons.

To help promote clean up, the City has installed pet waste stations at City parks. These stations provide not only Zero-Waste biodegradable bags with which to pick up your pet's waste, they also provide a sealed container in which to dispose of the waste.

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
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www.888cleanla.com

Storm Water Pollution Prevention

Used Motor Oil

Used motor oil dripped onto driveways and lawns can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

RECYCLE USED OIL

Why Recycle Used Motor Oil and Oil Filters?
Did you know that used motor oil never wears out? It just gets dirty and can be recycled, cleaned, and used again. Recycling used motor oil conserves a natural resource (oil) and is good for the environment too! Motor oil poured onto the ground or into storm drains, or tossed into trash cans (even in a sealed container) can contaminate and pollute the soil, groundwater, streams, and rivers. Recycling your used motor oil reduces this pollution threat.

Where Can I Recycle My Used Motor Oil and Oil Filters?
Walnut residents can take up to five gallons of uncontaminated used oil and oil filters in secured, non-leaking containers to one of the following five certified Used Oil Collection Centers in Walnut (*Please call ahead for hours of operation. Used oil can only be dropped off during working hours):*

- MasterLube, 308 N. Lemon Avenue, 909.598.3881
- Firestone Tires 860 N. Nogales Street, 626.965.2224
- The Oilmen, 856 N. Nogales Street, 626.965.4798
- Kraken Auto Parts, 18724 Amir Road, 626.965.6012
- Mobil Xpress Lube, 762 N. Nogales St., 626.965.6032

Illegal Oil Dumping:
Please do not dispose of your used oil by pouring it into the gutter or onto the ground. It is not only illegal; it is a major source of water contamination. Street gutters drain directly into our local rivers and ocean; and fluid dumped on the ground can seep into rivers and ground water. So if wouldn't want you or your children to drink it, eat it or swim in it; don't pour it out!

RECYCLE USED OIL FILTERS

How to Store/Transport Used Oil: Used motor oil must be stored, transported and delivered to the Collection Centers in secured, non-leaking containers. Used oil may only be dropped off during normal hours of operation. It is not permitted to leave used oil at any Collection Center if the facility is closed. Do not risk contaminating the oil by storing it in a container formerly used for other products such as anti-freeze or paint. Walnut residents may pick up free used oil containers and used oil filter containers at the City's Maintenance and Recreation Facility at 21701 E. Valley Blvd. (proof of residency required).

What About Contaminated Oil? Certified Collection Centers will not accept used motor oil that has been contaminated with other fluids such as antifreeze, solvents, gasoline, or water. So please, don't mix your used oil with anything. Contaminated oil must be taken to a household hazardous waste collection facility. Call (888) CLEANLA for a collection facility or mobile collection event near your area.

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909-595-7543

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www.888cleanla.com

Attachment D

City of Walnut

Legal Authority

December 11, 2013

Mr. Samuel Unger
Executive Officer
Los Angeles Regional Quality Control Board
320 W. 4th Street, Suite 200
Los Angeles, CA 90013
sunger@waterboards.ca.gov

Re: Legal Authority of the City of Walnut to Implement and Enforce the Requirements of 40 CFR 122.26(d)(2)(i)(A-F) and RWQCB Order R4-2012-0175, NPDES Permit CAS004001

Dear Mr. Unger:

The City of Walnut (the "City"), by and through its City Attorney, hereby submits the following certification ("Statement"), pursuant to Section VI.A.2.b of Order R4-2012-0175 (NPDES Permit CAS004001), issued by the California Regional Water Quality Control Board, Los Angeles Region ("RWQCB") on November 8, 2012 and entitled "Waste Discharge Requirements for Municipal Separate Storm Sewer System ("MS4") Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4" (the "Permit").

The City is one of the Permittees under the Permit. Section VI.A.2.b of the Permit requires the City to provide the RWQCB with a statement by its chief legal counsel, certifying that the City has the legal authority to implement and enforce each of the current requirements set forth in 40 C.F.R. § 122.26(d)(2)(i)(A-F) and the Permit. The purpose of this Statement is to describe the City's compliance with Section VI.A.2.b of the Permit. As discussed in further detail herein, it is our opinion that the City has the necessary legal authority to implement the Permit and to control and prohibit discharges of pollutants into the Municipal Separate Storm Sewer System ("MS4"). However, this Statement is not, nor should it be construed as, a waiver of any rights that the City may have relating to the Permit.

1. Legal Authority Statement

In our opinion, the City has the necessary legal authority to comply with the legal requirements imposed upon it under the Permit, consistent with the requirements set forth in the U.S. Environmental Protection Agency's regulations promulgated under the Clean Water Act, and, specifically, 40 C.F.R. § 122.26(d)(2)(i)(A-F), and to the extent permitted by state and federal law and subject to the limitations on municipal action under the California and United States Constitutions, except as noted herein.

The City, as a general law city, has broad general police powers under the California Constitution to enact legislation for health and public welfare of the community to the extent not preempted by federal or state law. In addition, the City adopted ordinances for the purpose of ensuring that it has adequate legal authority to implement and enforce its storm water control program. The City has the authority under the California Constitution and state law to enact and enforce these ordinances, and these ordinances were duly enacted.

2. Ordinances

The City has adopted ordinances related to the regulation of urban runoff to control and prohibit discharges of pollutants into the MS4 and to comply with the requirements of the Permit applicable to it, as well as, to the extent applicable, 40 C.F.R. § 122.26 (d)(2)(i)(A)-(F). The City's Storm Water Management and Discharge Control Ordinance (Ord. No. 593) is the principal City ordinance addressing the control of urban runoff. Under this ordinance and Walnut Municipal Code (WMC) Title V, Chapter 21, Article III, the City has the necessary legal authority to do the following:

i. Control the contribution of pollutants to its MS4 from storm water discharges associated with industrial and construction activity and control the quality of storm water discharged from industrial and construction sites. This requirement applies both to industrial and construction sites with coverage under an NPDES permit, as well as to those sites that do not have coverage under an NPDES permit (WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities);

ii. Prohibit all non-storm water discharges through the MS4 to receiving waters not otherwise authorized or conditionally exempt pursuant to Part III.A (WMC Title V, Chapter 21, Article III, 21-65: Prohibited Activities);

iii. Prohibit and eliminate illicit discharges and illicit connections to the MS4 (WMC Title V, Chapter 21, Article III, 21-65: Prohibited Activities);

iv. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4 (WMC Title V, Chapter 21, Article III, 21-65: Prohibited Activities);

v. Require compliance with conditions in Permittee ordinances, permits, contracts or orders (*i.e.*, hold dischargers to its MS4 accountable for their contributions of pollutants and flows) (WMC Title V, Chapter 21, Article III, 21-69: Enforcement);

vi. Utilize enforcement mechanisms to require compliance with applicable ordinances, permits, contracts, or orders (WMC Title V, Chapter 21, Article III, 21-69: Enforcement);

vii. Carry out all inspections, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with applicable municipal ordinances,

permits, contracts and orders, and with the provisions of this Order, including the prohibition of non-storm water discharges into the MS4 and receiving waters. This means the Permittee must have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from entities discharging into its MS4 (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities);

viii. Require the use of control measures to prevent or reduce the discharge of pollutants to achieve water quality standards/receiving water limitations (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Chapter 21-68: Requirements for Industrial/Commercial and Construction Activities; WMC Title V, Chapter 21, Article III, 21-69: Enforcement; WMC Title V, Chapter 21, Article IV, 21-82: SUSMP Enforcement);

ix. Require that structural BMPs are properly operated and maintained (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities); and

x. Require documentation on the operation and maintenance of structural BMPs and their effectiveness in reducing the discharge of pollutants to the MS4 (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities).

3. Implementation

Some of the City's ordinances are implemented through permit programs and others are implemented as regulatory programs. Under each ordinance, one or more City departments or department directors are authorized and directed in each ordinance to take the actions contemplated by the ordinance (*e.g.*, to consider evidence and make findings, to issue or deny permits, to impose conditions on projects, to inspect, to take enforcement action, etc.).

The City's Storm Water Management and Discharge Control Ordinance (WMC Title V, Chapter 21, Article III) is the principal City ordinance addressing the control of urban runoff. This ordinance is regulatory, and applies to specified new and existing residential and business communities and associated facilities and activities, as well as new development and redevelopment, and all other specified new and existing facilities and activities that threaten to discharge pollutants within the boundaries of the City and within its regulatory jurisdiction, whether or not a City permit or approval is required. The City's Storm Water Management and Discharge Control Ordinance also contains discharge prohibitions and requirements for the implementation of BMPs and other requirements necessary to implement the Permit.

Other City departments require compliance with the City's Storm Water Management and Discharge Control Ordinance as a condition for issuance of relevant City permits. City departments may also impose specific conditions of approval consistent with the City's Storm Water Management and Discharge Control Ordinance. All City environmental ordinances are also implemented, in part, through the application of the CEQA process to proposed projects.

4. Administrative and Judicial/Legal Procedures

In addition to the above authority, the City has in place various legal and administrative procedures to assist in enforcing the various urban runoff related Ordinances, including Administrative, Nuisance, Criminal, Equitable and Other Civil Remedies.

a. Title V, Chapter 21, Article III, 21-69 (Enforcement)
b. Title I, Chapter 3, Article I, 3-2 (General Penalties; Continuing Violations)
c. Title III, Chapter 16A, Article III, 16A-6.17 (Collection of costs - Special assessment)
d. Title III, Chapter 16A, Article II, 16A-6.19 (Cumulative Remedies)
e. Injunctive relief under State law and the Municipal Code (WMC Title V, Chapter 21, Article III, 21-69 (Enforcement).
f. Declaratory relief under State law.
g. Federal law claims (*e.g.*, Clean Water Act and Resource Conservation and Recovery Act Citizen Suits).
h. Remedies under the California Government Code.

Violations of the City's Storm Water Ordinance are deemed a "public nuisance", in which case enforcement actions can be completed administratively, or judicially when necessary.

Please contact me if you have any questions or if you need any additional information regarding the City's legal authority to enforce the Permit.

Very truly yours,

Michael Montgomery
City Attorney

Attachment E

City of Walnut

Exceedance Summary 2004-2014

Los Angeles County Mass Emission Station S14

Los Angeles County Storm Water Monitoring Program

San Gabriel River, Mass Emmisions Staion S-14

(Exceedance/Number of Samples)

	2003-2004		2005-2006		2006-2007		2007-2008		2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014	
	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet
E. Coli																	NF	2/5	0/1	1/3
Fecal Coliform	1/2	2/3	1/2	3/4	2/2	3/3	1/2	3/3	2/3	2/5	2/4	0/4	0/1	1/4	1/2	0/4				
Fecal Enterococcus	2/2	3/3	2/2	3/4	2/2	3/3														
Total Collform	2/2	2/3	2/2	4/4	1/2	3/3														
Dissolved Oxygen																			1/1	1/3
Chloride									1/3	0/5	1/4	0/4							1/1	0/3
Cyanide	1/2	3/3	1/2	1/4	1/2	2/3					1/4	1/4					NF	1/5		
pH									1/3	0/5			0/1	2/3			NF	1/5		
Dissolved Copper															0/2	1/4	NF	2/5		
Total Copper	1/2	2/3	1/2	1/4	2/2	4/4	0/2	2/3												
Dissolved Thallium																	NF	1/5		
Dissolved Zinc											0/4	1/4			0/2	1/4				
Total Zinc			0/2	1/4			2/2	1/3												
Sulfate											1/4	0/4								
Total Dissolved Solids									1/3	0/5										
Total Mercury									1/3	1/5										
Ammonia					2/2	2/4	1/2	1/3												
Total Nickel			1/2	0/4																
Total Aluminum			0/2	1/4			1/2	3/3												
Total Lead			0/2	1/4																

Attachment F

Regional BMP Exhibits

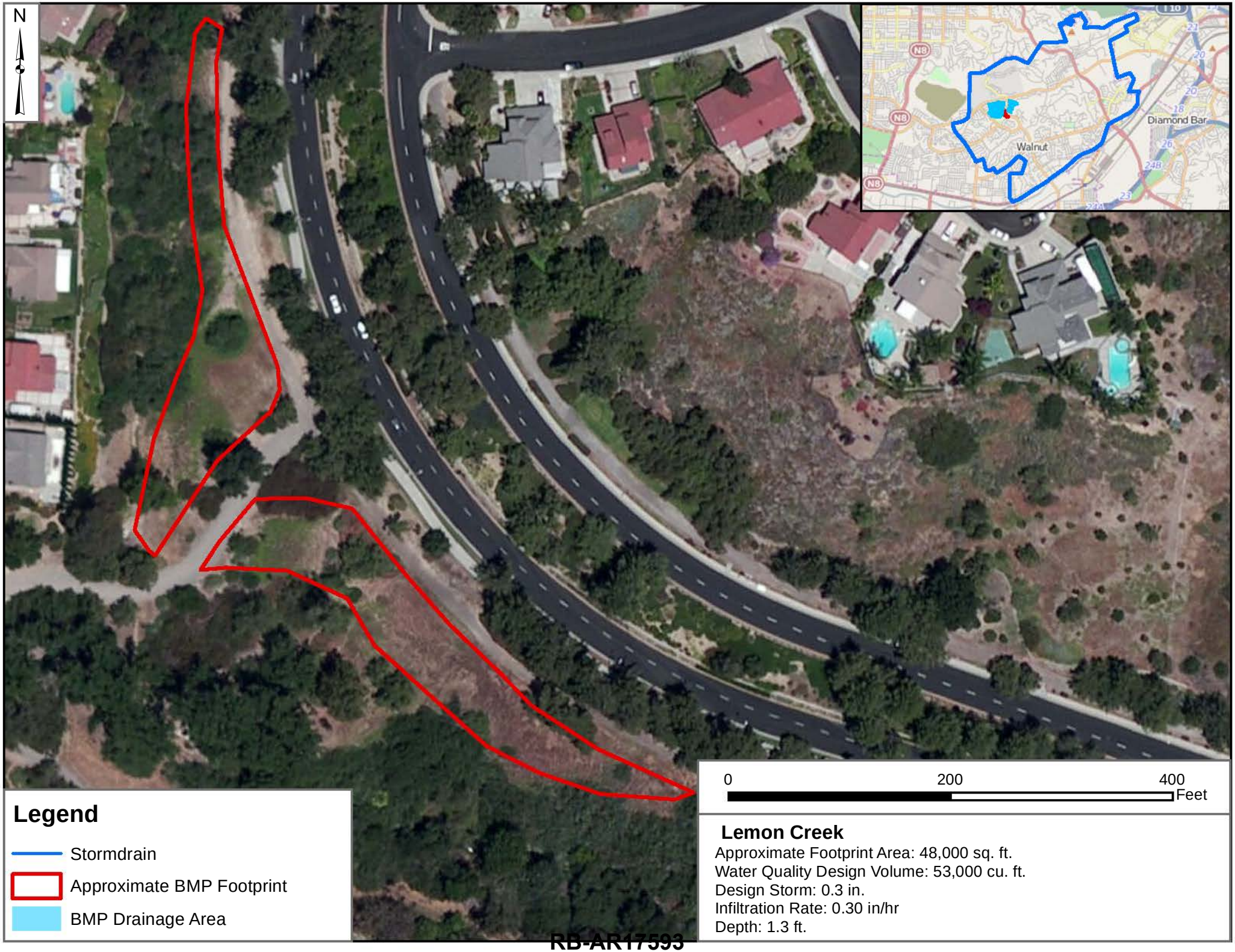
Legend

- Stormdrain
- Approximate BMP Footprint
- BMP Drainage Area

Butterfield Park

Approximate Footprint Area: 93,000 sq. ft.
Design storm intensity: 0.06 in/hr
Treatment Flow Rate: 1.57 cfs
Equalization Volume: 270,000 cu. ft.
Hydraulic Residence Time: 24 hrs
Depth: 8 ft.

RB-AR17592


N
Walnut
Diamond Bar
0
200
400
Feet
Legend
Stormdrain
Approximate BMP Footprint
BMP Drainage Area
Lemon Creek
Approximate Footprint Area: 48,000 sq. ft.
Water Quality Design Volume: 53,000 cu. ft.
Design Storm: 0.3 in.
Infiltration Rate: 0.30 in/hr
Depth: 1.3 ft.

RB-AR17593


N
Walnut
Diamond Bar
0
300
600
Feet
Legend
Stormdrain
Approximate BMP Footprint
BMP Drainage Area
Snow Creek 1
Approximate Footprint Area: 110,000 sq. ft.
Design storm intensity: 0.11 in/hr
Treatment Flow Rate: 1.80 cfs
Equalization Volume: 310,000 cu. ft.
Hydraulic Residence Time: 24 hrs
Depth: 8 ft.

RB-AR17594


N
Snow Creek Park
Snow Creek Park
West Covina
La Puente
Walnut
Diamond Bar
Chino H
0
125
250
Feet
Legend
Stormdrain
Approximate BMP Footprint
BMP Drainage Area
Snow Creek 2
Approximate Footprint Area: 130,000 sq. ft
Water Quality Design Volume: 190,000 cu. ft.
Design Storm: 0.9 in.
Infiltration Rate: 0.77 in/hr
Depth: 2 ft.

RB-AR17595

April 28, 2015

Ms. Mary Rooney
City of Walnut
Community Services Division
21201 La Puente Road
Walnut, CA 91789

APPROVAL, WITH CONDITIONS, OF THE CITY OF WALNUT'S WATERSHED MANAGEMENT PROGRAM (WMP), PURSUANT TO THE LOS ANGELES COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT (NPDES PERMIT NO. CAS004001; ORDER NO. R4-2012-0175)

Dear Ms. Rooney:

On November 8, 2012, the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board or Board) adopted Order No. R4-2012-0175, *Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, except those Discharges Originating from the City of Long Beach* (hereafter, LA County MS4 Permit). Part VI.C of the LA County MS4 Permit allows Permittees the option to develop either a Watershed Management Program (WMP) or an Enhanced Watershed Management Program (EWMP) to implement permit requirements on a watershed scale through customized strategies, control measures, and best management practices (BMPs). Development of a WMP or EWMP is voluntary and allows a Permittee to address the highest watershed priorities, including complying with the requirements of Part V.A (Receiving Water Limitations), Part VI.E and Attachments L through R (Total Maximum Daily Load Provisions), and by customizing the control measures in Parts III.A (Prohibitions – Non-Storm Water Discharges) and VI.D (Minimum Control Measures), except the Planning and Land Development Program. Pursuant to Part VI.C.4.c of the LA County MS4 Permit, the City of Walnut (City) submitted a draft WMP dated June 30, 2014, to the Los Angeles Water Board for review.

Public Review and Comment

On July 3, 2014, the Board provided public notice and a 46-day period to allow for public review and comment on the City's draft WMP. A separate notice of availability regarding the draft WMPs, including the City's WMP, was directed to State Senators and Assembly Members

within the Coastal Watersheds of Los Angeles County. The Board received two comment letters that had comments applicable to the City's draft WMP. One joint letter was from the Natural Resources Defense Council (NRDC), Heal the Bay, and Los Angeles Waterkeeper, and the other letter was from the Construction Industry Coalition on Water Quality (CICWQ). On October 9, 2014, the Board held a workshop at its regularly scheduled Board meeting on the draft WMPs. The Board also held a public meeting on April 13, 2015 for permittees and interested persons to discuss the revised draft WMPs with the Executive Officer and staff. During its initial review and its review of the revised draft WMP, the Los Angeles Water Board considered those comments applicable to the City's proposed WMP.

Los Angeles Water Board Review

Concurrently with the public review, the Los Angeles Water Board, along with U.S. EPA Region IX staff, reviewed the draft WMPs. On October 21, 2014, the Los Angeles Water Board sent a letter to the City detailing the Board's comments on the draft WMP and identifying the revisions that needed to be addressed prior to the Board's approval of the City's WMP. The letter directed the City to submit a revised draft WMP addressing the Los Angeles Water Board's comments. The City submitted its revised draft WMP on January 21, 2015 for Los Angeles Water Board review and approval. After the City's submittal of the revised draft WMP, Board staff had two teleconferences on April 14 and 15, 2015, and subsequent e-mail exchanges, with City representatives and consultants to discuss the Board's remaining comments and necessary revisions to the January 2015 WMP, including the supporting reasonable assurance analysis (RAA). On April 22, 2015, the City submitted additional revisions to the revised draft WMP for the Los Angeles Water Board review and approval.

Approval of WMP, with Conditions

The Los Angeles Water Board hereby approves, subject to the following conditions, the City's April 22, 2015, revised draft WMP. The Board may rescind this approval if all of the following conditions are not met to the satisfaction of the Board within the timeframe provided below.

1. Sections 4.11 and 5.1 of the revised draft WMP require more detail on the scope of the program enhancements (beyond the Permit minimum) for the list of non-modeled, non-structural BMPs, including how, when, and to what extent these BMPs will be enhanced during this permit term. Measurable milestones for implementing each one of the non-modeled, non-structural BMPs must be established (e.g., specify a milestone for the installation of Pet Waste Stations listed in Table 5-1 and provide details on the number and location of these Pet Waste Stations).
2. Correct the following typographical errors and omissions in the revised draft WMP :
    a. Correct table and figure referencing (e.g., Section 6.0 incorrectly references Table 4-8 as the City's proposed BMP Implementation Schedule, whereas the reference should be to Table 4-11)

b. Correct references to the effective date of the permit (e.g., Sections 1.0 and 3.2.3 indicate a date of December 28, 2013, while the correct date is December 28, 2012)
c. Correct references to permit limitations (e.g., Section 2.1 and Tables 2-4, 2-5, and 5-6 identify permit limits for Category 2 pollutants as WLAs or WQBELs, however, WQBELs/WLAs are only established for pollutants addressed by a TMDL. All other permit limitations applicable to the City's MS4 discharges are "Receiving Water Limitations.")
d. Delete erroneous statement on page 9, "Each of these sub-watersheds has a different beneficial use assigned for recreational activities. Subsequently the individual sub-watershed areas have different allowable coliform bacteria loadings."
e. Revise Table 5-6, Compliance Schedule as follows: (i) for E. coli, include December 2017 deadline for achieving 8% reduction in fecal coliform load, consistent with Table 4-11; (ii) for other Category 2 pollutants, include an interim milestone within the permit term (i.e., prior to December 28, 2017); and (iii) clarify what the percentages mean for each pollutant (e.g., for selenium, 30% of the San Jose Creek drainage area within the City is meeting the dry-weather WLA).

The City shall submit a final WMP to the Los Angeles Water Board that satisfies all of the above conditions no later than June 12, 2015.

Determination of Compliance with WMP

Pursuant to Part VI.C.6 of the LA County MS4 Permit, the City shall begin implementation of the approved WMP immediately. To continue to be afforded the opportunity to implement permit provisions within the framework of the WMP, the City must fully and timely implement all actions per associated schedules set forth in the approved WMP regardless of any contingencies indicated in the approved WMP (e.g., funding) unless a modification to the approved WMP, including any extension of deadlines where allowed, is approved by the Los Angeles Water Board pursuant to Part VI.C.6.a or Part VI.C.8.a.ii-iii. The Los Angeles Water Board will determine the City's compliance with the WMP on the basis of the compliance actions and milestones included in the WMP including, but not limited to, the following:

- Section 3.0 Minimum Control Measures
- Table 4-4 Allowable Daily Lead Loads (Computed for the Baseline Wet Day with the 90th Percentile Lead Load)
- Table 4-5 Allowable Bacteria Loads for 90th percentile year
- Table 4-6 Target Load Reductions for the Critical Condition (as a percent of baseline load)
- Section 4.8 Low Impact Development Ordinance
- Section 4.9 Green Streets
- Section 4.10 Regional BMPs

- Section 4.11 Non-Modeled Non-Structural BMPs (Establishes a milestone of an 8% load reduction for fecal coliform, with a range of 5% to 10%).
- Table 4-9 Fecal Coliform Load Reductions as a Percentage of Total Baseline Load for the San Jose Creek Drainage Area for the 90th Percentile Year
- Table 4-10 Fecal Coliform Load Reductions as a Percentage of Total Baseline Load for the Walnut Creek Wash Drainage Area for the 90th Percentile Year
- Table 4-11 Assumed BMP Implementation Schedule
- Figure 4-14 Fecal Coliform Interim and Final Load Reductions for the San Jose Creek Drainage Area
- Figure 4-15 Fecal Coliform Interim and Final Load Reductions for Walnut Creek Wash Drainage Area
- Table 5-1 MCM Program Enhancements
- Table 5-2 Green Streets BMPs
- Table 5-3 City of Walnut Green Streets Interim Implementation Schedule
- Table 5-4 Dry Weather Flow Elimination Program
- Table 5-5 Dry Weather Flow Elimination Program Implementation Schedule
- Table 5-6 Compliance Schedule (for TMDL and 303(d) listed pollutants)

Pursuant to Parts VI.C.3 and VI.E.2.d.i.(4)(a) of the LA County MS4 Permit, the City's full and timely compliance with all actions and dates for their achievement in its approved WMP shall constitute compliance with permit provisions pertaining to applicable WQBELs/WLAs in Part VI.E and Attachment P of the LA County MS4 Permit. Further, per Part VI.C.2.b of the LA County MS4 Permit, the City's full compliance with all requirements and dates for their achievement in its approved WMP constitutes compliance with the receiving water limitations provisions of Part V.A of the LA County MS4 Permit for the specific waterbody-pollutant combinations addressed by the approved WMP.

If the City fails to meet any requirement or date for its achievement in the approved WMP, which will be demonstrated through the City's' Annual Reports and program audits (when conducted), the City shall be subject to the baseline requirements of the LA County MS4 Permit, including but not limited to demonstrating compliance with applicable receiving water limitations and TMDL-based WQBELs/WLAs through outfall and receiving water monitoring. See Parts VI.C.2.c and VI.E.2.d.i.(4)(c).

Annual Reporting

The City shall report on achievement of actions and milestones within the reporting year, as well as progress towards future milestones related to multi-year projects, through its Annual Report per Attachment E, Part XVIII of the LA County MS4 Permit. For multi-year efforts, the City shall include the status of the project, which includes the status with regard to standard project implementation steps. These steps include, but are not limited to, adopted or potential future changes to municipal ordinances to implement the project, site selection, environmental review and permitting, project design, acquisition of grant or loan funding and/or municipal approval of

project funding, contractor selection, construction schedule, start-up, and effectiveness evaluation (once operational), where applicable. For all stormwater retention projects, including LID due to new/redevelopment, green streets, and regional BMPs, the City shall report annually on the volume of stormwater retained in each subwatershed area (i.e., San Jose Creek subwatershed and Walnut Creek Wash subwatershed).

The City shall also include in its Annual Report the source(s) of funds used during the reporting year, and those funds proposed for the coming year, to meet necessary expenditures related to implementation of the actions identified in its WMP per Part VI.A.3 of the LA County MS4 Permit. Further, as part of the annual certification concerning a permittee's legal authority required by Part VI.A.2.b of the LA County MS4 Permit, the City shall also certify in the Annual Report that it has the necessary legal authority to implement each of the actions and milestones in the approved WMP as required by Part VI.C.5.b.iv.(6). If the City does not have legal authority to implement an action or milestone at the time it submits the Annual Report, the City shall propose a schedule to establish and maintain such legal authority.

Adaptive Management

The City shall conduct a comprehensive evaluation of its WMP no later than April 28, 2017, and subsequently, every two years thereafter pursuant to the adaptive management process set forth in Part VI.C.8 of the Los Angeles County MS4 Permit. As part of this process, the City must evaluate progress toward achieving:

- Applicable WQBELs/WLAs in Attachment P of the LA County MS4 Permit according to the milestones set forth in its WMP;
- Improved water quality in MS4 discharges and receiving waters;
- Stormwater retention milestones; and
- Multi-year efforts that were not completed in the current year and will continue into the subsequent year(s), among other requirements.

As part of the adaptive management process, the City shall also re-evaluate its Category 2 and Category 3 water quality priorities based on data collected through its Integrated Monitoring Program. Where new water quality priorities are identified, the City shall conduct a RAA for the pollutants and identify and incorporated into its WMP appropriate watershed control measures to address them.

The City's evaluation of the above shall be based on both progress implementing actions in the WMP and an evaluation of outfall-based monitoring data and receiving water data. Per Attachment E, Part XVIII.6 of the LA County MS4 Permit, the City shall implement adaptive management strategies, including but not limited to:

- Refinement and recalibration of the Reasonable Assurance Analysis (RAA) based on data specific to the City's WMP area that are collected through the City's Integrated Monitoring Program and other data as appropriate;
- Identifying the most effective control measures, why they are the most effective, and how other control measures can be optimized based on this understanding;

- Identify the least effective control measures, why they are ineffective, and how the control measures can be modified or replaced to be more effective;
- Identify significant changes to control measures during the prior year(s) and the rationale for the changes; and
- Describe all significant changes to control measures anticipated to be made in the next year(s) and the rationale for each change.

As part of the adaptive management process, any modifications to the WMP, including any requests for extension of deadlines not associated with TMDL provisions, must be submitted to the Los Angeles Water Board for review and approval. The City must implement any modifications to the WMP upon approval by the Los Angeles Water Board or its Executive Officer, or within 60 days of submittal of modifications if the Los Angeles Water Board or its Executive Officer expresses no objections. Note that the City's Report of Waste Discharge (ROWD) is due no later than July 1, 2017. To align any modifications to the WMP proposed through the adaptive management process with permit reissuance, results of the first adaptive management cycle should be submitted in conjunction with the City's ROWD.

The Los Angeles Water Board appreciates the participation and cooperation of the City in the implementation of the LA County MS4 Permit. If you have any questions, please contact Ivar Ridgeway, Storm Water Permitting, at Ivar.Ridgeway@waterboards.ca.gov or by phone at (213) 620-2150.

Sincerely,

Samuel Unger

Samuel Unger, P.E.
Executive Officer

cc: Alicia Jensen, City of Walnut
Robert Wishner, City of Walnut
Melissa Barcelo, City of Walnut
Cody Howing, Assistant Engineer, RKA Consulting Group

Integrated Monitoring Plan

City of Walnut

Submitted to:

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Submitted by:

The City of Walnut
21201 La Puente Road
Walnut, CA 91789

March 9, 2015

RB-AR17602

Table of Contents

Attachment A: Table E-2

Attachment B: Aquatic Toxicity Monitoring Methods

Attachment C: Stream Bioassessment Procedure

Attachment D: Wet Weather Monitoring Location Maps

1.0- Municipal Separate Storm Sewer System Permit

On November 8, 2012 the Los Angeles Regional Water Quality Control Board adopted Order R4-2012-0175 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4. Order R4-2012-0175 became effective 50 days later on December 28, 2013. Order R4-2012-0175 serves as the National Pollution Discharge Elimination System (NPDES) permit for Coastal Watershed storm water and non-storm water discharges originating from the Los Angeles County Region, excluding the City of Long Beach. The permit covers the land areas of the Los Angeles County Flood Control, unincorporated areas of Los Angeles County and 84 Cities within the County of Los Angeles. Permittees are subject to the requirements set forth in the MS4 permit for all storm water and non- storm water discharges into the MS4. The City of Walnut is located in the Los Angeles Region and is identified in the MS4 Permit as a permittee under Order R4-2012-0175.

The MS4 permit regulates municipal discharges of storm water and non-storm water from the MS4s of the permittees. Storm water and non-storm water discharges have been identified as a transport mechanism for pollutants into the receiving waters of the Los Angeles Region. Pollutants originating from various land uses are mobilized by surface flow of water which is then directed into the MS4 and eventually deposited into receiving water bodies. In many cases pollutant deposition into receiving water bodies has a noticeable impact on the local ecological system of the water body and recreational uses. It is the intent of the MS4 Permit to protect water quality and mitigate existing and potential sources of pollutants that are cause for impairment of receiving water bodies.

Conditions of the MS4 Permit require that all permittees develop a monitoring plan on an individual or joint basis that will address water quality issues with in the permittee's jurisdictional area. The monitoring program option selected will be utilized in conjunction with the City's watershed management plan to provide real water quality data for use in the assessment of program effectiveness and compliance with applicable water quality standards.

Attachment E of the MS4 Permit is the Monitoring and Reporting Program (MRP) which outlines the requirements that shall be included in a permittee's MRP. The MRP is a critical portion of the City of Walnut's overall approach for maintaining water quality and/or mitigating water quality issues.

1.1- Integrated Monitoring Plan

The objectives of the MRP are to assess the water quality of receiving water and discharges from the municipal separate storm water sewer system (MS4). The monitoring plan developed based on the MRP requirements will monitor chemical, physical, and biological impacts of discharges originating from the MS4. The data gathered from monitoring will be used to assess compliance with applicable TMDLs and WQBELs as established for wet weather or dry weather conditions. The program will also be used to characterize pollutant loads, identify pollutant sources and to measure and improve the effectiveness of pollutant control implementation practices. The MRP allows Permittees flexibility in how a monitoring program is implemented. The customizable monitoring programs allow the permittee to devote resources to areas that will result in the most effective use of available funds. Due to the configuration of the City of Walnut's MS4 and topography of the City, there is limited comingling of storm water prior

to its discharge into receiving water bodies. As a result, the City of Walnut has selected the individual Integrated Monitoring Report (IMP) option for compliance with the MRP section of the MS4 Permit. The City's IMP will be synchronized with its Watershed Management Plan (WMP) to provide an effective NPDES program in compliance with Order R4-2012-0175. This IMP was developed by RKA Consulting Group for the City of Walnut.

1.2- Purpose and Scope

The IMP will be utilized to assess the impact from MS4 discharges to receiving water bodies. Results from the IMP will be the basis for determining compliance with water quality based effluent limitations for pollutants causing impairment to a receiving water body. The objectives of the IMP as identified in the MRP portion of the MS4 Permit are outlined below:

- Assess the chemical, physical and biological impacts of discharges from the municipal storm water sewer system (MS4) on receiving waters.
- Assess compliance with receiving water limitations and water quality-based effluent limitations (WQBELs) established to implement Total Maximum Daily Load (TMDL) wet weather and dry weather waste load allocations (WLAs).
- Characterization pollutant loads in MS4 discharges.
- Identify sources of pollutants in MS4 discharges.
- Measure and improve the effectiveness of pollutant controls implemented under this order.

The IMP is organized into five subsections. Each of the sub sections focuses on an individual monitoring requirement set forth in the MS4 Permit.

- Receiving water monitoring
- Storm water outfall monitoring
- Non-storm water outfall monitoring
- New development/re-development effectiveness tracking
- Regional studies

1.3- City of Walnut

The City of Walnut is a General Law city that was incorporated on January 19, 1959. The City's has a jurisdictional area of 8.9 square miles and an approximate population of 30,000. The City has a rural charm which is preserved by a well-defined general plan. The City is located in the San Gabriel Valley region of Los Angeles County north of State Route 60 and west of State Route 57. The City's location with respect to the San Gabriel River Watershed is highlighted in Los Angeles County's map of the watershed (Figure 1-1).

Land use in the City is primarily devoted to residential development consisting of 3,760 acres or 65% of the City. The remaining land use in the City is composed of 1,680 acres of open space or 29% of the jurisdictional area, 255 acres of commercial use or 4.5% of the jurisdictional area, and 86 acres of agricultural use or 1.5% of the jurisdictional area. Figure 1-2 is a map of the City of Walnut's land use.

Figure 1-1: San Gabriel River Watershed Management Area

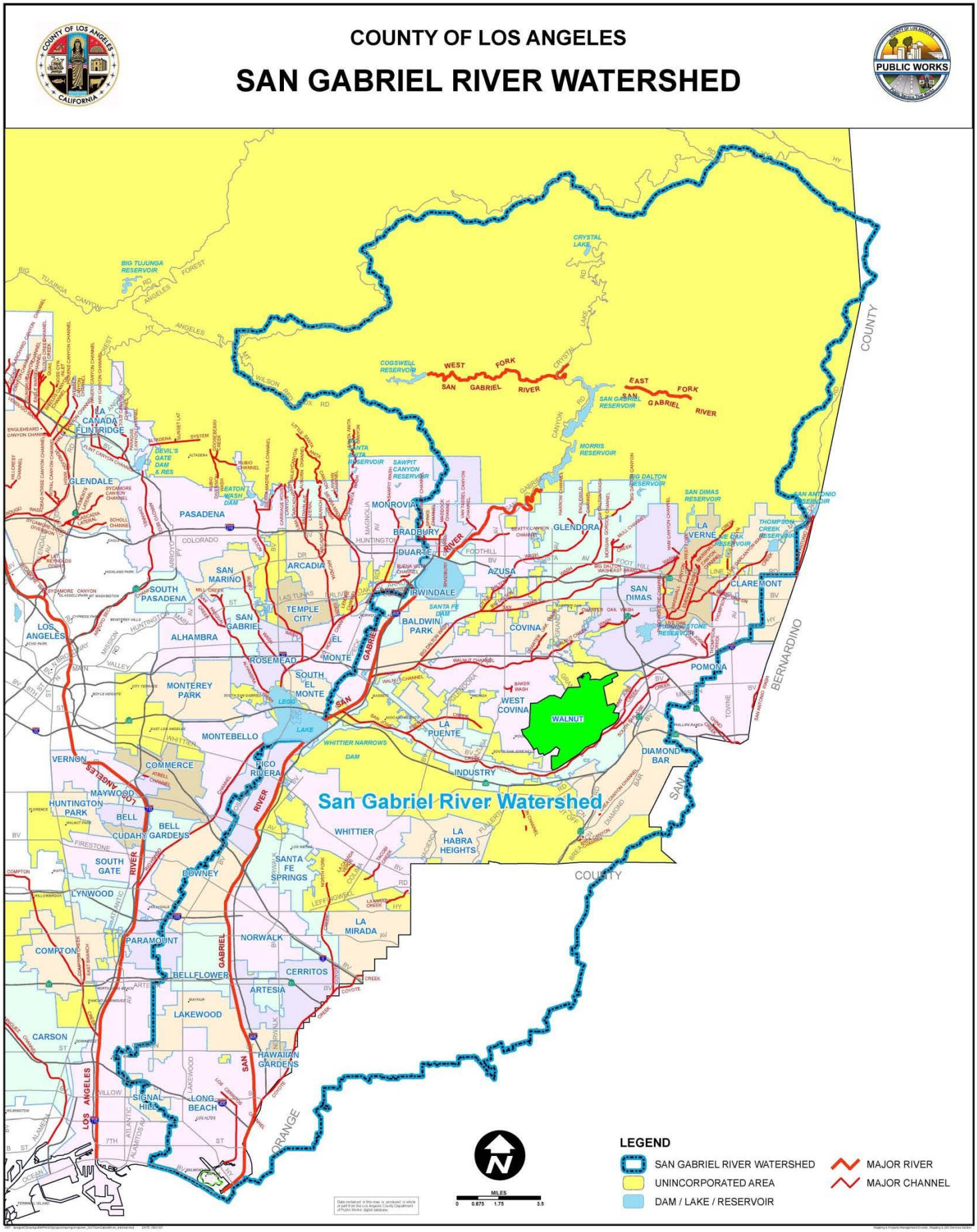


Figure 1-2: City of Walnut Land Use Map

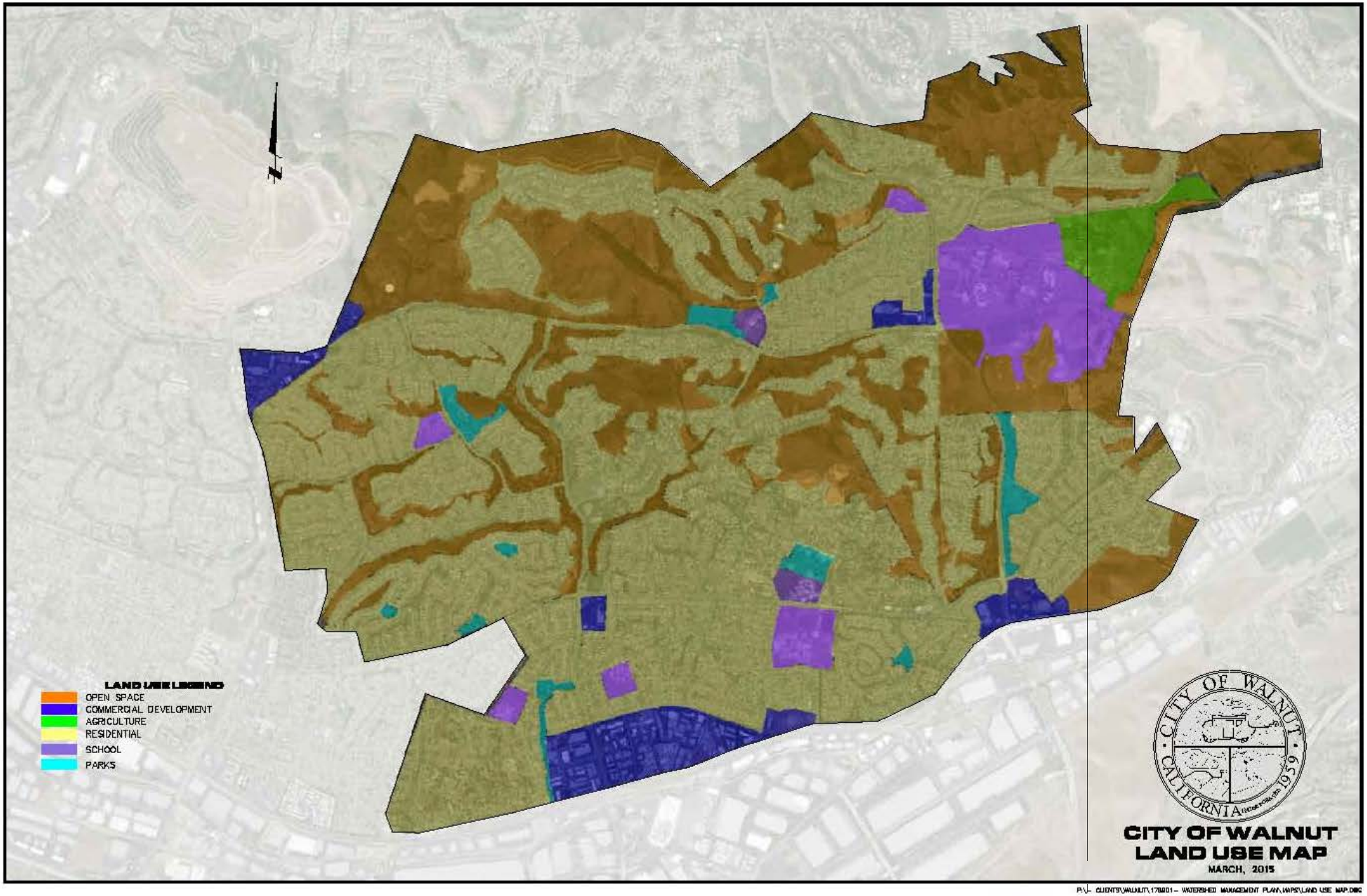


Table 1-1 compares the land uses of the City of Walnut with those of the entire San Gabriel River Watershed.

Table 1-1

Watershed Land Use		
Land Use	City of Walnut	San Gabriel River Watershed
Residential and Other*	65%	26%
Open Space	29%	50%
Agriculture/Other	1.5%	9%
Commercial/Industrial	4.5%**	15%

**Other land uses include streets, parks, schools and other land uses complementary to residential development*

***There are no current industrial land uses in the City of Walnut.*

The City boundary extends from the San Jose Hills to the north to Valley Boulevard in the south, and from Nogales Street to the west to the easterly boarder of the City with unincorporated areas of Los Angeles County and the City of Pomona. Other cities identified as MS4 Permittees bordering or in close proximity to the City of Walnut include: City of La Puente, City of Industry, City of West Covina, City of Diamond Bar, City of Pomona, and unincorporated areas of Los Angeles County (see Figure 1-1 for San Gabriel River Watershed Map).

1.4- Walnut Watershed Characteristics

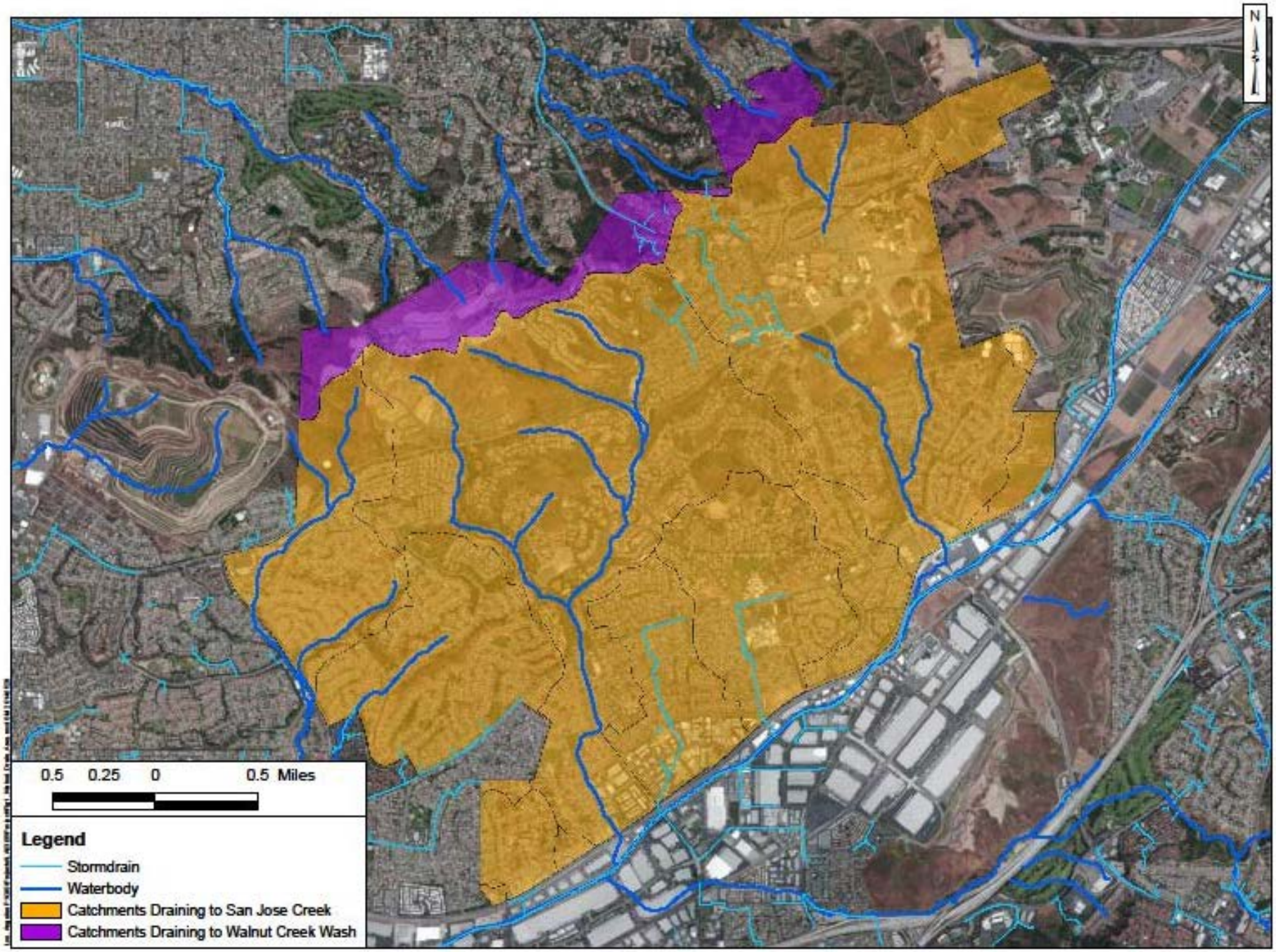
The City of Walnut drains to the San Gabriel River Watershed and is part of the San Gabriel River Watershed Management Area (SGRWMA). The City drains to the San Gabriel River through two sub-watersheds in the SGRWMA. Reach 1 of the San Jose Creek is located to the south of the City and Walnut Creek Wash is located to the north. Both water bodies connect to Reach 3 of the San Gabriel River which runs parallel with State Route 605 and eventually drains directly to the Pacific Ocean. Figure 1-3 shows the two respective watersheds, storm drains, and water bodies in the general vicinity of the City.

1.4.1- San Jose Creek Reach 1

Due to the topography and location of the San Jose Hills formation, approximately 93% of the City drains to the South and is tributary to Reach 1 of the San Jose Creek. Storm water and non-storm water flows are captured by catch basins and then carried through a network of storm drains and open channels to multiple outfalls located in San Jose Creek Reach 1.

The San Jose Creek transports runoff for the City of Walnut's outfalls approximately 12 miles to its confluence with San Gabriel River Reach 3 just north of the interchange of State Route 60 and State Route 605. The San Jose Creek is channelized from the area adjacent to the City of Walnut to approximately three quarters of a mile east of Workman Mill Road where the Creek is transitioned to soft bottomed. A number of other upstream and downstream permittees contribute runoff that reaches Reach 1 of the San Jose Creek in addition to the City of Walnut. The Creek extends north east to connect with Thomson Wash which originates at easterly limits of Los Angeles County. Thompson Creek Dam is located at the very top of Thomson Wash.

Figure 1-3: City of Walnut Drainage Areas



1.4.2- Walnut Creek Wash

The remaining 7% of the City of Walnut's jurisdictional area drains to the Walnut Creek Wash. A majority of the City's tributary area to Walnut Creek Wash watershed is open space with a small portion of residential development. With a majority of the tributary area land use categorized as open space, MS4 discharges originating from this area are minimal. The existing MS4 flows drain to the north of the City into unincorporated Los Angeles County and eventually into Walnut Creek Wash.

Walnut Creek Wash originates at the Puddingstone Dam, and is soft bottom up to a quarter mile east of Covina Hills Road where it transitions to a channelized wash. The channelized wash returns to a soft bottom channel at Baldwin Park Boulevard and continues as such to confluence with the San Gabriel River. The confluence of Walnut Creek Wash and the San Gabriel River is located south west of the interchange of State Route 10 and State Route 605. The City of Walnut contributes a very small portion of flow to the Walnut Creek Wash which is primarily composed of flow from a number of other permittees in the SGRWMA.

1.4.3- City of Walnut MS4 System

The City of Walnut's storm drain system consists of 644 City owned catch basins and 142 Los Angeles County Flood Control owned catch basins. A majority of the City's storm drain system outlets connect directly to Reach 1 of the San Jose Creek.

There is one storm drain outfall that contains flows originating from the Walnut Creek Wash watershed area of the City of Walnut. This singular outfall is an underground storm drain that drains to the north of the City into unincorporated Los Angeles County and eventually into Walnut Creek Wash. The referenced storm drain carries a relatively small amount of the total City run off and has 13 catch basins connected the line from the City of Walnut.

There are two open soft bottom creeks in the City which for much of their extents run in or adjacent to parks. Lemon Creek drains portions of the western side of the city and begins in the San Jose hills in the Vicinity of the Three Oaks Development and extends south to its confluence with Reach 1 of the San Jose Creek. Snow Creek begins near the intersection of Grand Avenue and Temple Avenue at Mount. San Antonio Community College located in the north eastern section of the City. Snow Creek travels south along Grand Boulevard to just south of Snow Creek Park where it connects to an underground reinforced concrete box (RCB). The RCB eventually connects directly with Reach 1 of San Jose Creek in the City of Industry near the intersection of Somerset Drive and Valley Boulevard.

1.5- Established Water Quality Targets

It is the intent of the IMP to provide assessable water quality monitoring data for use in determining the effectiveness of the WMP and for determining compliance with effluent limitations, WQBELS or other numeric targets as established by TMDLs or the Los Angeles Region Basin Plan.

Table 1-1 identifies all applicable water bodies and their respective pollutant water quality targets that have been established. These pollutants will be the central focus of the monitoring program in addition to the standard base line water quality related parameters required under the MS4 Permit and the first year monitoring program required pollutants identified in Table E-2 of Attachment E in the MS4 Permit (See Attachment A).

Table 1-1

Watershed Specific Pollutants with Established Numeric Targets			
Water Body	**TMDL**	**303(d) List**	**Other Pollutants of Concern**
San Gabriel River Reach 2	• Lead	• Coliform Bacteria • Cyanide	• None Identified
San Jose Creek Reach 1	• Selenium	• Ammonia • Coliform Bacteria • pH • Total Dissolved Solids • Toxicity	• None Identified
Walnut Creek Wash	N/A	• Benthic-Micro invertebrate Bio-assessments • Indicator Bacteria • pH	• None Identified

The City of Walnut is subject to one TMDL. The San Gabriel River and Impaired Tributaries Metals and Selenium TMDL was established by the USEPA on March 26, 2007 and is focused on metals and selenium that have been identified as exceeding allowable concentrations in the San Gabriel River and Tributaries. Table 1-2 identifies the TMDL established water body specific pollutant and the allowable WLA for wet and/or dry weather conditions.

Table 1-2

San Gabriel River and Impaired Tributaries Metals and Selenium TMDL			
Water Body	**Pollutant**	**Weather Conditions**	**WLA**
San Gabriel River Reach 2	Lead	Wet	81.34 µg/L x Daily Storm Volume (L)
San Jose Creek Reach 1	Selenium	Dry	5 µg/L

The San Gabriel River and impaired Tributaries Metals and Selenium TMDL was established by the USEPA and does not include a timeline for compliance with the WLAs nor does it have any interim milestones established. The City of Walnut proposed BMP implementation schedule and Compliance is identified in the WMP. The proposed compliance schedule is based on the implementation schedule of the BMP program.

Other pollutants required to be included in the monitoring program have been identified by the CWA 303(d) list as creating impairment on the identified receiving water bodies. WLAs for the 303(d) list pollutants are based on the limits identified in the Basin Plan for the Los Angeles Region with the intent of preserving beneficial uses of the specific water body listed.

The City of Walnut drains directly to Reach 1 of the San Jose Creek and the Walnut Creek Wash. Both water bodies have been identified on the 303(d) list as having pollutants found during water quality investigations. Table 1-3 identifies all of the applicable numeric targets for 303(d) listed pollutants that will be monitored under this plan. Numeric targets are established by the Los Angeles Region Basin Plan.

Table 1-3

Numeric Targets for 303(d) Listed Pollutants		
Water Body	**303(d) Listed Pollutant**	**WQBEL**
San Jose Creek Reach 1	Ammonia	LA Region Basin Plan Table 3-2, 3-4
San Jose Creek Reach 1	Coliform Bacteria	See Table 1-4
San Jose Creek Reach 1	pH	6.5-8.5
San Jose Creek Reach 1	TDS	750mg/L
San Jose Creek Reach 1	Toxicity	See Section XIII of MS4 Permit Attachment E, Attachment B of this document
Walnut Creek Wash	Benthic-Miro Invertebrate Bio-assessment	See Attachment C
Walnut Creek Wash	Indicator Bacteria	See Table 1-4
Walnut Creek Wash	pH	6.5-8.5

Table 1-4

Coliform Bacteria WQBEL		
Water Body	Recreational Use	Bacteria WQBEL
San Jose Creek Reach 1	REC1(P),High Flow Suspension	4000/100ml Not more than 10% allowed to exceed in 30 days
Walnut Creek Wash	REC1 (I), REC2(I)	400/100ml Not more than 10% allowed to exceed in 30 days

Other potential pollutants of concern have not been identified due to a lack of conclusive monitoring data. It is anticipated that if other pollutants of concern exist, the inclusion of Table E-2 of Attachment E in the MS4 permit with first year monitoring requirements will serve as an adequate process for screening and identifying the other unidentified pollutants of concern should they exist in MS4 discharges from the City of Walnut.

2.0- Receiving Water Monitoring

The primary goal of receiving water monitoring is to determine whether the applicable receiving water quality goals are being achieved. MS4 discharges can impact the receiving water quality and potentially contribute pollutants mobilized by storm water or non-storm water flows captured the MS4. Over time, results of the monitoring will be analyzed for trends in pollutant concentrations in the receiving water body. As a result of MS4 discharges exceeding allowable pollutant limits, beneficial uses identified in the Los Angeles Region Basin Plan may be impacted. Results from the receiving water monitoring program will also be used to determine if beneficial uses are fully supported as determined by water chemistry as well as aquatic toxicity and bio-assessment monitoring.

The City of Walnut is located in the San Gabriel River Watershed Management Area. The City primarily drains to Reach 1 of the San Jose Creek with a relatively small portion of the City draining to Walnut Creek. Both the San Jose Creek and Walnut Creek are tributary to Reach 3 of the San Gabriel River which eventually flows into the Pacific Ocean.

Permittees have been directed to utilize previously designated mass emission stations for receiving water sampling. The closest station with respect to the City of Walnut is located in Reach 2 of the San Gabriel River. Los Angeles County monitoring station S14 is located below San Gabriel River Parkway in Pico Rivera. The upstream tributary area is 450 square miles at this location. The City of Walnut is directly tributary to San Jose Creek Reach 1 which is located upstream of monitoring station S14. Figure 2-1 notes the approximate location of station S14 in on a map of the San Gabriel River Watershed Map developed by Los Angeles County. Receiving water monitoring data from station S14 will be utilized in this IMP, however due to vast size of area that drains to the station, all data will be supplemental to results of outfall monitoring from the City. The City will continue to search for and consider partnerships that will establish receiving water monitoring stations that will provide more reflective data than the S14 station. However, until that partnership is established the City will utilize the S14 station for receiving water data. The City of Walnut reserves the right to change the receiving water monitoring location should a more representative alternative location be identified at a later date. Changes to the proposed receiving water monitoring location will be at the discretion of the City.

2.1- TMDL Monitoring

TMDL monitoring and tracking is a critical component of the IMP. The City of Walnut is named in Table K-9 of the MS4 Permit as being subject to the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL. The San Gabriel River Metals TMDL is a USEPA established TMDL. Table 1-2 highlights the applicable San Gabriel River Metals TMDL Waste Load Allocations (WLAs) established for the City of Walnut. Metals TMDL WLAs have been established for San Jose Creek Reach 1 and San Gabriel River Reach 2. As previously mentioned, the City plans to utilize the monitoring data from mass emissions station S14 identified in Figure 2-1 as a supplement to the data that is gathered directly from the City's major outfalls. This arrangement will allow the City to better establish its direct contribution to water quality in the watershed.

The City is also required to participate in the monitoring program related to the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Toxic Pollutants TMDL. Since all permittees in the San Gabriel River are subject to meeting the monitoring requirements for the Harbor Toxics TMDL a group approach to this program will offer a cost effective method for compliance. The City of Walnut will participate in the Lower San Gabriel River Watershed Committee Harbor Toxics TMDL Monitoring Program. The program monitoring details are identified in the Lower San Gabriel River Watershed Group's CIMP. Data will be gathered from the monitoring program and included in the City's reporting documents.

2.2- Wet Weather Receiving Water Monitoring Requirements

Minimum required receiving water monitoring frequencies are defined in section VI.C of Attachment E in the MS4 Permit. Wet weather is defined as when the flow with the receiving water is at least 20% greater that the base flow or as defined in an approved IMP, CIMP or TMDL. In an effort to simplify the wet weather definition and conform with applicable TMDLs the City of Walnut will attempt to sample storms that qualify under wet weather conditions identified in the San Gabriel Metals and Selenium TMDL. The TMDL identifies wet weather conditions as flows greater than 260 cfs as measured at USGS station 11085000.

Wet weather monitoring will occur at least three times per year for all applicable parameters with the exception for aquatic toxicity, Lead and Selenium. Aquatic toxicity monitoring will be conducted at a minimum of twice per year. Lead and selenium will be monitored four times during the first year. Metals monitoring results for the first year will be reviewed and potentially reduced to three samples per year if it is found the reduced frequency will provide adequate data. The first wet weather event with a predicted rainfall with a 70% probability 24 hours prior to rain fall will be targeted for monitoring. At a minimum two additional rainfall events with a minimum separation of three dry days (less than .1 inch of rain per day) between monitoring will be monitored to meet the minimum requirement of three storm events per year. Receiving water monitoring shall be coordinated to start as soon as possible following storm water outfall monitoring to better reflect the potential impact from MS4 discharges.

2.3- Dry weather Receiving Water Monitoring Requirements

Dry weather monitoring requirements are defined in section VI.D of Attachment E in the MS4 Permit. Monitoring shall take place a minimum of two times per year for all parameters, or more if required by a TMDL monitoring plan. At least one of the monitoring events shall take place during the historically driest month of the year. Typically the driest month of the year is in August, which will be utilized for the time period of which at least one of the monitoring events occurs. Receiving Water Monitoring Parameters for monitoring San Gabriel River Reach 2 are identified in Table 2-1.

Table 2-2

Receiving Water Monitoring Parameters				
Water Body	**Monitoring Parameter**	**Source of Monitoring Requirement**	**Wet Weather Minimum Monitoring Frequency**	**Dry Weather Minimum Monitoring Frequency**
San Gabriel River Reach 2	Flow	Minimum Parameter	3	2
	Lead	TMDL	4	NA
	Selenium	TMDL	NA	2
	Coliform Bacteria	303(d)	3	2
	pH	Minimum Parameter	3	2
	*Toxicity	Minimum Parameter	2	2
	Cyanide	303(d)	3	2
	Total Suspended Solids	Minimum Parameter	3	2
	Hardness	Minimum Parameter	3	2
	Dissolved Oxygen (DO)	Minimum Parameter	3	2
	Temperature	Minimum Parameter	3	2
	Specific Conductivity	Minimum Parameter	3	2
	**Additional Screening Parameters	Minimum Parameter	1	1
San Gabriel River Harbor	Toxicity	TMDL	See Lower San Gabriel River Watershed Group CIMP	See Lower San Gabriel River Watershed Group CIMP

** Per section VI.C.d.vi of attachment E of the MS4 Permit, aquatic toxicity is only required to be monitored twice per year*

*** Additional Screening Parameters are included in Appendix A of this document. Per section VI.C.e of attachment E of the MS4 Permit, these parameters are only required to be monitored in the first year. If not detected in the first year further monitoring is not required.*

Table 2-3

Receiving Water Beneficial Uses		
Beneficial Use	**Water Body**	
	San Gabriel River Reach 2	**San Jose Creek Reach 1**
MUN	P(1)	P(1)
GWR	I	I
REC1	E(2)	P(2)
REC2	E	I
WILD	E	E
WARM	I	I
COLD		
RARE	E	
WET		

P: Potential beneficial use

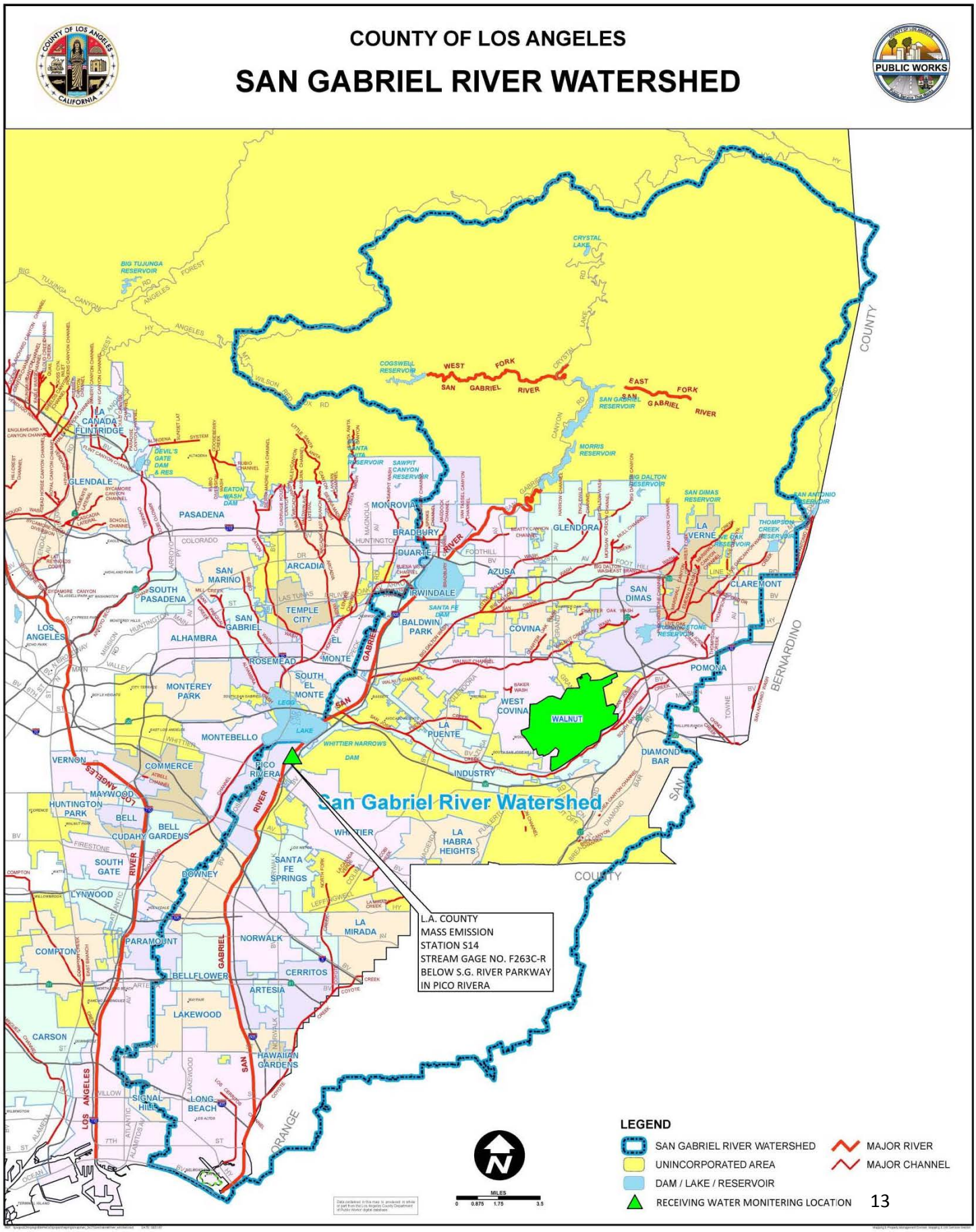
I: Intermittent beneficial use

E: Existing beneficial use

(1) Use may be reviewed by SWRCB

(2) Access restricted by LACDPW

Figure 2-1: Mass Emission Monitoring Station Location



3.0- Outfall Monitoring

Outfall monitoring will play a key role in determining the water quality of both storm water and non-storm water discharges from the City of Walnut's MS4. Similarly to the receiving water monitoring program, the outfall monitoring program will be utilized to determine whether the applicable water quality goals are being achieved. MS4 discharges can impact the receiving water quality and potentially contribute pollutants mobilized by storm water or non-storm water flows deposited to the receiving water body. Over time, results of the monitoring will be analyzed for trends in pollutant concentrations. The program will also be utilized in the elimination of prohibited non –storm water discharges.

The City of Walnut has conducted an inventory of its MS4 outfalls based on storm drain as-built records from the City's files and the Los Angeles County Storm Drain Records. The findings from the MS4 outfall inventory process are outlined in Table 3-1.

3.1- Storm Water Outfall Based Monitoring

Storm water outfall monitoring will be utilized to determine compliance with wet weather TMDL and WQBEL requirements. The outfalls chosen for monitoring have representative drainage areas for the land uses found within the City of Walnut.

3.1.1- Outfall Monitoring Site Selection

Outfall locations selected for storm water monitoring were considered based on a number of criteria. Per the MRP section of the MS4 Permit, the City of Walnut must monitor at least one location per sub watershed drainage area (HUC-12). Within the jurisdictional boundaries of the City of Walnut there are three HUC-12 areas as shown in igure 3-1. The County of Los Angeles developed HUC-12 equivalent areas which are based on more detailed information of the existing topography and storm drain systems. When comparing both sub-watershed boundaries it is apparent that some differences exist, however in regards to the monitoring requirement of one outfall per sub-water shed, there effectively is no difference in the number of HUC-12 boundaries in the City's jurisdiction. To simplify the outfall location selection, the City of Walnut will utilize the USGS established HUC-12 boundaries per the requirements of the MS4 Permit for determining locations.

Other parameters that were taken into account when selecting the storm water outfall monitoring locations includes correlation between the outfall drainage area land use and the land uses within the City's jurisdiction. A majority of the City is devoted to signal family residential development and open space. Figure 3-3 is a map of the land uses with in the City. Establishing an outfall that accurately reflects the City's land use limits the available monitoring sites to a few key points. Land uses within individual HUC-12 sub watersheds with in the City's boundaries do not reflect the City's land use in all cases. Due to the limited commercial and agricultural land uses in the City and the centralized concentration of open space, not all of the potential HUC-12 based outfall monitoring locations will reflect the City's overall land use.

Table 3-1

City of Walnut Outfall Inventory						
ID No.	**Outlet Coordinates**	**Outlet Location Description**	**Plan Reference No.**	**Size (in)**	**Outlet Material**	**Owner**
1	34°00'12.04"N117°52'15.01"W	250' E/Int. of E Valley Blvd and Fairway Dr	RDD 0127	48	RCP	LACOFCD
2	34°00'41.63"N 117°52'25.06"W	80' E/Int. of E Calle Baja Dr and Camino De Teodoro	MTD 0199	21	RCP	LACOFCD
3	34°00'42.16"N 117°52'45.61"W	W/Int. of La Puente Rd and Paseo Del Caballo	MTD 0201	60	RCP	LACOFCD
4	34°00'47.46"N 117°52'48.96"W	S/Int. of Avenida Del Sol and Acaso Dr	MTD 0829	≤36	RCP	LACOFCD
5	34°00'59.23''N 117°53'03.07''W	150' S/Int. of Bel Air Dr and Mandeville Dr	MTD 907-1	-	-	TBD
6	34°00'59.33''N 117°53'03.76''W	150' S/Int. of Bel Air Dr and Mandeville Dr	MTD 907-1	72	RCP	TBD
7	34°01'04.22''N 117°53'17.69''W	150' N/Int. of Shakespeare Dr and S Nogales St	MTD 404	24	RCP	TBD
8	34°01'12.87''N 117°53'24.73''W	Int. of Shadow Oak Dr and S Nogales St	MTD 404	60	RCP	TBD
9	34°01'15.19''N 117°53'26.40''W	225'N/Int. of Shadow Oak Dr and S Nogales St	MTD 404	18	RCP	TBD
10	34°01'22.37''N 117°53'32.12''W	200' S/Int. of Sutter Creek Dr and Nogales Ave	MTD 404	18	RCP	TBD
11	34°01'23.71''N 117°53'34.39''W	Int. of Sutter Creek Dr and Nogales Ave	MTD 918	27	RCP	TBD
12	34°14'18.60''N 117°53'33.87''W	250' N/Int. of Sutter Creek Dr and Nogales Ave	MTD 404	78	RCP	TBD
13	34°01'40.20''N 117°53'37.36''W	100' W/Int. of Amar Rd and S. Manu Ln	MTD 0657	18	RCP	LACOFCD
14	34°01'40.20''N 117°53'37.36''W	Int. of Amar Rd and S Manu Ln	MTD 0657	30	RCP	LACOFCD
15	34°01'45.87''N 117°53'22.89''W	Int. of Amar Rd and E Magdalena Rd	MTD 0685	36	RCP	LACOFCD
16	34°03'06.60''N 117°51'45.75''W	N Grand Ave at N City Limit	RDD 0058	33	RCP	LACOFCD
17	34°01'56.51''N 117°49'33.24''W	1,350' E/Int. of E Valley Blvd and Faure Ave	RDD 0251	30	RCP	LACOFCD
18	34°01'41.16''N 117°50'03.36''W	Snow Creek connection; 500' E/Int. of E Valley Blvd and N Grand Ave	RDD 0251	30	RCP	LACOFCD
19	34°01'32.71''N 117°50'12.92''W	Snow Creek connection; 650' W/Int. of E Valley Blvd and N Grand Ave	MTD 1675	30	RCP	TBD
20	34°01'23.69''N 117°50'16.68''W	Int. of Somerset Dr and Valley Blvd	MTD 1146	48	RCP	TBD
21	34°01'21.48''N 117°50'17.55''W	San Jose Creek; 280' S/Int. of Valley Blvd and Somerset Dr	San Jose Creek	18	RCP	TBD
22	34°01'10.97''N 117°50'27.96''W	400' S/W/Int. of Valley Blvd and Brea Cyn Rd	MTD 1146	24	RCB	TBD
23	34°01'05.99''N 117°50'38.95''W	550' E/Int. of Valley Blvd and Morningside Dr	MTD 1146	60	RCP	TBD
24	34°00'56.41''N 117°50'59.82''W	Int. of Valley Blvd and Pierre Rd	BI 8301 - Line A	102	RCP	LACOFCD
25	34°00'35.12''N 117°51'30.68''W	Int. of Valley Blvd S Lemon Ave	RDD 0127	96	RCP	LACOFCD
26	34°00'28.29''N 117°51'44.1''W	Lemon Creek culvert; W/Valley Blvd and Lemon Creek Dr	-	168	RCB	TBD

See Figure 3-2 for a map of these locations

Prospective storm water monitoring outfall locations were first selected based on HUC-12 boundaries. The list of outfalls was further refined on the basis of having a similar representative land use in the drainage area as the land use in the city. The best available outfall of each HUC-12 area was then selected for further investigation.

Storm water outfall monitoring locations selected by the City ideally do not include drainage from adjacent jurisdictions. However, the intermingling design of the MS4 system does not always allow this to be possible. Due to the topography of the City, there are only a few locations that drain into the City from other jurisdictions. Conditions in the City of Walnut yielded only one of the potential storm water monitoring locations as being identified to include storm water from jurisdictions.

The final parameters reviewed in selecting the proposed storm water outfall location were the location conditions and potential safety concerns. Ideal outfall monitoring sites would allow for safe access and accurate sampling practices with little impact to surrounding communities and traffic.

Outfall monitoring locations selected to be included in this portion of the IMP are at manmade structures, and are relatively accessible. None of the selected monitoring locations are located in the path of traffic, however to allow for safe access, adequate safety practices and traffic control measures must be utilized when field crews are conducting sampling or maintenance. The proposed storm water outfall monitoring locations are listed in Table 3-2 below. Figure 3-2 illustrates the geographical locations on a map of the City.

Table 3-2

Storm Water Outfall Monitoring Locations

Outfall Number	Receiving Water Body	Location Description	Latitude Longitude	HUC-12	Size	Shape
M1	San Jose Creek Reach 1	N/E Corner of Grand Ave and La Puente Rd.	34°01'53.82" N 117°50'15.35" W	18071060502	9'2"x11'	RCB
M2	San Jose Creek Reach 1	S/W Corner of Nogales St. and Shakespeare Dr.	34°01'00.52" N 117°53'17.41" W	18071060501	108"	RCP
M3	Walnut Creek Reach1	Center median of Grand Ave and N'ly City Limits	34°03'06.32" N 117°51'45.23" W	18071060402	33"	RCP

Storm water outfall monitoring site M1 will serve as a primary monitoring location for a majority of the City of Walnut. M1 is the largest of the selected monitoring site and has a drainage area of approximately 1,315 Acres (23% of the City). M1 is located approximately 325' north of La Puente Rd. on the east side of Grand Ave. in Snow Creek Park. The point where monitoring will take place is a manhole to the 9'2" X 11' reinforced concrete box. The point of monitoring is located approximately 1,500' north of the City limits. No accessible manholes were identified downstream from this location that were still within the boundaries of the City. There is an existing commercial development just south of the City limit which also drains to this storm drain. Sampling at the nearest accessible manhole downstream from the City limit would increase the commercial area in the catchment by approximately 50% and introduce water from another jurisdiction.

Further upstream of the selected location is an open earthen channel commonly referred to as Snow Creek. Further downstream from the monitoring location, the RCB merges with Reach 1 of the San Jose Creek. Table 3-3 demonstrates that the drainage area to monitoring site M1 is relatively similar to the land use in the City of Walnut.

Table 3-3

Land Use in Drainage Area for Monitoring Location M1			
Land Use Type	**M1 Drainage Area Land Use**	**City of Walnut Drainage Area**	**HUC-12 18071060502**
Commercial	4.5%	4.5%	6%
Agriculture	6.5%	1.5%	2.5%
Open Space	26%	29%	35.7%
Residential/Other	63%	65%	55.8%

Storm water outfall monitoring location M2 may serve as an alternative monitoring site for the City. M2 is the second largest of the selected storm water monitoring sites and has a drainage area of 855 Acres (15% of the City). M2 is located at the south western corner of Nogales Street and Shakespeare Drive at an outlet structure to a 108" RCP storm drain. The outlet site may also be identified as the starting point for the Giano Channel. The monitoring location is located approximately 200' outside of the City limits. This particular location transports storm water from both the City of Walnut and the City of West Covina. Should the mixed storm water sources cause issue with other sites are available for this HUC-12, however the alternative sites have a drainage area that is less reflective of the City's land use. The table below demonstrates the similarities of the respective land use for the drainage area of monitoring site M2 and the land use in the City of Walnut.

Figure 3-1: City of Walnut HUC-12 Boundaries

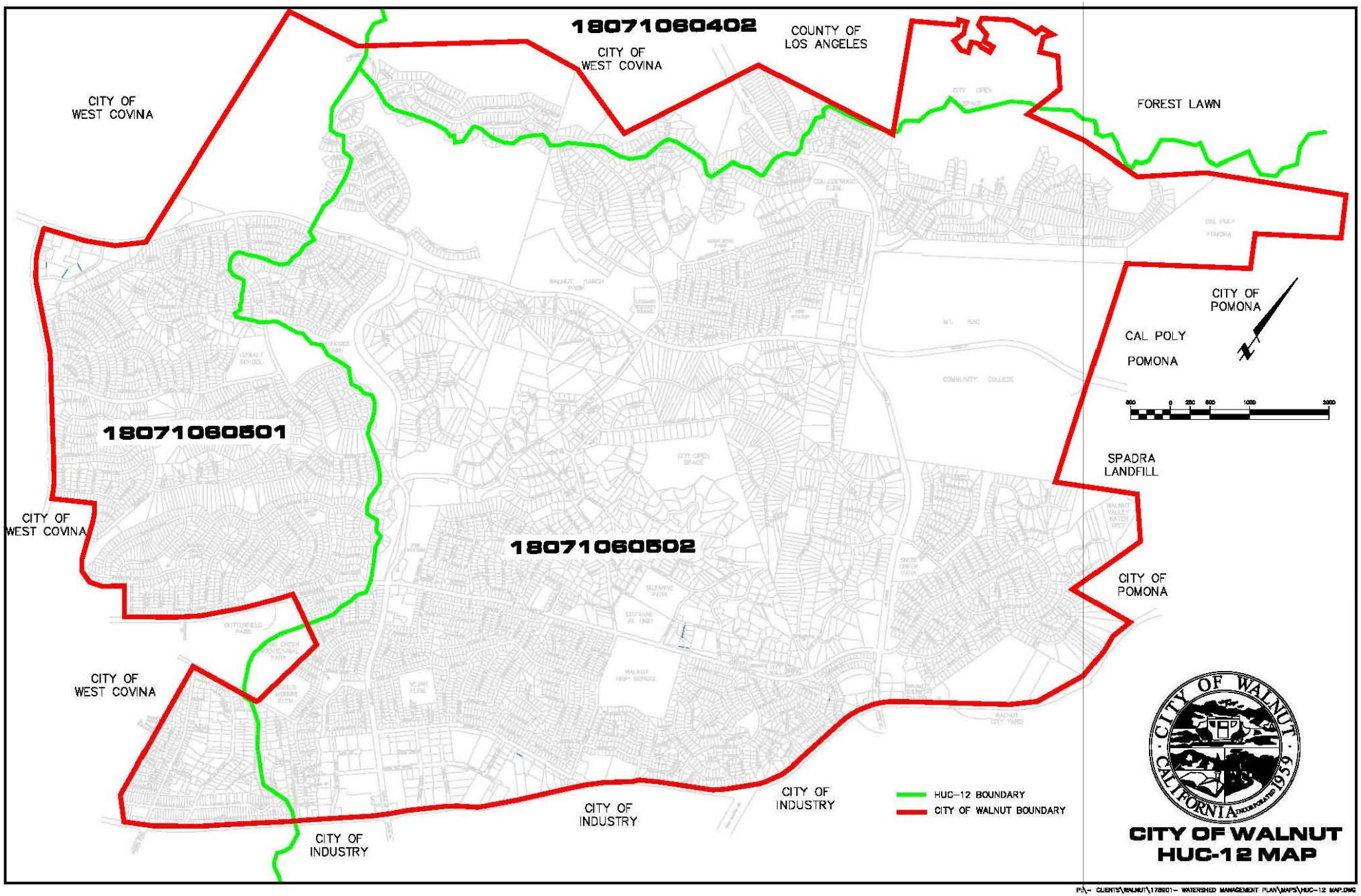


Figure 3-2: Outfall Inventory Map

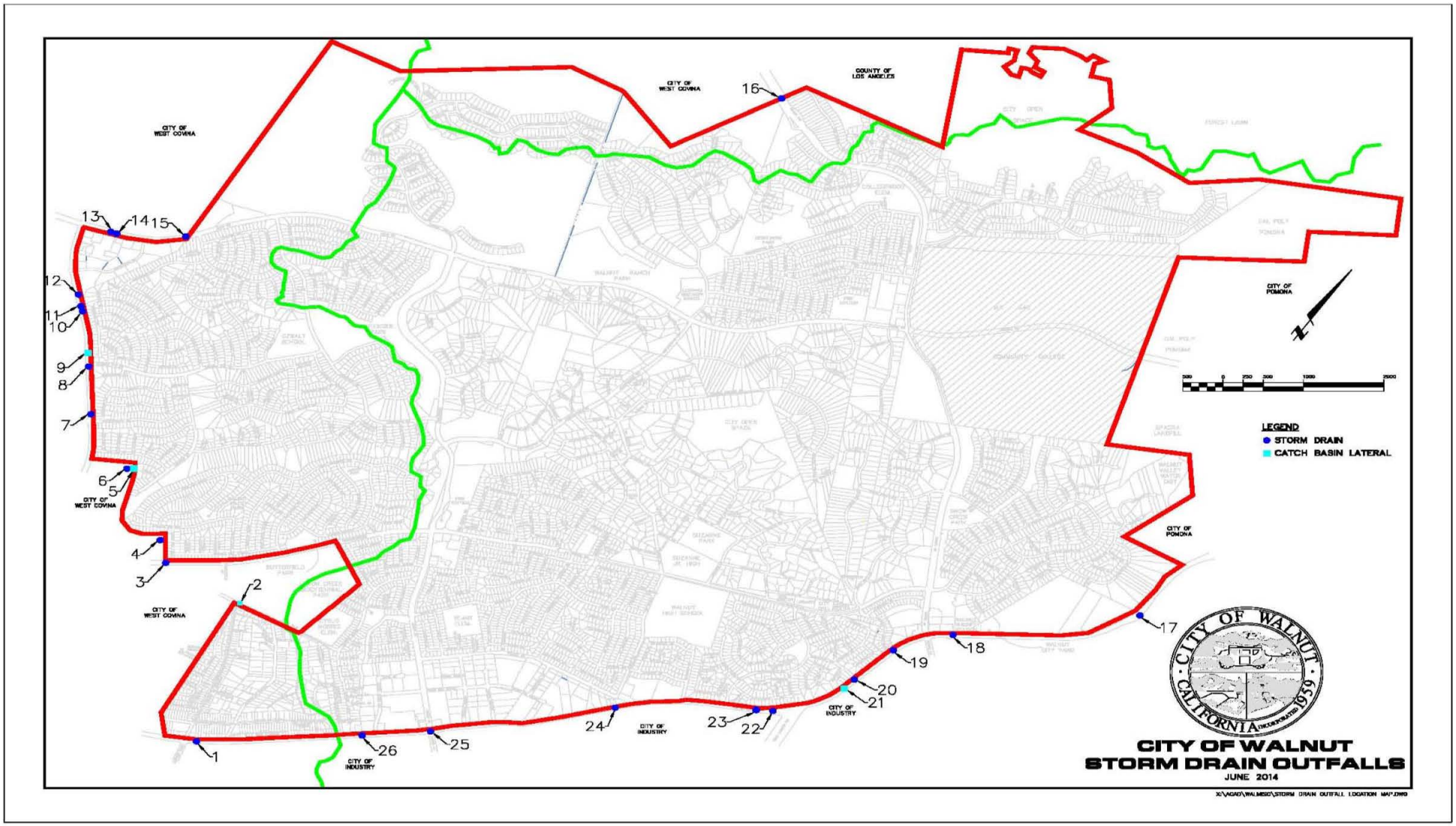


Table 3-4

Land Use in Drainage Area for Monitoring Location M2			
Land Use Type	**M2 Drainage Area Land Use**	**City of Walnut Drainage Area**	**HUC-12 18071060501**
Commercial	9.5%	4.5%	4.9%
Agriculture	0.0%	1.5%	0%
Open Space	22.5%	29%	27.6%
Residential/Other	68%	65%	67.5%

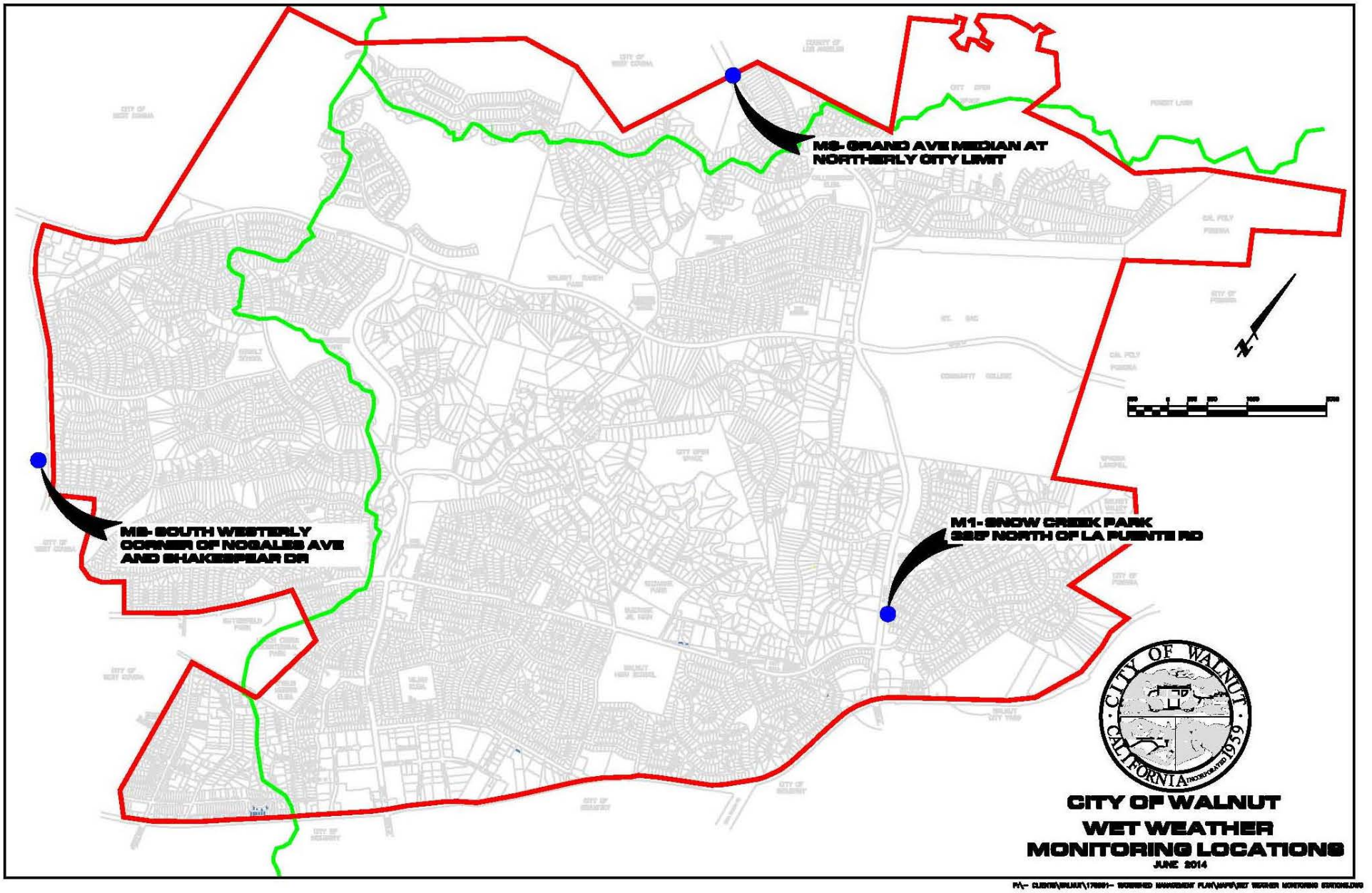
Storm water outfall location M3 will serve as the storm water monitoring location for the northerly portion of the City. This drainage area is the only are in the City of Walnuts jurisdictional area that drains to the Walnut Creek. The approximate drainage area for M3 is 56 Acres (.9% of the City). The scale of storm water flow that is transported by the storm drain at M3 is much lower than the other two sites, however this site is proposed because it is the only location where flow is draining from the City of Walnut to the Walnut Creek watershed. The monitoring site is located in the center median of Grand Avenue approximately 20' away from the City limit in the jurisdictional area of the City of Walnut. The outfall is a manhole to a 30" RCP. Table 3-5 demonstrates the land use differences between the City of Walnut and the drainage area of M3. The land use is not representative of the City of Walnut, but M3 is the only site for monitoring that exists for the Walnut Creek watershed.

Table 3-5

Land Use in Drainage Area for Monitoring Location M3			
Land Use Type	**M1 Drainage Area Land Use**	**City of Walnut Drainage Area**	**HUC-12 18071060402**
Commercial	0.0%	4.5%	0%
Agriculture	0.0%	1.5%	0%
Open Space	46%	29%	64.3
Residential/Other	54%	65%	35.7

The City of Walnut proposes to monitor one outfall location for each of the sub watersheds that it is tributary to instead of the HUC-12 based requirement. The locations proposed to be monitored by the City of Walnut only include M1 and M3. It is anticipated that the results from M1 would be similar to those found at M2 and both drain to Reach 1 of the San Jose River. Monitoring site M1 offers a better representation of land use and larger drainage area than M2. The City may consider monitoring at all three wet weather outfall monitoring locations at a later date during the permit term, however for the first year and foreseeable future of the monitoring program the City will only monitor outfalls M1 and M3 for storm water flows as an attempt to maximize available funds for monitoring an minimize redundant data collection.

Figure 3-4: Monitoring Locations



3.1.2 Monitoring Requirements for Storm Water Outfall Monitoring

Section VIII.B of Attachment E in the MS4 Permit outlines the minimum requirements for Storm water outfall monitoring. Storm water discharges shall be monitored a minimum of three times per year for all parameters except for aquatic toxicity. Storm water monitoring shall take place during wet weather conditions. In an effort to simplify the wet weather definition and conform with applicable TMDLs the City of Walnut will attempt to sample storms that qualify under wet weather conditions identified in the San Gabriel Metals and Selenium TMDL. The TMDL identifies wet weather conditions as flows greater than 260 cfs as measured at USGS station 11085000. Monitoring events shall target the first qualifying wet weather event of the season and at least two additional events in the same season. The first wet weather event to be targeted shall be forecasted at least 24 hours in advance with 70% probability of rainfall. The two additional events to be monitored shall be separated by a minimum of three dry condition days between events. Monitoring Parameters are identified in Table 3-6.

Table 3-6

Outfall Monitoring Parameters		
Monitoring Parameter	**Source of Monitoring Requirement**	**Wet Weather Minimum Monitoring Frequency**
Flow	Minimum Parameter	3
Lead	TMDL	3
Selenium	TMDL	3
Coliform Bacteria	303(d)	3
pH	Minimum Parameter	3
*Toxicity	Minimum Parameter	3 Maximum
Cyanide	303(d)	3
Total Suspended Solids	Minimum Parameter	3
Hardness	Minimum Parameter	3
Dissolved Oxygen (DO)	Minimum Parameter	3
Temperature	Minimum Parameter	3
Specific Conductivity	Minimum Parameter	3
Total Dissolved Solids	303(d)	3
**Additional Screening Parameters	Minimum Parameter	3

** Per section VIII.B.1.c.vi of attachment E of the MS4 Permit, toxicants identified as part of a TIE in the receiving water body shall be monitored at the outfalls or if inconclusive, aquatic toxicity. Aquatic Toxicity Monitoring Methods shall conform to section XII of Attachment E of the MS4 Permit.*

*** Additional Screening Parameters are included in Appendix A of this document. Per section VI.C.e of attachment E of the MS4 Permit, these parameters are only required to be monitored in the first year. If not detected no further monitoring is required.*

3.1.3- Storm Water Outfall Monitoring Sampling Methods

Sampling of storm water at outfalls will take place during the first 24 hours of an event or before the event ends if less than 24 hours. A minimum of three grab samples separated by 15 minutes of each hour for a 24 hour event or for the duration of the storm if less than 24 hours, will be taken to create a flow weighted composite sample of the discharge from an outfall. Continuous sampler equipment may be selected for use in this monitoring plan. Grab samples may be utilized for specific pollutants at the discretion of the sampling lab/consultant.

Sampling and analysis will be conducted by a contracted water sampling consultant. Tasks conducted by the consultant will conform to the following requirements which will be verified by the City:

- Consultants shall demonstrate that required pollution detection limits can be met with reasonable accuracy and precision.
- All equipment utilized in gathering and analyzing samples shall be cleaned and maintained in a manner that prevents sample contamination.
- Sample analysis shall be conducted in accordance with EPA established or Regional Board accepted methods and procedures applicable to pollutant(s) being analyzed.
- An adequate QA/QC program shall be in place to ensure precise and accurate results.

3.2- Non- Storm Water Outfall Based Monitoring

Non-storm water outfall monitoring will be utilized to determine compliance with dry weather TMDL and WQBEL requirements. Outfalls will be screened to determine the presence of dry weather flows. Dry weather monitoring will also be utilized to aid in the elimination of illicit discharges. Outfalls determined to have dry weather flows will be prioritized and investigated to determine the source of the flows and if the flows are categorized as a prohibited discharge.

3.2.1- Outfall Screening Procedure

Upon approval of the IMP, the City of Walnut will commence the screening process of outfalls for dry weather flows. Outfalls found to have consistent significant dry weather flows will be prioritized based on the receiving water, observed dry weather flow volume, observed water quality and the size of the outfall.

The initial stage of screening will be comprised of a visual assessment of all outfalls. This will take place during the first dry season that this IMP is in effect. Each outfall will be visited and inspected at least once for flow during dry weather conditions. If flow is present, pictures and general notes will be taken of the flow characteristics. Outfalls where dry weather flow is greater than a garden hose will be classified as substantial and will be visited at least two additional times to confirm initially observed flow characteristics are consistent.

Each outfall found to have significant dry weather flows shall be recorded and tracked over the duration of the MS4 Permit. Field inspection reports shall be kept on file in an electronic format for future reference. Field reports shall include the following information and will conform to the Non-storm water outfall inventory requirements outlined in IX.D of attachment E in the MS4 Permit.

- Date and Time of Visual inspection
- Outfall ID Number (Reference Outfall inventory)
- Outfall Structure Description (Shape and Size)
- Receiving Water Description at Discharge Point
- Latitude/Longitude
- Nearest Street Address
- Parking, Access, and Safety Considerations
- Photographs of Outfall
- Photographs of Non-storm Water Discharge
- Estimated Discharge Rate
- All Diversions Upstream or Downstream of the outfall
- Observed Characteristics of Discharge water (Color, Clarity, Odor, etc.)

Following the initial visual screening process, the field reports of outfalls with non-storm water discharges will be compiled into an inventory and reviewed for the purpose of prioritizing source investigations. The MS4 Permit requires that prioritization be determined by the classification parameters below. The prioritization levels have been classified in to tiers in ascending numeric values with Tier 1 being the first outfalls to be monitored.

Tier 1 Prioritization – Outfalls discharging directly to receiving waters with WQBELS or receiving water limitations in the TMDL provisions for which final compliance has passed.

Tier 2 Prioritization – All major outfalls and other outfalls that discharge to a receiving water subject to a TMDL shall be prioritized according to TMDL compliance schedules.

Tier 3 Prioritization – Outfalls to which monitoring data exists and indicate recurring exceedances of one or more of the Action Levels identified in Attachment G of the MS4 permit.

Tier 4 Prioritization - All other major outfalls identified to have significant non-storm water discharges.

Prioritization of outfall investigations within each Tier will be based on best professional judgment with flow volume, outfall drainage area, and observed discharge water quality among other parameters taken into account.

3.2.2- Source Investigation

Non-storm water outfall source investigations will be scheduled to ensure that at least 25% of the outfalls with non-storm water discharges will undergo a source investigation within three years of the

effective date of the MS4 Permit (Effective Date December 28, 2013), and 100% complete within 5 years of the effective date of the permit.

Source investigations shall include both desktop level analysis of potential sources and field investigations to trace sources of dry weather flows. Based on the source investigation results the City of Walnut will proceed with actions described in Table 3-7.

Table 3-7

Dry Weather Flow Monitoring	
Dry Weather Flow Source	**Action**
Illicit Discharge	The City of Walnut will proceed with implementing proceedures to eliminate the discharge consistent with IC/ID requirements. Actions shall be documented and reported in the next Annual Report.
NPDES Permitted Discharge	If the source is determined to be a NPDES permitted discharge, a discharge subject to Record of Decision approved by the USEPA pursuant section 121 of CERCLA, a conditionally exempt essential non-storm water discharge, or entirely comprised of natural flows as defined in Part III.A.d of the MS4 Permit, then document the source and report to the Regional Board in the next Annual Report.
The Source is Unknown or a Conditionally Exempt, but Non-Essential, Non-Storm Water Discharge	The City of Walnut Shall conduct monitoring as required by the MS4 permit and further described in this document.
Discharge is Comprised of more than one source	The City of Walnut will attempt to quantify the relative contribution from the City's jurisdictional boundary and classify the contributions as authorized, conditionally exempt essential, natural, illicit discharge, conditional exempt non-essential, or unknown
Source is Identified as Originating from Up-Stream Jurisdiction	The City shall inform the up-stream jurisdiction and the Regional Water Board within 30 days of determination of the presence of the discharge, all available characterization data, contribution determination efforts, and efforts taken to identify its source.

Before a source of non-storm water discharge is classified as unknown, it shall be investigated to a reasonable extent. Investigation procedures shall include field inspections and desktop studies. Monitoring for indicator parameters shall be conducted if initial investigations yield no results. Video inspection of the storm drain may be utilized by the City in the source investigation. Other means determined to be potentially effective in locating the source of unknown flows will also be evaluated. A

description of all efforts to identify a source of dry weather flows will be included in the next Annual Report for sources to be classified as unknown. All MS4 outfalls requiring no further action shall be maintained in the Storm Drains, Channels and Outfalls map and associated database.

3.2.3- Monitoring Non-Storm Water Discharges Exceeding Criteria

Within 90 days after completing the source identification or after the Executive Officer of the Regional Water Board approves the IMP, whichever is later, the City of Walnut will move forward with implementing monitoring activities. Dry weather monitoring activities will be limited to two outfalls that have been determined to convey significant discharges comprised of either unknown or conditionally exempt non-storm water discharges, or containing discharges attributed to illicit discharges per dry season. The following parameters shall be monitored:

- Flow
- Pollutants assigned a WQBEL or RWL to implement TMDL Provisions applicable to the receiving water body
- Other Pollutants identified on the CWA 303(d) list for receiving water
- Pollutants identified in a TIE conducted in response to observed aquatic toxicity during dry weather at the nearest downstream receiving water monitoring station during the last sample event or, where the TIE conducted on the receiving water sample was inconclusive, aquatic toxicity. If the discharge exhibits aquatic toxicity, then a TIE shall be conducted.
- Other parameters in Table E-2 identified as exceeding the lowest applicable water quality objective in the nearest downstream receiving water monitoring station per Part VI.D.1.d. of the MS4 Permit.

The frequency of monitoring during the first year shall be at least four times per outfall in the first year for outfalls that have been identified as having non-storm water discharges of unknown origin. Monitoring will then be reduced to at least twice per year for the second year. Dry weather outfall monitoring frequency will continue at a minimum of two sampling events for the remainder of the MS4 Permit cycle. Dry weather monitoring frequency may be increased from two times per year should the City deem it necessary to further trace flow source, BMP effectiveness or any other reason that would aid the City in improving water quality.

The City will evaluate the results of the first year of dry weather monitoring and consider submitting a request to the Executive Officer of the Regional Water Quality Board to eliminate the monitoring requirements for specific pollutants found to not be a threat to the receiving waters.

3.2.4- Sampling Methods

Non storm water discharges shall be monitored during days when precipitation is less than 0.1 –inch and those not less than three days after a rain event of greater than 0.1-inch. A minimum of three grab samples separated by 15 minutes for each hour during a 24 hour period, will be taken to create a flow weighted composite sample of the discharge from an outfall. Continuous sampler equipment may also

be selected for use in this monitoring plan. Samples will then be taken from the site to a City selected lab for analysis.

Sampling and analysis will be conducted by a contracted water sampling consultant. Tasks conducted by the consultant will conform to the following requirements which will be verified by the City:

- Consultants shall demonstrate that required pollution detection limits can be met with reasonable accuracy and precision.
- All equipment utilized in gathering and analyzing samples shall be cleaned and maintained in a manner that prevents sample contamination.
- Sample analysis shall be conducted in accordance with EPA established or Regional Board accepted methods and procedures applicable to pollutant(s) being analyzed.
- An adequate QA/QC program shall be in place to ensure precise and accurate results.

4.0- New Development/Redevelopment Effectiveness Tracking

The objective of the new development/re-development tracking system is to track BMP effectiveness. This program will be utilized to adjust and hone BMP implementation and design with the intent to improve the effectiveness of BMPs. The City of Walnut will keep a database of the information outlined below for use in evaluating the effectiveness of the new development and re-development in the City.

New Development Re-development Tracking Parameters

- Name of project developer and project
- Project Location & Map
- Date of Certificate of Occupancy
- 85th Percentile Storm Event (inches/24 hours)
- Other Design Criteria required to meet hydromodification requirements for drainages to natural water bodies
- Project Design Storm (inches/ 24 Hours)
- Project Design Storm Volume (MGD)
- Percent of Design Storm volume to be retained on site
- Flow Through BMPs provide one year, one hour Isohyetal map published by Los Angeles County
- Percent of design Storm to be infiltrated at an offsite mitigation or ground water replenishment site
- Percent of Design Storm to Volume to be retained or treated with Biofiltration at an offsite retrofit project
- Location Maps of Offsite Mitigation, groundwater replenishment, or retrofit sites,
- Documentation of issuance of requirements to the developer

As the City's database of new development and re-development effectiveness builds, the City will evaluate the effectiveness of certain BMPs and re-evaluate what BMPs will be allowed for consideration in new development or re-development projects.

5.0- Regional Studies

Regional Studies are required to further characterize the impact on beneficial uses of receiving waters from discharges originating at the MS4 outlets. These studies will include the Southern California Storm water Monitoring Coalition (SMC) Regional Watershed Monitoring Program and special studies as specified in approved TMDLs. The City is not named as a member of the SMC, but the County of Los Angeles is. The City of Walnut will meet the Permit requirement of participating in the SMC via the County of Los Angeles's participation.

6.0- Special Studies

Per the MS4 Permit each permittee shall be responsible for conducting special studies required in an effective TDML or an approved TMDL Monitoring Plan. The City of Walnut is subject to one TMDL which is the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL. No special studies were classified as required in the final TMDL. A number of potential special studies are identified in the TMDL, but at this time no special studies have been considered for further development by the City of Walnut. In the event that monitoring data would suggest that a special study would benefit the City, further investigation of potential study(ies) will be reviewed pending available budget to do so.

7.0- Annual Reporting

On an annual basis, the City of Walnut will submit an annual report to the Regional Water Quality Control Board on or before December 15th. The report will document and present key NPDES information that was gathered for previous fiscal year (June 1 to July 30). The report shall include information that will allow the Regional Board to assess the results of the pervious years NPDES program. The report topics discussed shall include:

- Participation in one or more Watershed Management Plan
- The Impact of storm water and non-storm water discharges on the receiving water
- Compliance with receiving water limitations, numeric water quality based effluent limitations and non-storm water action levels
- Effectiveness of control measures in reducing discharges of pollutants from the MS4 to receiving waters
- Whether the quality of MS4 discharges and the health of receiving waters is improving, staying the same, or declining as a result of watershed management program efforts, an/or TMDL implementation measures or other minimum control measures
- Whether changes in water quality can be attributed to pollutant controls imposed on new development, re-development or retrofit projects.

Other key information will be presented will provide the Regional Board a clear and representative view of how the Watershed Management Plan and Integrated Monitoring Plan are being implemented. Section XVI through XVIII of Attachment E to the MS4 Permit discusses in detail the required annual reporting requirements.

8.0- Adaptive Management Process

The City of Walnut will utilize the MS4 Permit required adaptive management process to review and potentially modify the IMP in an effort to improve the effectiveness of the plan. The adaptive management process will take place every two years from the date of approval by the Regional Water Quality Control Board. The review process of the plan will include consideration of the following items:

- Progress toward achieving interim and/or final water quality-based effluent limitations and/or receiving water limitations in Part VI.E and Attachment L through R, according to established compliance schedules.
- Progress toward achieving improved water quality in MS4 discharges and achieving receiving water limitations through implementation of the watershed control measures based on an evaluation of outfall-based monitoring data and receiving water monitoring data.
- Achievement of interim milestones.
- Re-evaluation of water quality priorities identified for the WMA based on more recent water quality data for discharges from the MS4 and the receiving water(s) and a reassessment of sources of pollutants in MS4 discharges.
- Availability of new information and data from sources other than the monitoring program with in the WMA that informs the effectiveness of the actions implemented by the IMP.
- Regional Water Board recommendations.
- Recommendations for modifications to the Watershed Management Program solicited through a public participation process.

The findings of the adaptive management review process can result in modifications to the IMP including changes to compliance deadlines, interim milestones necessary to improve the effectiveness of the program. Modifications to compliance deadlines established by TMDLs will not be allowed through the adaptive management process. Proposed modifications to the IMP shall be reported by the City of Walnut in the Annual Report. Proposed modifications identified through the adaptive management process shall be implemented upon approval by the Regional Board Executive Officer within 60 days of their submittal if the Regional Board Executive has not expressed any objections to the modifications.

9.0- References

Los Angeles Regional Water Quality Control Board (Regional Board), 2012. Order No. R4-2012-0175 NPDES Permit No. CAS004001 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, except those Discharges Originating from the City of Long Beach MS4. November 8. http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/la_ms4/2012/Order%20R4-2012-0175%20-%20A%20Final%20Order%20revised.pdf

Los Angeles Regional Water Quality Control Board (Regional Board), 1994. "Water Quality Control Plan Los Angeles Region." June. http://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/electronics_documents/bp1_introduction.pdf

Los Angeles Regional Water Quality Control Board (Regional Board), 2007. "Total Maximum Daily Loads for Metals and Selenium San Gabriel River and Impaired Tributaries." March. http://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/Established/San%20Gabriel%20River%20Metals%20TMDL/final_sangabriel_metalstmdl_3-27-07.pdf

Los Angeles County Department of Public Works, 2014. "San Gabriel River Watershed." June. http://ladpw. org/wmd/watershed/sg/

Attachment A

MS4 Permit Table E-2

CONSTITUENTS	MLs
CONVENTIONAL POLLUTANTS	**mg/L**
Oil and Grease	5
Total Phenols	0.1
Cyanide	0.005
pH	0 – 14
Temperature	N/A
Dissolved Oxygen	Sensitivity to 5 mg/L
BACTERIA (single sample limits)	MPN/100ml
Total conform (marine waters)	10,000
Enterococcus (marine waters)	104
Fecal coliform (marine & fresh waters)	400
E. coli (fresh waters)	235
GENERAL	**mg/L**
Dissolved Phosphorus	0.05
Total Phosphorus	0.05
Turbidity	0.1 NTU
Total Suspended Solids	2
Total Dissolved Solids	2
Volatile Suspended Solids	2
Total Organic Carbon	1
Total Petroleum Hydrocarbon	5
Biochemical Oxygen Demand	2
Chemical Oxygen Demand	20-900
Total Ammonia Nitrogen	0.1
Total Kjeldahl Nitrogen	0.1
Nitrate-Nitrite	0.1
Alkalinity	2
Specific Conductance	1umho/cm
Total Hardness	2
MBAS	0.5
Chloride	2
Fluoride	0.1
Methyl tertiary butyl ether (MTBE)	1
Perchlorate	4 µg/L
METALS (Dissolved & Total)	**µg/L**
Aluminum	100
Antimony	0.5
Arsenic	1
Beryllium	0.5
Cadmium	0.25
Chromium (total)	0.5
Chromium (Hexavalent)	5
Copper	0.5
Iron	100
Lead	0.5
Mercury	0.5
Nickel	1
Selenium	1
Silver	0.25
Thallium	1
Zinc	1

SEMIVOLATILE ORGANIC COMPOUNDS	
ACIDS	**µg/L**
2-Chlorophenol	2
4-Chloro-3-methylphenol	1
2,4-Dichlorophenol	1
2,4-Dimethylphenol	2
2,4-Dinitrophenol	5
2-Nitrophenol	10
ACIDS	**µg/L**
4-Nitrophenol	5
Pentachlorophenol	2
Phenol	1
2,4,6-Trichlorophenol	10
BASE/NEUTRAL	**µg/L**
Acenaphthene	1
Acenaphthylene	2
Anthracene	2
Benzidine	5
1,2 Benzathracene	5
Benzo(a)pyrene	2
Benzo(g,h,i)perylene	5
3,4 Benzoflouranthene	10
Benzo(k)flouranthene	2
Bis(2-Chloroethoxy) methane	5
Bis(2-Chloroispropyl) ether	2
Bis(2-Chloroethyl) ether	1
Bis(2-Ethylhexl) phthalate	5
4-Bromophenyl phenyl ether	5
Butyl benzyl phthalate	10
2-Chloroethyl vinyl ether	1
2-Chloronaphthalene	10
4-Chlorophenyl phenyl ether	5
Chrysene	5
Dibenzo(a,h)atnthracene	0.1
1,3-Dichlorobenzene	1
1,4-Dichlorobenzene	1
1,2-Dichlorobenzene	1
3,3-Dichlorobenzidine	5
Diethyl phthalate	2
Dimethyl phthalate	2
di-n-Butyl Phthalate	10
2,4-Dinotrotoluene	5
2,6-Dinotrotoluene	5
4,6 Dinitro-2-methylphenol	5
1,2 Diphenylhydrazine	1
di-n-Octyl phthalate	10
Fluoranthene	0.05
Fluorene	0.1
Hexachlorobenzene	1
Hexachlorobutadiene	1
Hexachloro-cyclopentadiene	5
Hexachloroethane	1

Indeno(1,2,3-cd)pyrene	0.05
Isophorone	1
Naphthalene	0.2
Nitrobenzene	1
N-Nitroso-dimethyl amine	5
N-Nitroso-diphenyl amine	1
N-Nitroso-di-n-propyl amine	5
Phenanthrene	0.05
BASE/NUETRAL	**µg/L**
Pyrene	0.05
1,2,4-Trichlorobenzene	1
CHLORINATED PESTICIDES	**µg/L**
Aldrin	0.005
alpha-BHC	0.01
beta-BHC	0.005
delta-BHC	0.005
gamma-BHC (lindane)	0.02
alpha-chlordane	0.1
gamma-chlordane	0.1
4,4'-DDD	0.05
4,4'-DDA	0.05
4,4'-DDT	0.01
Dieldrin	0.01
alpha-Endosulfan	0.02
beta-Endosulfan	0.01
Endosulfan sulfate	0.05
Endrin	0.01
Endrin aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Toxaphene	0.05
POLYCHLORINATED BIPHENYLS	**µg/L**
Aroclor-1016	0.5
Aroclor-1221	0.5
Aroclor-1232	0.5
Aroclor-1242	0.5
Aroclor-1248	0.5
Aroclor-1454	0.5
Aroclor-1260	0.5
ORGANOPHOSPHATE PESTICIDES	**µg/L**
Altrazine	2
Chlorpyrifos	0.05
Cyanazine	2
Diazinon	0.01
Malathion	1
Prometryn	2
Simazine	2
HERBICIDES	**µg/L**
2,4-D	10
Glyphosate	5
2,4,5-TP-SILVEX	0.5

Attachment B

Aquatic Toxicity Monitoring Methods

Aquatic Toxicity Monitoring Methods

The following requirements related to monitoring methods for aquatic toxicity are from section XII of Attachment E of the MS4 Permit.

A. Aquatic Toxicity Monitoring as required in Parts VI (Receiving water Monitoring), VIII (Storm Water Outfall Based Monitoring), and IX (Non-storm Water Outfall Based Monitoring) of this MRP, shall be conducted according to the procedures described in this Part. When the State Water Board's *Policy for Toxicity Assessment and Control* is fully approved and in effect, the Regional Water Board Executive Officer may direct the Permittiee(s) to replace current toxicity program elements with standardized procedures in the policy.

B. The Permittee(s) shall collect and analyze samples taken from receiving water monitoring locations to evaluate the extent and causes of toxicity in receiving waters.

C. Toxicity samples may be flow-weighted composite samples, or grab samples, for wet and dry event sampling.

D. The total sample volume shall be determined both by the specific toxicity test method used and the additional volume necessary for TIE studies. Sufficient sample volume shall be collected to perform both the required toxicity tests and TIE studies.

E. Holding Times. Al toxicity tests shall be conducted as soon as possible following sample collection. The 36-hour sample holding time for the test initiation shall be targeted. However, no more than72 hours shall elapse before the conclusion of sample collection and test initiation.

F. Definition of Chronic Toxicity. Chronic toxicity measures a subleathal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or receiving waters compared to that of the control organisms.

G. Chronic Toxicity Monitoring Programs

1. Freshwater Test Species and Methods**.**

   If samples are collected in receiving waters with salinity <1 ppt, or from outfalls discharging to receiving waters with salinity <1 ppt, then the Permittee(s) shall conduct the following critical life stage chronic toxicity tests on undiluted samples in accordance with species and short-term test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136). In no case shall the following test species be substituted with another organism unless written authorization from the Regional Water Board Executive Officer is received.

   i. A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0[4]).

   ii. A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test method 1002.0[5]).

   iii. A static renewal toxicity test with the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).

2. Marine and Estuarine Test Species and Methods.

If samples are collected in receiving waters with salinity ≥1 ppt, or from outfalls discharging to receiving waters with salinity ≥1 ppt, then the Permittee(s) shall conduct the following critical life stage chronic toxicity tests on undiluted samples in accordance with species and short-term test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995). Artificial sea salts shall be used to increase sample salinity. In no case shall the following test species be substituted with another organism unless written authorization from the Regional Water Board Executive Officer is received.

a. A static renewal toxicity test with the topsmelt, *Antherinops affinis* (Larval Survival and growth Test Method 1006.01[5]);
b. A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus* (Fertilization Test Method 1008.0; and
c. A static non-renewal toxicity test with the giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0).

3. Test Species Sensitivity Screening.
   To determine the most sensitive test species, the Permittee(s) shall conduct two wet weather and two dry weather toxicity tests with a vertebrate , an invertebrate, and a plant. After this screening period, subsequent monitoring shall be conducted using the most sensitive test species is sensitive to such toxicant(s) and a test species is sensitive to such toxican(s), then monitoring shall be conducted using only that test species. Sensitive test species determinations shall also consider the most sensitive test species used for proximal receiving water monitoring. After the screening period, subsequent monitoring shall be conducted using the most sensitive test species. Rescreening shall occur in the fourth year of the permit term.
4. Chronic toxicity test biological endpoint data shall be analyzed using the Test of Significant Toxicity t-test approach specified in the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (U.S. Environmental protection Agency, Office of Wastewater Management, Washington D.C. EPA 833-R-10-003). For this monitoring program, the critical chronic in stream waste concentration (IWC) is set at 100% receiving water for receiving water samples and 100% effluent for wet- and dry-weather outfall samples. A 100% receiving water/outfall effluent sample and a control shall be tested.

H. Quality Assurance
1. If the receiving water or outfall effluent test does not meet all test acceptability criteria (TAC) specified in the test methods manuals (*Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms* (EPA/821/R-02/013, 2002) and *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995)), then the Permittee(s) must re-sample and re-test at the earliest time possible.
2. Control water, including brine controls, shall be laboratory water prepared and used as specified in the test methods manuals.

3. If organisms are not cultured in-house, then concurrent testing with a reference toxicant shall be conducted. If organisms are cultured in-house, then monthly reference toxicant testing is sufficient. Reference toxicant tests and effluent toxicity tests shall be conducted using the same tests conditions (e.g., same test duration, etc.).

I. Toxicity Identification Evaluation (TIE).

1. A toxicity test sample is immediately subject to TIE procedures to identify the toxic chemical(s), if either the survival or sublethal endpoint demonstrates a Percent Effect value equal to or greater than 50% at the IWC. Percent Effect is defined as the effect value-denoted as the difference between the mean control response and the mean IWC response, divided by the mean control response-multiplied by 100.
2. A TIE shall be performed to identify the causes of toxicity using the same species and test method and, as guidance, U.S. EPA manuals: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, 1992); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).
3. The TIE should be conducted on the test species demonstrating the most sensitive toxicity response at a sampling station. A TIE may be conducted on a different test species demonstrating a toxicity response with the caveat that once the toxicant(s) are identified, the most sensitive test species triggering the TIE shall be further tested to verify that the toxicant has been identified and addressed.
4. A TIE Prioritization Metric (see Appendix 5 in SMC Model Monitoring Program) may be utilized to rank sites for TIEs.

J. Toxicity Reduction Evaluation (TRE)

1. When a toxicant or class of toxicants is identified through a TIE conducted at a receiving water monitoring station, Permittees shall analyze for the toxicant(s)during the next scheduled sampling event in the discharge from the outfall(s) upstream of the receiving water location.
2. If the toxicant is present in the discharge from the outfall at levels above the applicable receiving water limitation, a TRE shall be performed for that toxicant.
3. The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs are identified, the Permittee(s) shall submit a TRE Corrective Action Plan to the Regional Water Board Executive Officer for approval. At minimum, the plan shall include a discussion of the following:
    a. The potential sources of pollutant(s) causing toxicity.
    b. A list of municipalities and agencies that may have jurisdiction over sources of pollutant(s) causing toxicity.
    c. Recommended BMPs to reduce the pollutants(s) causing toxicity.
    d. Proposed post-construction control measures to reduce the pollutant(s) causing toxicity.

e. Follow-up monitoring to demonstrate that the toxicants have been reduced or eliminated.

K. Chronic Toxicity Reporting

1. Aquatic toxicity monitoring results submitted to the Regional Water Board shall be consistent with the requirements identified in Part XIV.L and M and Part XVIII.A.5 and A.7 of the MRP.
2. The Annual Report in Part XVIII of the MRP shall include:
    a. A full laboratory report for each chronic toxicity test prepared according to the appropriate test methods manual chapter on Report Preparation including.
        i. The chronic toxicity test results for the t-test, reported as “Pass” of “Fail”, and the “Percent Effect”.
        ii. The dates of sample collection and initiation of each toxicity test.
        iii. Test Species with biological endpoint values for each concentration tested.
        iv. Reference toxicant test results.
        v. Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).
        vi. TRE/TIE testing results.
        vii. A printout of CETIS (Comprehensive Environmental Toxicity Information System) program results.
    b. All results for receiving water or outfall effluent parameters monitored concurrently with the toxicity test.
    c. TIEs (Phases I, II, and III) that have been completed or are being conducted, by monitoring station.
    d. The development, implementation, and results for each TRE Corrective Action Plan, beginning the year following the identification of each pollutant or pollutant or pollutant class causing chronic toxicity.

Attachment C

Stream Bio-assessment Procedure

CALIFORNIA STREAM BIOASSESSMENT PROCEDURE

(Protocol Brief for Biological and Physical/Habitat Assessment in Wadeable Streams)

The California Stream Bioassessment Procedure (CSBP) is a standardized protocol for assessing biological and physical/habitat conditions of wadeable streams in California. The CSBP is a regional adaptation of the national Rapid Bioassessment Protocols outlined by the U.S. Environmental Protection Agency in "Rapid Bioassessment Protocols for use in Streams and Rivers" (**EPA/841-B-99-002**). The CSBP is a cost-effective tool that utilizes measures of the stream's benthic macroinvertebrate (BMI) community and its physical/habitat characteristics to determine the stream's biological and physical integrity. The purpose of this Protocol Brief is to introduce the techniques of bioassessment to aquatic resource professionals and help standardize data for statewide bioassessment efforts. The Protocol Brief is only a summary and does not contain all the necessary information that may be required to understand the concepts of bioassessment and to implement a successful monitoring program. Additional information and updates on bioassessment can be obtained by visiting the **DFG Aquatic Bioassessment Laboratory website at** www.dfg.ca.gov/cabw/cabwhome.html.

History of the CSBP

The CSBP was originally developed in 1993 to measure biological response from point-source discharges of chemical contaminants, inorganic sediment and elements of organic enrichment. The method was based on sampling the single richest habitat in a stream reach; this was the most common technique at the time (Rosenberg and Resh 1993, Loeb and Spacie 1994, Lenat and Barbour 1994) and consistent with the U.S. EPA's Rapid Bioassessment Protocols (RBP) (Plafkin et al. 1989). In 1995, the CSBP was adapted for use in ambient and non-point source pollution monitoring programs and this version was reviewed by a Technical Advisory Committee assembled by DFG and the U.S. EPA. The 1996 edition of the CSBP was widely distributed in California and accepted as the state's standardized RBP protocol (Davis et al. 1996 U.S. EPA 2002). A 1999 revision added quality assurance and control (QA/QC) techniques to ensure high quality field collections, laboratory analysis and taxonomic consistency.

As of 2003, the CSBP is the most often used RBP protocol in California (Barbour and Hill, 2003). This unique protocol allows the user to produce biological and physical/habitat data that can be used to measure differences between sites, compare to a regional Index of Biological Integrity (IBI) (Ode *et al.* 2003) and help diagnose response to individual stressors. In addition to the high gradient riffle based procedure, the 2003 edition of the CSBP describes techniques for use in unique channels and a technique for low gradient channels that blends elements of the CSBP with those of a multi-habitat technique recommended by the U.S. EPA (Barbour et al. 1999).

The CSBP 2003 has four notable changes to the existing protocol; 1) the stream reach for the assessment is no longer defined by a set of five pool-riffle sequences, but rather by a discreet length of 100 m (300 ft); 2) the area of benthos sampled has been reduced from 1.6 m^2 (18 ft^2) to 0.8 m^2 (9 ft^2); 3) although 3 independent samples will be collected at each reach, there is now an option to composite the 3 samples in the laboratory and reduce the total number of BMIs identified at each reach from 900 to 500; and 4) there is a new QA/QC procedure to collect a set of duplicate samples

at 10% of the reaches for projects with more than 20 sites. These changes were based on experiences gained from several years of field testing, changes in the national RBP (Barbour et al. 1999), recommendations from Barbour and Hill (2003) and methods comparison studies conducted by DFG. **Data collected with these modifications can easily be made compatible with previous CSBP data and these changes make the CSBP more consistent with other BMI protocols used in the western US.**

OVERVIEW OF THE CSBP

The CSBP can be used to measure biological and physical/habitat condition in all freshwater lotic environments (streams and rivers) shallow enough to allow safe wading (≤1.5 m). The CSBP samples benthic macroinvertebrates with a 0.5mm mesh net from the richest habitat along 3 randomly selected transects within a 100 m (300 ft) reach of stream or river. The 3 transects are placed within shallow-fast water habitat (usually riffle) for high gradient channels and throughout the entire reach for low gradient channels. At each transect, three 0.09 m^2 (1 ft^2) areas of stream benthos are sampled and composited into a single sample. In low gradient channels, the 3 collections along the transect are selected to represent the relative proportions of the different richest habitat categories present (submerged vegetation, hard substrate of natural rock or concrete, soft substrate of sand or mud, stream bank vegetation and woody debris). Physical/habitat is measured using a qualitative U.S. EPA procedure throughout the entire reach and additional quantitative measures within the vicinity of the BMI samples. Taxonomic identification of the BMI samples is performed on a fixed count of 300 organisms from the 3 samples (total of 900 for the entire reach) or 500 from the composite of the 3 samples. There are two standard levels of taxonomic identification: one standardized for the state by the California Bioassessment Laboratory Network (CAMLnet; www.dfg.ca.gov/cabw/camlnetste.pdf) and a more precise level based on the U.S. EPA's Environmental Monitoring and Assessment Program (EMAP).

CALIFORNIA DEPARTMENT OF FISH AND GAME SCIENTIFIC COLLECTING PERMIT

Anyone who collects fish, amphibians, or invertebrates from the waters of the state must have a DFG Scientific Collecting Permit in their possession. The permit can be obtained from the DFG License and Revenue Branch in Sacramento (916-227-2225). Those conducting bioassessment in California should specify on the permit application that they will take freshwater invertebrates (authorization 5), incidental fish (authorization 6) and amphibians (authorization 8). It is also advisable to contact the local Game Warden and District Fisheries Biologist at the closest Regional Office prior to collecting.

FIELD PROCEDURES FOR COLLECTING BMI SAMPLES

The CSBP can be used to sample BMIs from all streams and rivers where the access and depth (≤1.5 m) do not require the use of a boat. The step-by-step procedures described in this document have been divided into three sections: high gradient channels, low gradient channels and considerations for unusual channel conditions. **Contact DFG or visit the DFG Aquatic Bioassessment Laboratory website for more information on Rapid Bioassessment procedures for boatable streams and rivers and lentic or still water environments.**

CSBP for High Gradient Channels

High gradient channels usually have greater than a 1% slope and will always contain pool-riffle sequences with a ratio high enough to contain at least 3 riffles per 100 m (300 ft) reach. Riffle substrate could be rock, sand or mud, but must be at least 1 m (3 ft) wide with flow velocities greater than 0.3 m/sec (1 ft/sec).

Biological and Physical/Habitat Equipment List

Measuring tape (300 ft or 100 m)
D-shaped kick net (0.5 mm mesh)
Standard size 35 sieve (0.5 mm)
Wide-mouth 500 ml plastic jars
White enameled pan and forceps
95% ethanol
California Bioassessment Worksheet (CBW)
Physical/Habitat Quality Form
Chain of Custody Form (COC)
Random Number Table
pH, temp, DO and conductivity meter
Stadia rod and hand level or clinometer
Densiometer

Step 1. Measure a 100 m (300 ft) reach of channel and count the number of riffles greater than 1 m (3 ft) wide and 1 m (3 ft) long. Randomly choose 3 of the riffles within the stream reach.

Step 2. Starting with the downstream riffle, place the measuring tape along the bank of the entire riffle while being careful not to walk in the stream. Select one transect from all possible 1/3 m (1 ft) marks using a random number table. For riffles longer than 10 m (30 ft), randomly place the transect within the top third of the riffle.

Step 3. Inspect the transect before collecting BMIs by imagining a line going from one bank to the other, perpendicular to the flow. Choose 3 locations along that line where you will place your net to collect BMIs. If the substrate is fairly similar and there is no structure along the transect, the 3 locations will be on the side margins and the center of the stream. If the substrate is structurally complex along the transect, then place the 3 collections to reflect it.

Step 4. Collect BMIs at the 3 locations along the transect by placing the D-shaped net on the substrate and disturbing an area as wide as the net and 1 ft upstream. Excavate the 0.09 m^2 (1ft^2) area to an approximate depth of 10-15 cm (4-6 in) by kicking or by using a tool to loosen the substrate. Pick-up and scrub large rocks by hand under water in front of the net. If the substrate is sand or mud, a hand rake can be used to prevent substrate from filling the net. Maintain a consistent sampling effort (approximately 1-3 minutes) at each area. Combine the 3 collections within the net to make one "composite" sample.

Step 5. Place the contents of the net in a standard size 35 sieve (0.5 mm mesh) or white enameled tray. Remove the larger twigs, leaves and rocks by hand after carefully inspecting for clinging organisms. If the pan is used, place the material through the sieve to remove excess water before placing the material in the jar. Place the sampled material in a jar and completely fill with 95% ethanol. Never fill a jar more than 2/3 full with course sampled material or 1/2 full with sand or mud. **Gently** agitate jars that contain primarily mud or sand to help mix the alcohol, taking care to not damage any organisms present.

Step 6. Place a label containing descriptive information about the sites (see box) in each jar. An additional label can be taped to the outside of the jar to help with the sample log-in process at the laboratory. A Chain of Custody (COC) should accompany the samples during transportation to the laboratory.

Bioassessment Sample Label
Project Name:
Site Name/Code:
County:
Riffle/Reach Number:
Transect Number:
Date/Time:
Sampled by:

Step 7. Proceeding upstream, Repeat Steps 2 through 5 for the next two riffles within the stream reach.

Step 8. **QA/QC Repeat Sampling Procedure. For projects with 20 or more sites, duplicate samples must be collected at 10% of the reaches.** For reaches containing more than six riffles, randomly choose 3 riffles for the primary set of samples and randomly choose 3 more riffles for the duplicate set of samples. For reaches that contain 6 or less riffles, measure the entire length of all riffle habitat and randomly select 3 transects from the total length for the primary samples and randomly select 3 for the duplicate samples. For both methods, start at the downstream riffle or transect, proceeding upstream collecting the 6 samples designating them as primary or duplicate.

CSBP for Low Gradient Channels

Low gradient channels usually have less than a 1% grade and will never have more than two riffles. These channels can be as deep as 1.5 m, but with low enough water velocity to allow safe wading. **Channels greater than 1.5 m deep, with swift water velocities and/or which can not be accessed on at least one bank will require a boat.**

Step 1. Measure a 100 m (300 ft) section of channel trying to avoid large human-made structures such as bridges or dams. The stream reach can be less than 100 m (300 ft) if access or obstacles are a problem, especially if the channel is morphologically homogeneous.

Step 2. Without entering the water, survey the entire reach for approximate percentages of 5 generalized habitat categories: a. submerged vegetation, b. hard substrate of natural rock or concrete, c. soft substrate of sand or mud, d. stream bank vegetation and e. woody debris. Record the proportions and make note if it was difficult to determine depth and habitat type (e.g. water was highly turbid).

Step 3. Determine how many 2 m (6 ft) intervals can be established along the entire length of the reach. Randomly select 3 of the intervals and using a range finder or measuring tape, locate the three points on the bank of the reach.

Step 4. Starting with the downstream point, establish a transect across the channel perpendicular to the flow. Sample BMIs at 3 locations along that transect, choosing areas representing the generalized habitats identified in Step 2. Collect BMIs by placing the D-shaped kick-net on the substrate or vegetation and disturb a 0.09 m^2 (1 ft^2) portion of habitat upstream of the kick-net. Maintain a consistent sampling effort (approximately 1-3 minutes) at each site. Combine the 3 collections within the kick-net to make one "composite" sample. Note the 3 generalized habitats that were sampled along the transect on the field form.

Step 5. Place the contents of the kick-net in a standard size 35 sieve (0.5 mm mesh) or white enameled tray. Remove the larger twigs, leaves and rocks by hand after carefully inspecting for clinging organisms. If the pan is used, place the material through the sieve to remove excess water before placing the material in the jar. Place the sampled material and label (see box) in a jar and completely fill with 95% ethanol. Never fill a jar more than 2/3 full with course sampled material or 1/2 full with sand or mud. **Gently** agitate jars that contain primarily mud or sand to help mix the alcohol, taking care to not damage any organisms present.

Step 6. Place a label containing descriptive information about the sites (see page 4 box) in each jar. An additional label can be taped to the outside of the jar to help with the sample log-in process at the laboratory. A Chain of Custody (COC) should accompany the samples during transportation to the laboratory.

Step 7. Proceeding upstream, Repeat Steps 4 and 5 for the next two transects within the reach. Try to choose generalized habitats for the 9 collections (3 areas along 3 transects) in proportion to what was determined in Step 2.

Step 8. **QA/QC Repeat Sampling Procedure. For projects with 20 or more sites, duplicate samples must be collected at 10% of the reaches.** After determining how many 2 m (6 ft) intervals can be established along the entire length of the reach, randomly select 3 of the intervals for collecting the primary samples and randomly select 3 more intervals for the duplicate samples. Starting with the downstream transect, proceed upstream collecting the 6 samples and designating them as primary or duplicate.

PROTOCOL CONSIDERATIONS FOR UNUSUAL CHANNEL CONDITIONS

CSBP for Intermittent or Ephemeral Channels: Intermittent or ephemeral channels will have flowing water during the rainy season and be dry during mid to late summer. These channels can be sampled using the CSBP for high or low gradient streams, but must be sampled in a spring (March through May) index period or at the end of the wet period.

CSBP for No Flow Conditions in High and Low Gradient Channels: Although this is very problematic for sampling BMIs, sometimes sampling areas in high gradient streams have pocket water with little or no flow. In this case, put the net at the downstream portion of the sampling area, disturb the substrate and push the water into the net with vigorous hand motions. Strained water from the surface of a nearby pool with a bucket can be used to move organisms into the net by pouring the water into the pocket area in front of the net. In low gradient channels, low flow or no flow conditions can be quite common. In this case, put the net downstream of the sampling area, get in front of the net and agitate the substrate with a twisting foot motion for 30 seconds. At 5-10 second intervals throughout the agitation, step aside and swiftly move the net in a "figure eight" motion through the cloud of suspended substrate.

CSBP for Bifurcated or Braided Channels: Low gradient channels can have two or more channels flowing through a typically wide riparian corridor. There is no need to extend the transect through islands or sand bars separating these bifurcated or braided high gradient channels. Use the

standard procedure for sampling the dominant channel or randomly selected one channel if there are more than 2 similar channels >1 m (>3 ft) wide.

CSBP for Channels <1 M (3 ft) Wide (the "Spot-Sampling" modification): High gradient channels <1 m (<3 ft) wide can not be sampled using the 1/3 m (1 ft) wide D-frame net at three places along the transect. In this case, divide the channel into an upper, middle and lower section, relative to the flow. Each section should be approximately 30 m long, but could be divided by natural breaks in the morphology of the channel. Survey each section, without stepping into the channel for all 0.09 m^2 (1 ft^2) areas where the substrate and flow resemble a riffle. Randomly select 3 of these "sampleable areas" in the lower section and composite them into one sample. Proceed upstream and repeat for each section.

CSBP for Large Boulder Channels: High gradient channels that are dominated by boulder substrates too large to move, but with enough gravel substrate in patches between the boulder can be sampled similarly to the previous modification. After dividing the channel into three sections, count the patches of substrate small enough to sample and randomly select three patches. Composite the three samples and proceed upstream to sample the next two sections.

CSBP for Channels Immediately Below Water Impoundments: High gradient channels immediately below a water impoundment structure that prevents gravels and fines from moving downstream will often not contain shallow-fast water habitats with gravel or cobble substrates. These channels can be sampled either using the modification for large boulder channels or by using the low gradient procedure where 3 transects are chosen randomly from the entire reach.

CSBP for Cement Channels: Cement channels in urban areas will typically have uniform shape and depth with no natural habitat. These channels should be sampled using the low gradient protocol of 3 randomly selected transects along 100 m (300 ft) of channel. The 3 collections can be simply taken from the left margin, center and right margin of the channel. Try to avoid human made habitats such as shopping carts and other transient debris.

CSBP for Channels with Gradient Controls: Some low gradient urban streams will have low level dams to control the gradient. The channel will be transformed into small impoundments separated by extremely high gradient sections of large boulders to dissipate the energy. Do not sample the high gradient sections. Sample the impounded areas using the low gradient protocol or if the impoundments are too deep to wade, sample along the littoral zone of one bank. Divide the bank into upper, middle and lower sections, randomly pick three points at 1 m (3 ft) intervals and at each point, take a 0.09 m^2 (1ft^2) sweep through the vegetation trying to disturb the sediment if present. Composite the 3 collections and repeat for each section.

CSBP for Channels with Three or Fewer Riffles: High gradient channels that are wider than 1 m (3 ft), but have 3 or fewer riffles within the 100 m (300 ft) reach will not allow for an independent sample from several riffles. In these cases, measure the entire length of all riffle habitat and select the 3 transects randomly from the total length.

CSBP for Channels with Continuous Riffle Habitat: Stream reaches (usually very high gradient) that have continuous riffle habitat should be sampled using the low gradient procedure where 3 transects are chosen randomly from the entire reach.

CSBP for Channels with Transitional Gradient: Large watersheds can have wide channels where the gradient transitions from high to low. Riffle pool sequences can be present, but further apart than in higher gradient channels. In these cases, expand the reach length to 40 times the average width to allow for an adequate number of riffles to sample. If riffle habitat is limited to one or two riffles in a greater than 100 m (300 ft) transitional gradient reach, then consider the riffle to be hard substrate and use the low gradient procedures.

FIELD PROCEDURES FOR MEASURING CHEMICAL AND PHYSICAL/HABITAT QUALITY

The EPA's physical/habitat scoring criteria is a nationally standardized method (Barbour et al. 1999). It is used to measure the physical integrity of a stream and can provide a stand alone evaluation or used in conjunction with a bioassessment sampling event. DFG recommends that this procedure be conducted on every 100 m (300 ft) reach as part of a bioassessment program. A detailed description of the scoring criteria is available through the DFG Aquatic Bioassessment Laboratory website. **This procedure is an effective measure of a stream's physical/habitat quality, but can produce inconsistent measures if QA/QC measures are not regularly implemented. This procedure requires field training prior to its use and field audits throughout the program.**

The following list of quantitative measures of chemical and physical/habitat characteristics are considered minimal and should be measured when rapid bioassessments are not part of an existing chemical or fisheries habitat program where a more extensive list of parameters are measured. The information produced from measuring chemical and physical/habitat characteristics can be used to classify stream reaches and to help explain data anomalies.

Reach-Wide Parameters:

- GPS coordinates at the top and bottom of the reach
- Water temperature, specific conductance, pH, alkalinity and dissolved oxygen at the center of the reach using approved standardized procedures and instruments
- Reach length, average width and gradient
- Visually estimated substrate composition using the following categories: fines (<0.25 cm) (<0.1in.), gravel (0.25-0.8 cm) (0.1-2 in.), cobble (0.8-25 cm) (2-10 in.), boulder (>25 cm) (>10 in.) and bedrock (solid)

Sample Site Specific Parameters:

- Average length, width and depth for each of the 3 randomly chosen riffles (for unmodified high gradient protocol only)
- Water velocity immediately upstream of the three composite samples along each of the 3 transects
- Percent cover upstream of the three composite samples along each of the 3 transects. Measure this parameter using a densiometer 1/3 m (1 ft) above the water surface and averaged for each transect
- Substrate consolidation at the three sample excavations along the 3 transects. Estimates are obtained while collecting the BMI sample by noting whether the substrate is loosely, moderately or tightly cemented
- Pebble count and percent embeddedness immediately upstream of the 3 transects where BMI samples were collected. Measure this parameter by establishing a transect approximately 1/3 m (1 ft) upstream of the sample transect, randomly choosing 10 points along the transect, reaching down to the point at the end of a wooden dowel or tip of the boot and measure the width of the particle. For every third particle (3 on each transect), estimate percent embeddedness by noting how much of the particle was surrounded by fine substrate.

LABORATORY PROCEDURES FOR ANALYZING BMI SAMPLES

DFG recommends that taxonomic identification of BMI samples collected using the CSBP is performed by a professional or permanent university laboratory with extensive experience with California taxa. **These bioassessment laboratories should participate in the California Bioassessment Laboratories Network (CAMLnet) to ensure that they are aware of the standardized level of taxonomy and QA/QC procedures recommended for bioassessments conducted in California.** To ensure a high quality product, all contracts to a bioassessment laboratory should require:

1. A Laboratory Standard Operation Procedure (SOP) document and Quality Assurance Protection Plan (QAPP)
2. A list of all taxonomists that will work on the samples including their education, years of experience and any specialized training they have received.
3. Internal QA/QC documentation for sub-sampling and taxonomic validation (can be specified to provide this information upon request);
4. Be able and willing to perform taxonomy consistent with the CAMLnet Taxonomic Effort Standards (www.dfg.ca.gov/cabw/camlnetste.pdf).

Project managers are encouraged to subject all laboratory data to an external review by an independent laboratory at the rate of 10% to 20% (depending on experience and nature of the project) of the project samples. The DFG Aquatic Bioassessment Laboratory performs this QC procedure and can be contacted about information on the procedure requirements and costs.

Taxonomic Level of BMI Identification

There are two levels of taxonomic identification for samples collected using the CSBP. It is the ultimate responsibly of the contractor or project manager to guarantee that the level of taxonomy reported is consistent with the CSBP standards.

CSBP Level 1 is used for most state-wide rapid bioassessment projects and it is imperative when comparing data to the Southern California IBI. In general, Level 1 taxonomic effort is to genera where possible for most taxonomic groups, order for oligochaetes and family for chironomids.

CSBP Level 2 is based on the taxonomic effort levels established by the U.S. EPA for the Western Pilot EMAP. In general, Level 2 taxonomic effort identifies insects to species level where possible and the Dipteran Family: Chironomidae to genus.

Compositing Samples or Data

There will always be 3 samples collected at each sampling reach when using the CSBP. Depending on the objectives of the project, the samples can be processed as individual samples and subsampled for 300 organisms/sample (900 organisms total per site) or **composited at the laboratory** and subsampled for 500 organisms.

Subsampling

The CSBP requires fixed count subsampling with a +/- 10% accuracy. The total count of BMIs must come from at least 3 randomly selected grids within a subsampling tray. The last grid must be fully counted to get an estimate of relative abundance. The debris from processed grids should be put in a clean "remnant" jar and the remaining contents of the tray should be placed back into the original sample jar. If a "large and rare" survey is preformed on the sample, it should be conducted after the subsampling procedure and counted separately.

Data Production, Storage and Analysis

DFG has developed a Microsoft Access® database based loosely on the U.S. EPA's Environmental Data Analysis System (EDAS). The structure of the CalEDAS database is available through the DFG Aquatic Bioassessment Laboratory website, but it does not currently come with end-user support. Whether using the DFG database or other software, the laboratory analysis should produce a BMI taxa list that is consistent with CAMLnet (see above) for all samples and a list of common or project specific biological metrics. Many common biological metrics are listed in the U.S. EPA's RBP document (Barbour et al 1999) and several other sources of bioassessment literature. When BMI samples are processed independently, there are two options for calculating metrics depending on the needs of the project:

1. Calculate metrics for all three samples independently and calculate metric averages at each site

2. The three samples can be composited in the analysis stage, and a 500 count subsample of the 900 organisms can be used to generate one set of **cumulative** metrics for each site.

QA/QC CONSIDERATIONS FOR USING THE CSBP

All private and public entities conducting bioassessment using the CSBP should have a Standard Operating Procedures document (SOP) and a Quality Assurance Protection Plan (QAPP). Large programs and laboratories can have a quality assurance officer and some smaller operations may only have a field or laboratory supervisor. In either case, those individuals responsible for assuring the quality of samples collected in the field and processed in the laboratory should be trained on all aspects of the CSBP. Two 3-day courses on bioassessment concepts and the use of the CSBP are available through the American Fisheries Society (CalNeva AFS) and the Society of Environmental Toxicology and Chemistry (NorCal and SoCal SETAC). Information on these courses can be found at www.slsii.org

The details of a QAPP should be tailored for particular bioassessment operations. Depending on the nature of the project, appropriate boiler plate for QAPPs may be available through Regional Water Quality Control Boards or the State Water Resources Control Board. These agencies should be contacted before developing a QAPP and initiating a bioassessment program.

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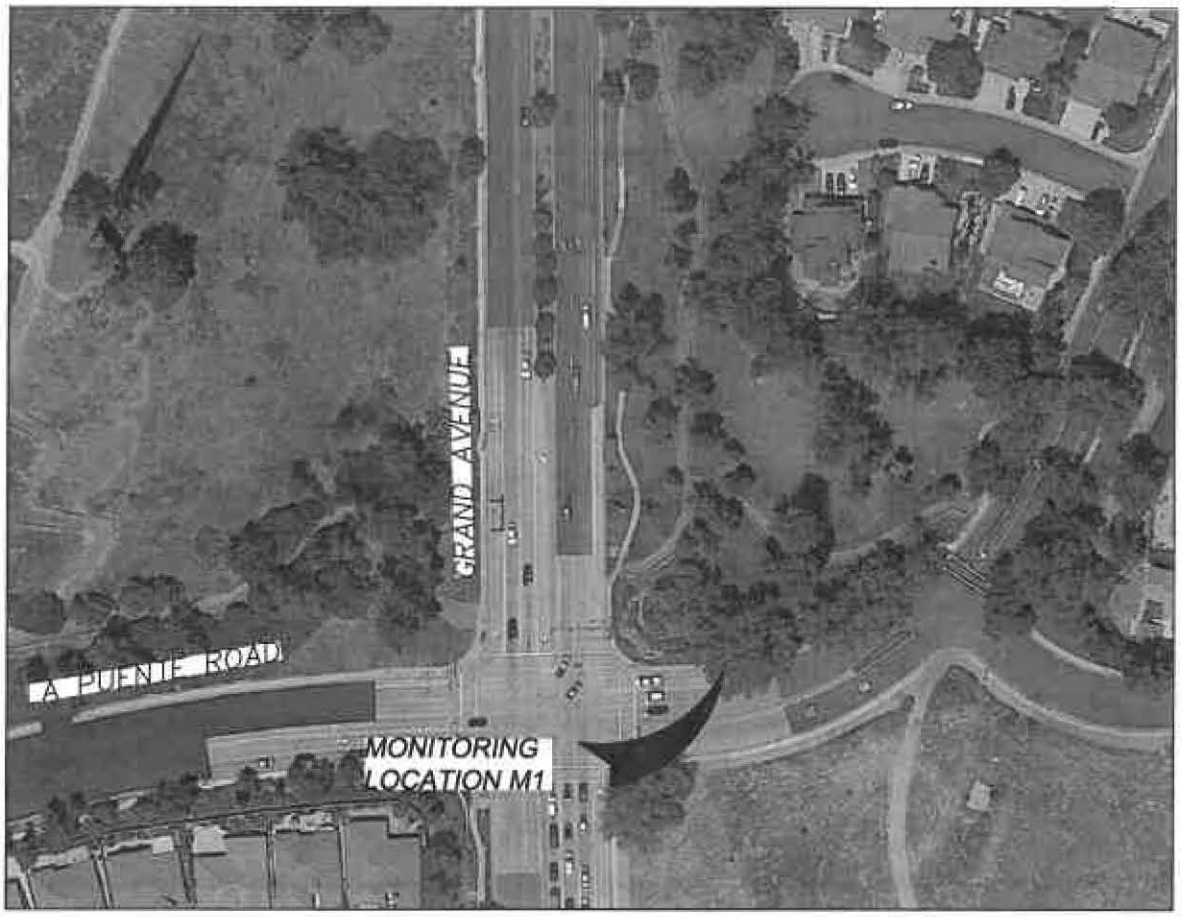
Attachment D

Wet Weather Monitoring Locations



MONITORING LOCATION M1 DRAINAGE AREA LAND USE			
LAND USE TYPE	M1 DRAINAGE ARA LAND USE	CITY OF WALNUT LAND USE	HUC–12 LAND USE
COMMERCIAL	4.5%	4.5%	6%
AGRICULTURE	6.5%	1.5%	2.5%
OPEN SPACE	26%	29%	35.7%
RESIDENTIAL/OTHER	63%	65%	55.8%

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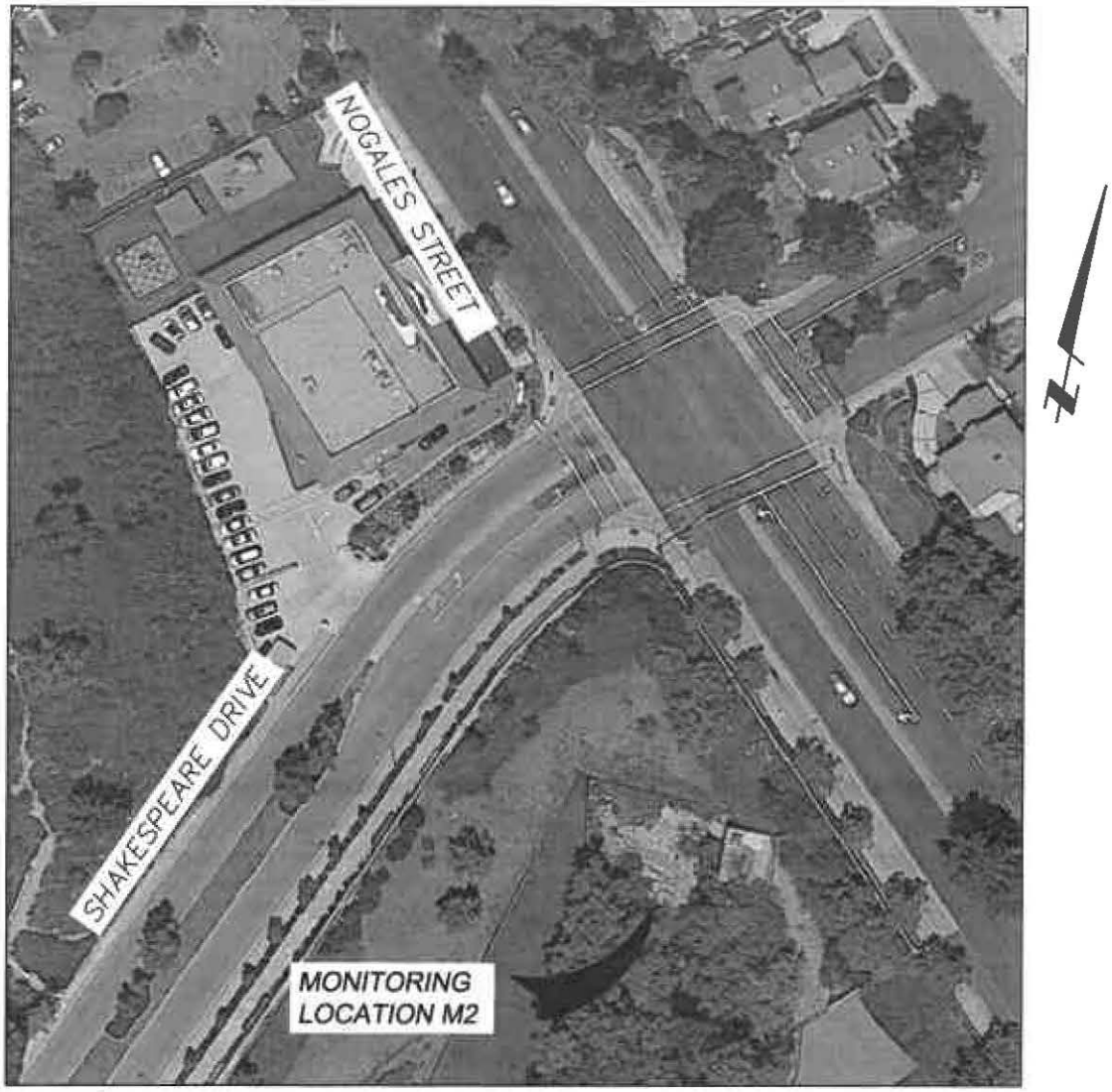
CITY OF WALNUT
WET WEATHER MONITORING
LOCATION M1

DATE:	SCALE:	DRAWN BY:	SHEET:
3–9–15	N.T.S.	C.A.H.	1 OF 1



MONITORING LOCATION M2 DRAINAGE AREA LAND USE			
LAND USE TYPE	M1 DRAINAGE ARA LAND USE	CITY OF WALNUT LAND USE	HUC-12 LAND USE
COMMERCIAL	9.5%	4.5%	4.9%
AGRICULTURE	0%	1.5%	0%
OPEN SPACE	22.5%	29%	27.6%
RESIDENTIAL/OTHER	68%	65%	67.5%

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CITY OF WALNUT
WET WEATHER MONITORING
LOCATION M2

DATE:	SCALE:	DRAWN BY:	SHEET:
3-9-2015	N.T.S.	C.A.H.	1 OF 1

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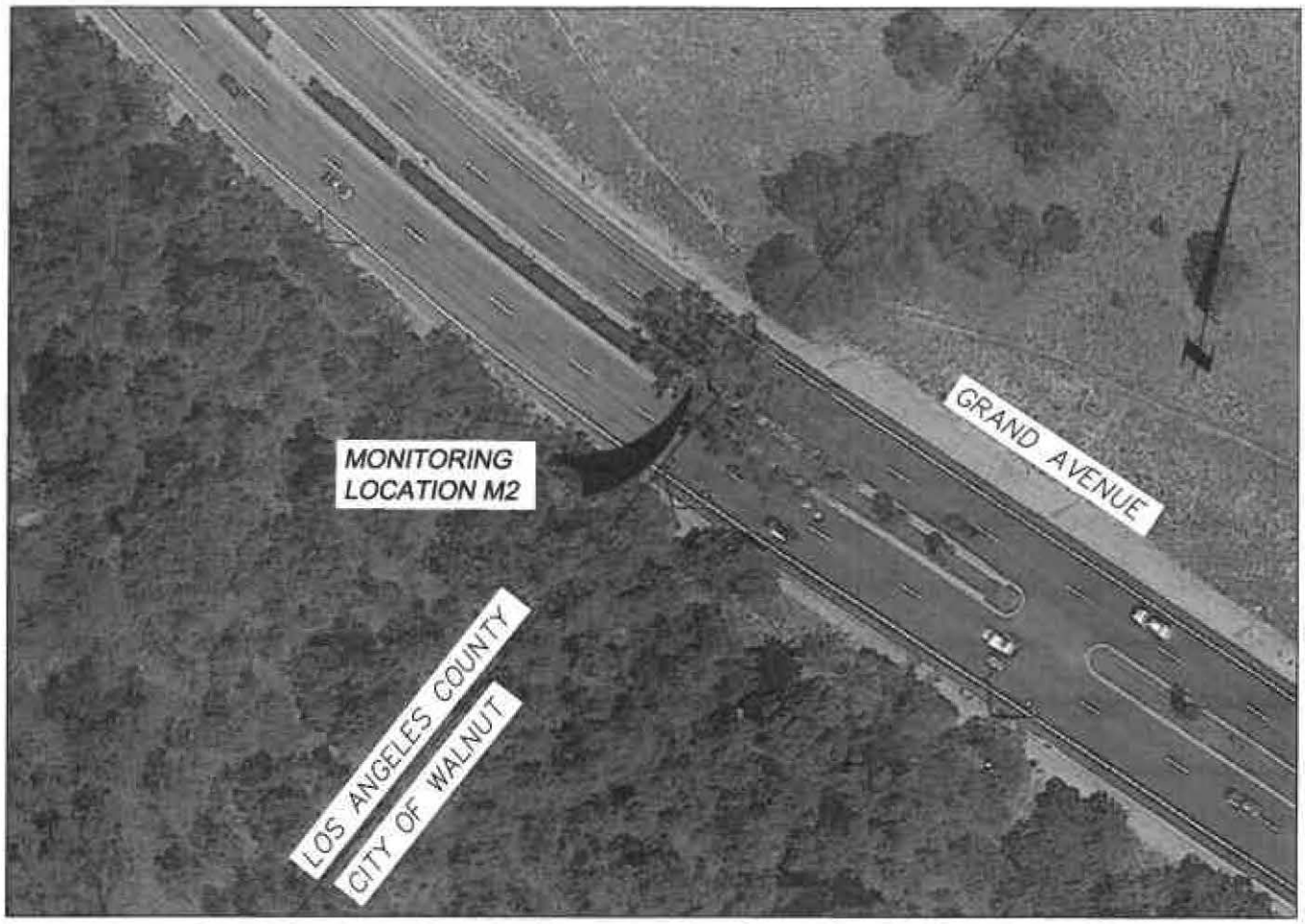

MONITORING LOCATION M3 DRAINAGE AREA LAND USE			
LAND USE TYPE	M1 DRAINAGE ARA LAND USE	CITY OF WALNUT LAND USE	HUC-12 LAND USE
COMMERCIAL	0%	4.5%	0%
AGRICULTURE	0%	1.5%	0%
OPEN SPACE	46%	29%	64.3%
RESIDENTIAL/OTHER	54%	65%	35.7%

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CITY OF WALNUT
WET WEATHER MONITORING
LOCATION M3

DATE:	SCALE:	DRAWN BY:	SHEET:
3-9-2015	N.T.S.	C.A.H.	1 OF 1

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Watershed Management Plan

City of Walnut

Submitted to:

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Submitted by:

The City of Walnut
21201 La Puente Road
Walnut, CA 91789

April 22, 2015

Revised June 12, 2015

RB-AR17661

Table of Contents

1.0- Municipal Separate Storm Sewer System Permit

On November 8, 2012 the Los Angeles Regional Water Quality Control Board adopted Order R4-2012-0175 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within Coastal Watersheds of Los Angeles County, except those discharges originating from the City of Long Beach MS4. Order R4-2012-0175 became effective 50 days later on December 28, 2012. Order R4-2012-0175 serves as the National Pollution Discharge Elimination System (NPDES) permit for Coastal Watershed storm water and non-storm water discharges originating from the Los Angeles County Region, excluding the City of Long Beach. The permit covers the land areas of the Los Angeles County Flood Control, unincorporated areas of Los Angeles County and 84 Cities within the County of Los Angeles. Permittees are subject to the requirements set forth in the MS4 permit for all storm water and non- storm water discharges into the MS4. The City of Walnut is located in the Los Angeles Region and is identified in the MS4 Permit as a permittee under Order R4-2012-0175.

The MS4 permit regulates municipal discharges of storm water and non-storm water from the MS4s of the permittees. Storm water and non-storm water discharges have been identified as a transport mechanism for pollutants into the receiving waters of the Los Angeles Region. Pollutants originating from various land uses are mobilized by surface flow of water which is then directed into the MS4 and eventually deposited into receiving water bodies. In many cases pollutant deposition into receiving water bodies has a noticeable impact on the local ecological system of the water body and recreational uses. It is the intent of the MS4 Permit to protect water quality and mitigate existing and potential sources of pollutants that are cause for impairment of receiving water bodies.

Conditions of the MS4 Permit require that all permittees develop a watershed management plan on an individual or joint basis that will address water quality issues with in the permittee's jurisdictional area. The City of Walnut submitted a Notice of Intent to the Los Angeles Regional Water Board on June 28, 2013 identifying the City's selected watershed management plan option. Due to the topographic nature and land use of the City of Walnut, the single permittee Watershed Management Plan (WMP) option was selected. A copy of the NOI is included in Attachment A of this document. The intention of the WMP is to provide a viable plan for implementing water quality improving infrastructure, policies and programs. The end result of the WMP is focused on complying with final effluent limitations and numeric targets for known pollutants in the receiving water.

The WMP is paired with an Integrated Monitoring Plan (IMP) to provide a complete program that will assess and address water quality in the City. The IMP will serve as the method for determining the need for pollutant reductions and ultimate compliance with the established water quality goals. The WMP and IMP were developed by RKA Consulting Group with exception to the Reasonable Assurance Analysis which was developed by Geosyntec Consultants.

1.1- The City of Walnut

The City of Walnut is a General Law city that was incorporated on January 19, 1959, and has a jurisdictional area of 8.9 square miles. Based on the 2010 Census, the City of Walnut has an approximate population of 30,000. One defining feature of the City is its rural charm which is preserved by a well-defined general plan. The City is located in the San Gabriel Valley region of Los Angeles County north of State Route 60 and west of State Route 57. Los Angeles County's map of the San Gabriel River Watershed (Figure 1-1) highlights in green, the City's location with respect to the watershed.

Land use in the City is primarily devoted to residential development consisting of 3,760 acres or 65% of the City. The remaining land use in the City is composed of 1,680 acres of open space or 29% of the jurisdictional area, 255 acres of commercial use or 4.5% of the jurisdictional area, and 86 acres of agricultural use or 1.5% of the jurisdictional area. Figure 1-2 is a map of the City of Walnut's land use. Table 1-1 compares the land uses of the City of Walnut with those of the entire San Gabriel River Watershed.

Table 1-1

Watershed Land Use		
Land Use	City of Walnut	San Gabriel River Watershed
Residential	65%	26%
Open Space	29%	50%
Agriculture/Other	1.5%	9%
Commercial/Industrial	4.5%*	15%

**There are no current industrial land uses in the City of Walnut.*

The City boundary extends from the San Jose Hills north of the City to Valley Boulevard to the south, and from Nogales Street to the west to the easterly boarder of the City with unincorporated areas of Los Angeles County and the City of Pomona. Other cities identified as MS4 Permittees bordering or in close proximity to the City of Walnut include: City of La Puente, City of Industry, City of West Covina, City of Diamond Bar, City of Pomona, and unincorporated areas of Los Angeles County (see Figure 1-1 for San Gabriel River Watershed Map).

1.2- Walnut Watershed Characteristics

The City of Walnut drains to the San Gabriel River Watershed and is part of the San Gabriel River Watershed Management Area (SGRWMA). The City's runoff drains to the San Gabriel River through two tributary water bodies in the SGRWMA. Reach 1 of the San Jose Creek is located to the south of the City and Walnut Creek Wash is located to the north. Both water bodies connect to Reach 3 of the San Gabriel River which runs parallel with State Route 605 and eventually drains directly to the Pacific Ocean. Figure 1-3 shows the City of Walnut and the two drainage areas within the City's jurisdiction.

1.2.1- San Jose Creek Reach 1

Due to the topography and location of the San Jose Hills, approximately 93% of the City drains to the South and is tributary to Reach 1 of the San Jose Creek. Storm water and non-storm water runoff is captured by catch basins and then carried through a network of storm drains and open channels to multiple outfalls connected to Reach 1 of the San Jose Creek.

The San Jose Creek transports runoff for the City of Walnut's outfalls approximately 12 miles to its confluence with San Gabriel River Reach 3 just north of the interchange of State Route 60 and State Route 605. The San Jose Creek is channelized from the area adjacent to the City of Walnut to approximately three quarters of a mile east of Workman Mill Road where the Creek is transitioned to soft bottomed. A number of other upstream and downstream permittees contribute runoff to Reach 1 of the San Jose Creek in addition to the City of Walnut. The Creek extends north east to connect with Thomson Wash which originates at easterly limits of Los Angeles County. Thompson Creek Dam is located at the very top of Thomson Wash.

Figure 1-1: San Gabriel River Watershed Management Area

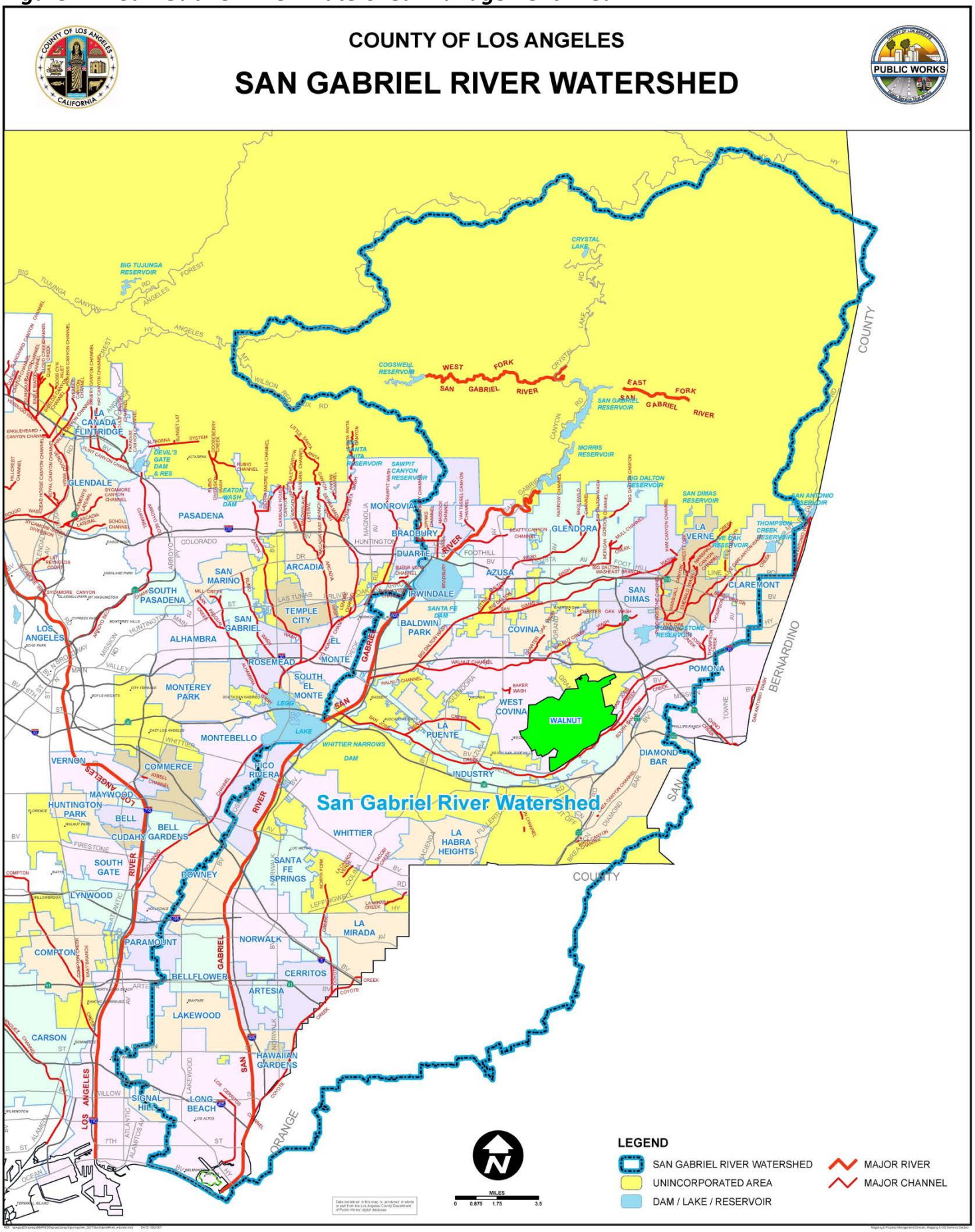
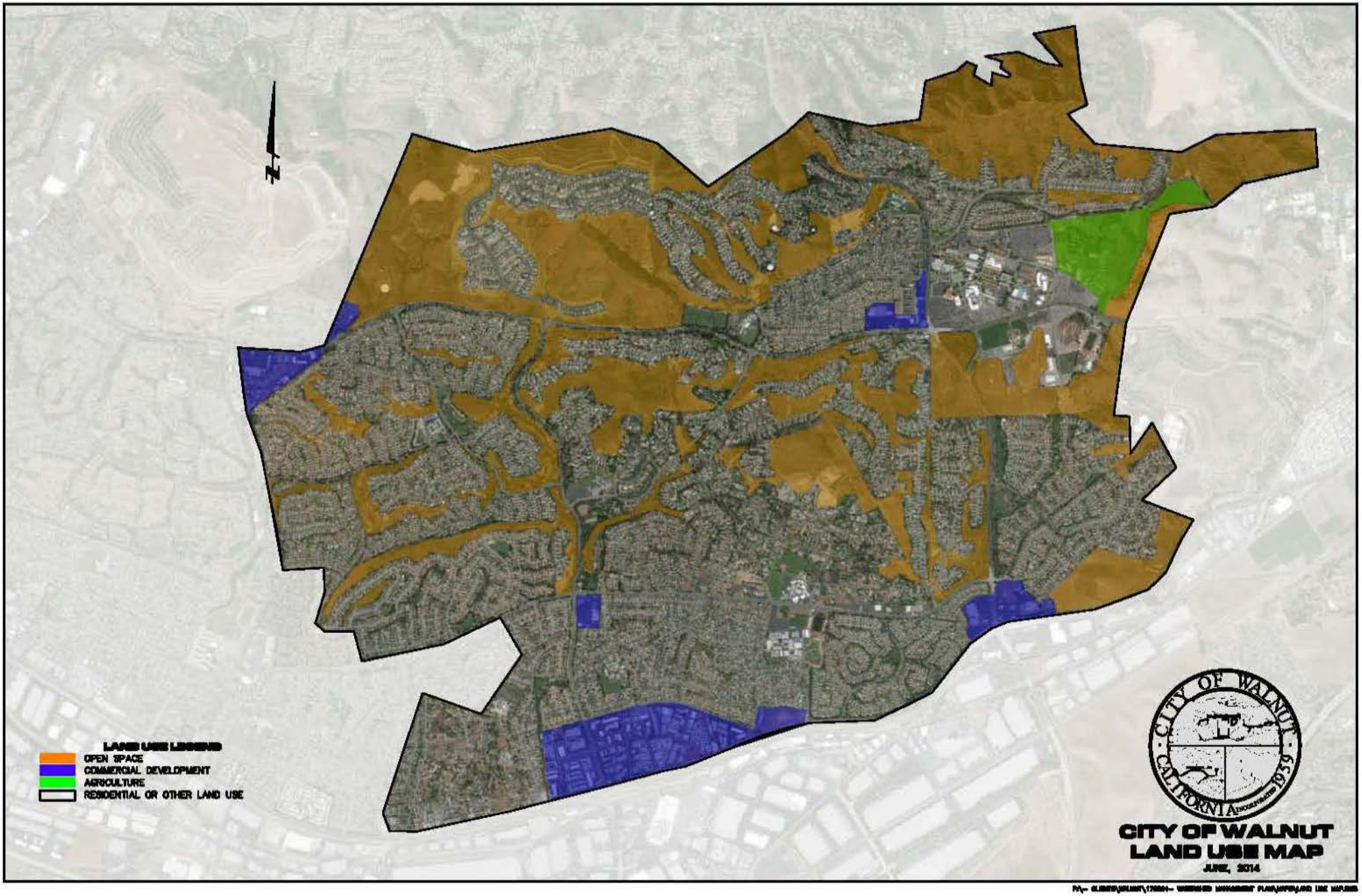


Figure 1-2: City of Walnut Land Use Map



1.2.2- Walnut Creek Wash

The remaining 7% of the City of Walnut's jurisdictional area drains to the Walnut Creek Wash. A majority of the City's tributary area to Walnut Creek Wash watershed is open space with a small portion of residential development. With a majority of the tributary area land use categorized as open space, MS4 discharges originating from this area are minimal. The existing MS4 flows drain to the north of the City into unincorporated Los Angeles County and eventually into Walnut Creek Wash.

Walnut Creek Wash originates at the Puddingstone Dam, and is soft bottom up to a quarter mile east of Covina Hills Road where it transitions to a channelized wash. The channelized wash returns to a soft bottom channel at Baldwin Park Boulevard and continues as such to confluence with the San Gabriel River. The confluence of Walnut Creek Wash and the San Gabriel River is located south west of the interchange of State Route 10 and State Route 605. The City of Walnut contributes a very small portion of flow to the Walnut Creek Wash which is primarily composed of flow from a number of other permittees in the SGRWMA

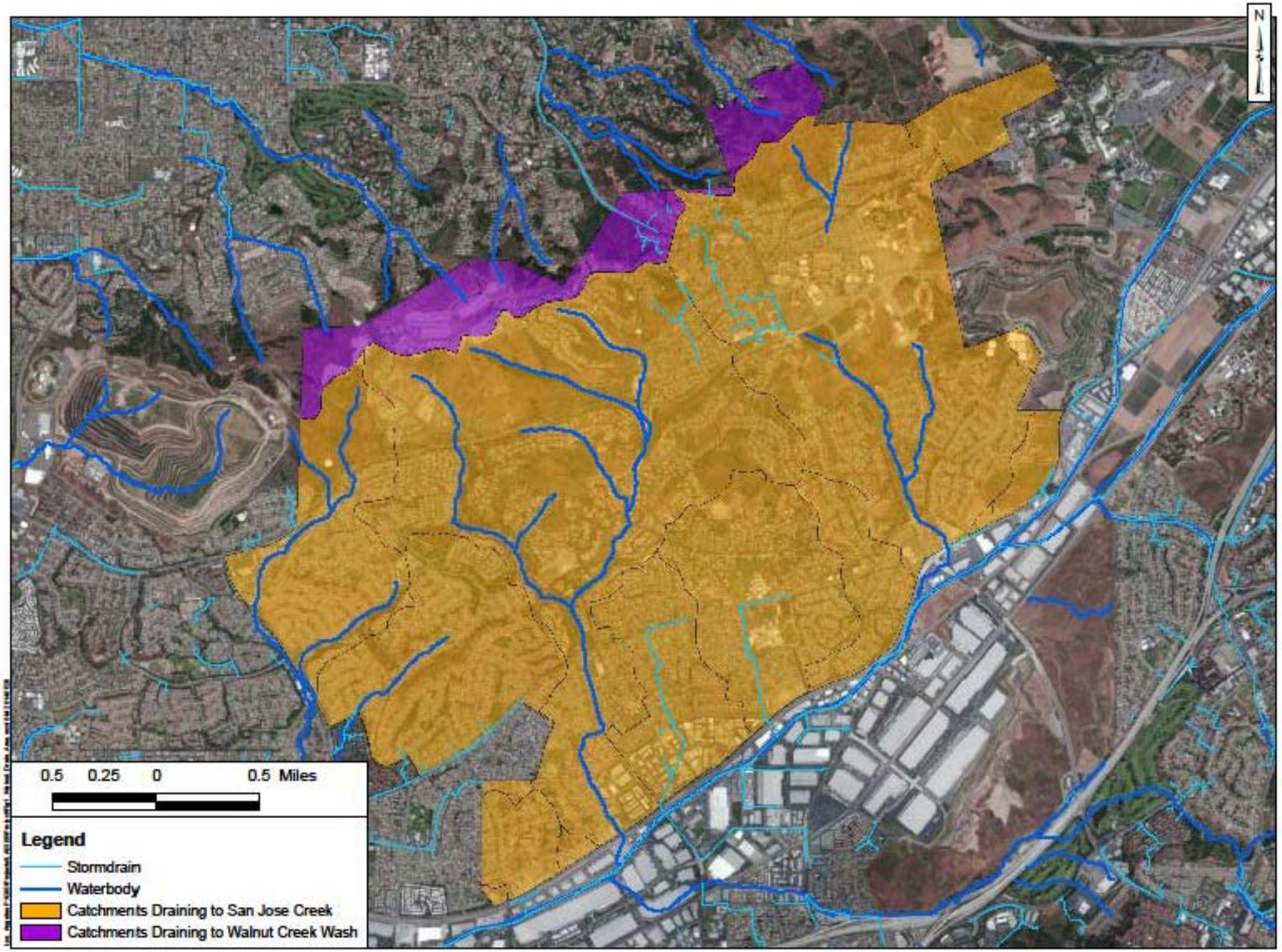
1.2.3- City of Walnut MS4 System

The City of Walnut's storm drain system consists of 644 City owned catch basins and 142 Los Angeles County Flood Control owned catch basins. A majority of the City's storm drain system outlets connect directly to Reach 1 of the San Jose Creek.

There is one storm drain outfall that contains flows originating from the Walnut Creek Wash watershed area of the City of Walnut. This singular outfall is an underground storm drain that drains to the north of the City into unincorporated Los Angeles County and eventually into Walnut Creek Wash. The referenced storm drain carries a relatively small amount of the total City run off and has 13 catch basins connected the line from the City of Walnut.

There are two open soft bottom creeks in the City which for much of their extents run in or adjacent to parks. Lemon Creek drains portions of the western side of the city and begins in the San Jose hills in the Vicinity of the Three Oaks Development and extends south to its confluence with Reach 1 of the San Jose Creek. Snow Creek begins near the intersection of Grand Avenue and Temple Avenue at Mount. San Antonio Community College located in the north eastern section of the City. Snow Creek travels south along Grand Boulevard to just south of Snow Creek Park where it connects to an underground reinforced concrete box (RCB). The RCB eventually connects directly with Reach 1 of San Jose Creek near the intersection of Somerset Drive and Valley Boulevard.

Figure 1-3: City of Walnut Drainage Areas



2.0- Water Quality Priorities

Per section VI.C.5.a.ii of the MS4 Permit, permittees are required to identify and prioritize water body pollutants within each Watershed Management Area (WMA) that overlays their jurisdictional area. The City of Walnut is wholly encompassed by one WMA. Per table K-6 of Attachment K in the MS4 Permit, the City of Walnut is included in the SGRWMA.

2.1- Water Quality Impairments

As described in section 1.2.1 "Watershed Characteristics" of this document, the City of Walnut is tributary to two tributary water bodies of the San Gabriel River. Each of the receiving water bodies that the City of Walnut is tributary to have individual water quality issues that have been established by a TMDL or by the California Clean Water Act Section 303(d) list. Table 2-1 of this document outlines the impairments for each of the receiving waters that the City of Walnut discharges MS4 flows into. These pollutants will be the primary focus for the City of Walnuts WMP.

Table 2-1

Watershed Management Area Impairments			
Water Body	**TMDL**	**303(d) List**	**Other Pollutants of Concern**
San Jose Creek Reach 1	• Selenium	• Ammonia • Coliform Bacteria • pH • Total Dissolved Solids • Toxicity	N/A
San Gabriel River Reach 3	N/A	• Indicator Bacteria	N/A
San Gabriel River Reach 2	• Lead	• Coliform Bacteria • Cyanide • Lead	N/A
Walnut Creek Wash	N/A	• Benthic-Macroinvertebrate Bio-assessments • Indicator Bacteria • pH	N/A

The MS4 Permit's prioritization of pollutants is categorized into three levels. The highest prioritization (Category 1) is reserved for water body pollutant combinations for which water quality based effluent limitations and/or receiving water limitations are established in Part IV.E and Attachments L through R of the MS4 Permit. High prioritization (Category 2) has been defined as including pollutants for which data indicate water quality impairment in the receiving water according to the State's Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (State Listing Policy) and for which MS4 discharges may be causing or contributing to the impairment. Medium Priority Pollutants (Category 3) are defined as pollutants for which insufficient data indicate water quality impairment in the receiving water according to the States Listing Policy, but which exceed applicable receiving water limitations contained in this Order and for which MS4 discharges may be causing or contributing to the exceedance.

The City will maintain the prioritization of pollutants as defined by the categorization priorities. In the event that a pollutant(s) of a category is determined to be within the allowable limit, the City will shift focus to the next tier down. For example, if all the Category 1 pollutants are found to be within allowable limits the City will then focus on the Category 2 pollutants of that receiving water body.

Table 2-2 identifies the prioritization of the individual constituents per the organization method defined in section VI.C.2.a. of the MS4 Permit.

Table 2-2

Water Quality Priorities		
Priority	**Water Body Pollutant**	**Source**
Category 1 (Highest)	Lead	TMDL
	Selenium	TMDL
Category 2 (High)	Ammonia	303(d)
	Benthic Macroinvertebrates	303(d)
	Coliform Bacteria	303(d)
	Cyanide	303(d)
	pH	303(d)
	Total Dissolved Solids	303(d)
	Toxicity	303(d)
Category 3 (Medium)	N/A	N/A

Pollutants identified as Category 1 priority in Table 2-2 have Waste Load Allocations determined by their applicable TMDL. Both Lead and Selenium Waste Load Allocations (WLA) are established by the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL .

Table 2-3 identifies the established WLA for each of the applicable TMDL pollutants. Pollutants identified in Table 2-3 should be referenced against Table 2-1 to determine the applicable WLA for the associated water body.

Table 2-3

Category 1 (Highest Priority) Pollutant Waste Load Allocation		
Pollutant	**Daily Maximum**	**Weather**
Lead	81.34 µg/L X Daily Storm Volume (L)	Wet
Selenium	5 µg/L	Dry

Pollutants identified as Category 2 priority in Table 2-2 have Receiving Water Limitations (RWLs) identified in the Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties. RWLs are established based on the beneficial uses also determined in the Basin Plan. Some Category 2 pollutants that are identified in Table 2-4 do not originate from MS4 discharges and will not be included in the Reasonable Assurance Analysis portion of this document.

Table 2-4

Category 2 (High Priority) Pollutant Receiving Water Limitation	
Pollutant	**RWL**
Ammonia	See LARWQCB Basin Plan Table 3-1 through 3-4
Benthic Macroinvertebrates	See Attachment D for Bio assessment
Coliform Bacteria	See Table 2-5
Cyanide	.005mg/L
Dissolved Oxygen (DO)	Mean Annual 7mg/L, but not less than 5 mg/L
pH	6.5-8.5 Standard Units
Total Dissolved Solids	750mg/L
Toxicity	See Attachment E for Toxicity Assessment

Allowable coliform bacteria loadings are based on the beneficial uses assigned to the impaired water body. As previously discussed in the document, the City of Walnut is tributary to two sub watersheds in the SGRWMA. Table 2-5 identifies the applicable bacteria RWL for each of the sub-watershed receiving water bodies that the City is tributary to.

Table 2-5

Bacteria Receiving Water Limitation		
Receiving Water Segment	**Recreational Beneficial Use**	**RWL E Coli Density**
San Jose Creek	REC1 (potential), REC2 (intermittent) with High Flow Suspension*	Geometric Mean Limit: 126/100 ml Single Sample Limit: 235/100 ml
Walnut Creek Wash	REC1 (intermittent), REC2 (intermittent)	Geometric Mean Limit: 126/100 ml Single Sample Limit: 235/100 ml

REC1 = water contact recreation

REC2 = non-water contact recreation

Existing water quality monitoring data and land use in the City were examined to determine if there was significant evidence identifying the presence of Category 3 pollutants. Los Angeles County Mass Emissions Station S14 was chosen for this analysis.

Most of the pollutants identified as exceeding RWLs at S14 already have been established as either Category 1 or Category 2 pollutants. The remaining pollutants identified as exceeding the RWL over a 10 year period, only had few instances of exceedances. When considering the size of the watershed tributary to the monitoring station it is impossible to truly establish the City of Walnut's potential contribution of the pollutants in question. The limited data available does not provide any clear correlation between the monitored exceedances at station S14 and the City of Walnut's storm drain outfalls.

The City will continue to examine monitoring data made available by other agencies in addition to the data that the City gathers under the City IMP. Under the permit requirements, the City is required the monitor for all of the pollutants identified in Table E-2 of the permit for the first year of the program.

The City will utilize future data to determine the presence of Category 3 pollutants. If any pollutants are identified by the City's IMP, they will be added to the WMP during the adaptive management process.

2.2- Pollution Source Assessment

Pollutants identified as causing impairments on the applicable receiving waters originate from various sources in the watershed. MS4 discharges from the City of Walnut are composed of surface runoff from storm events or other non-storm water sources. Pollutants that are mobilized by surface runoff are likely from non-point sources which are difficult to eliminate prior to mobilization.

Existing receiving water monitoring data from within the San Gabriel River watershed was examined to determine the existing water quality conditions. Data from the Los Angeles County monitoring station S14 was selected for this review. Los Angeles County monitoring station S14 is located below San Gabriel River Parkway in Pico Rivera. The upstream tributary area is 450 square miles at this location. The City of Walnut is directly tributary to San Jose Creek Reach 1 which is located upstream of monitoring station S14. The last ten years of data from the Los Angeles County Storm water Monitoring program mass emissions station S14 was compiled and reviewed. A summary of the exceedances is included as Attachment E. The pollutants with exceedances identified by the S14 monitoring data are mostly established on the 303(d) list. Due to vast area that drains to the S14 monitoring station, it is unclear how MS4 flows originating from the City of Walnut impact the San Gabriel River watershed.

This section highlights potential sources of the specific pollutants of concern that have been established as causing or contributing to impairment of the local water bodies that the City is tributary to.

Ammonia

Ammonia has been identified on the 303(d) list as causing impairment in the San Jose Creek Reach 1. The 303(d) list support documents identify that discharges from Publicly Owned Treatment Works (POTWs) as a potential source of most of the ammonia in the Los Angeles Region Watersheds. The City of Walnut is downstream from a POTW facility that discharges to the San Jose Creek.

POTWs have since been issued NPDES permits that include water quality objectives for Ammonia. Based on County monitoring data, it appears that Ammonia exceedances are decreasing in occurrence. Modifications to treatment processes and facilities are expected to yield results that will reduce previously measured amounts of ammonia to acceptable levels. This pollutant does not likely originate from the MS4. The City of Walnut's WMP will not address this pollutant any further other than as required in the monitoring program.

Benthic Macroinvertebrate Bio assessment

The 303(d) listing for bio assessment of benthic macroinvertebrates was established by the State Water Board after recommendation by the LARWQCB. The Walnut Creek Wash has been identified as having pollutant combinations in concentrations that are detrimental to the populations of benthic macro-invertebrates in the water body. MS4 discharges with toxic properties are identified as causing impacts to populations of benthic macroinvertebrates. The jurisdictional area of Walnut that is tributary to Walnut Creek Wash is composed of open space and single family residential land use. A 30" RCP storm drain coveys all of water contributed to the Walnut Creek Wash. The volume of MS4 discharges contributed by the City of Walnut is relatively small and not likely to contribute pollutants in toxic levels. Water quality conveyed by said storm drain will be monitored as part of the IMP. The runoff that is

deposited into the wash is connected to the channelized portion of the wash. It is unclear if this requirement is incorrectly assigned to the City of Walnut based on the beneficial uses applicable to channelized water bodies.

Bacteria

E Coli is used to determine the likelihood of pathogenic bacteria present in surface waters. E. coli and other pathogens that originate from fecal contamination in surface waters. Storm water and non-storm water runoff originating from residential development land uses have been known to contribute to bacteria loading in receiving waters. Potential sources may be natural or from contamination caused by interaction of septic or sanitary sewer system flows with the MS4 or agricultural runoff that is captured by the MS4. Homeless populations and wild life have also been identified a potential sources of coliform bacteria in the Basin Plan.

Cyanide

Cyanides are produced in both natural and manmade processes. The source of cyanide deposition into the receiving waters is not clear. Due to the land uses within the City it is assumed that the MS4 is not a likely source of this pollutant. Further data will be gathered though the City's monitoring program.

Lead

Lead has been identified as a Category 1 priority pollutant per the MS4 permit. Section 4 "Source Assessment" of the Total Maximum Daily Loads for Metals and Selenium San Gabriel River and Impaired Tributaries defines that the sources of metals in the San Gabriel River as originating from either point sources or atmospheric deposition.

The potential sources of lead in the watershed have been identified as natural and manmade. Potential manmade sources identified in the EPA TMDL document as contributing lead to storm water runoff are: automobile brake pads, vehicle wear, building materials, pesticides, erosion of paint, and atmospheric deposition from fuel ignition and industrial facilities.

Within the City of Walnut, it is not likely that potential lead pollution is originating from industrial discharges due to current the land uses. Atmospheric deposition and naturally occurring sources may account for some of the lead loading found in the local watershed. Automobile related sources and urbanized land use are also potential sources within the City of Walnut. Lead deposited on impervious surfaces such as a street is mobilized by surface runoff and transported to the receiving waters.

pH

The CWA 303(d) list identifies pH as causing impairment in both San Jose Creek Reach 1 and Walnut Creek Wash. pH is a measure of acidic or basic chemistry properties of water. The scale is a range from 0 to 14 with 7 being the measurement that reflects pure water at a temperature of 25^{o}C. pH measurements of <7 indicate that the water sample is acidic whereas measurements of >7 are considered to have basic chemistry properties. Natural waters tend to have a pH slightly higher than 7, and are very sensitive to major shifts in either the acidic or basic direction. A number or environmental conditions can impact the pH of a receiving water including natural or manmade conditions. MS4 discharges may contribute to changes in pH in receiving waters.

Selenium

Selenium has been identified as a Category 1 priority pollutant per the MS4 permit. Selenium in the San Jose Creek is suspected to likely be from a natural source. Limited data is available to verify this assumption. However, because there are no industrial facilities that manufacture products known to utilize selenium in the production process within the City, natural sources are the only apparent remaining potential source. Selenium is an element (Se on the periodic table) that is found naturally in local marine sedimentary soils. The local watershed area is known to have marine sedimentary soils. While the source is natural in nature the possibility that urbanization in the watershed has increased mobilization and deposition of the element in the receiving waters. The source may also be in the soft bottom portion of the San Jose Creek. Further studies are required to better understand the source of selenium. The IMP portion of this plan will be utilized as a tool to determine if the City of Walnut's MS4 discharges are contributing to the Selenium impairment in the San Jose Creek.

Total Dissolved Solids

Total Dissolved Solids (TDS) includes both organic and inorganic particles that are fully suspended in water. TDS identified in the watershed may be naturally occurring but can also be from compounds that a mobilized by urban runoff. Residential development is a known potential source of TDS in storm water and non-storm water runoff.

Toxicity

Toxicity in receiving waters is defined as when chemical properties of water adversely affect organism's ability to normally survive. Chronic Toxicity is identified as a level of toxicity that results in an impact in an organism's ability grow or reproduce, but not result in death. Toxicity at a level that results in death of an organism is classified as acute toxicity. Toxicity is not limited to concentrations of a singular pollutant, and can be caused by a number of pollutants. Urban runoff has been identified as a potential source of toxicity in MS4 discharges.

3.0- Minimum Control Measures

The MS4 Permit requires permittees to implement policies and practices that will aid in the improvement of water quality in the City and WMA. These policies and practices are defined as Minimum Control Measures (MCMs) and are outlined in section VI.D.5 for Non-LACFCD permittees. Many of the City's existing MCMs were implemented under the previous permit, but latest permit has expanded some of the requirements for the existing programs. Per the MS4 Permit, the City of Walnut is required to have the following MCM Programs.

- Public Information and Participation Program
- Industrial/Commercial Facilities Program
- Planning and Land Development Program
- New Development/Re-Development Program
- Development Construction Program
- Public Agency Activities Program
- Illicit Connection and Illicit Discharge Elimination Program

3.1- Public Information and Participation Program

Each permittee is required to implement a Public Information and Participation Program (PIPP) under the MS4 Permit. Improving public education and awareness is likely to have a positive impact on water quality by changing activities or actions of the public that negatively impact water quality. The PIPP encompass a number of outreach and education opportunities and expected to have a positive effect in water quality. The MS4 Permit identifies the primary goals of the PIPP as follows:

- The PIPP shall measurably increase the knowledge of the target audiences about the MS4, and the adverse impacts of storm water pollution on receiving waters and potential solution to mitigate the impacts.

- The PIPP shall also measurably change the waste disposal and storm water pollution generation behavior of target audiences by developing and encouraging the implementation of appropriate alternatives.

- The PIPP shall involve and engage a diversity of socio-economic groups and ethnic communities in Los Angeles County to participate in mitigating the impacts of storm water pollution.

The City of Walnut is approaching compliance with the MS4 Permit as a singular permittee implementing an individual WMP. The City currently maintains a PIPP program that was implemented under the previous MS4 Permit. Much of the same requirements from the previous permit are included in the latest permit, however this document will describe the program moving into the current permit term.

3.1.1- Public Reporting

The City currently contracts with Los Angeles County for maintenance of catch basins, storm drain and sanitary sewer networks. The City of Walnut is a contract city and utilizes the 888-CLEAN-LA hotline for its general public reporting contact in coordination with the Los Angeles County Maintenance Crews.

County hotline and City contact information for the Environmental Department and the Building and Safety Department is made available on the City's Website on the Storm Water pollution Prevention page. Contact information related to public reporting of storm water issues is also provided in pamphlets available at the City Hall and the City's Environmental Services Guide page on the City Website. The City maintains and will continue to maintain current contact information as updates are made necessary.

3.1.2- Public Outreach

The City's Environmental Services department hosts a community outreach booth at the Walnut Family Festival. At this booth, the City provides educational material regarding the importance of Walnut's commitment to storm water pollution prevention as well as specific information on how Walnut residents can help improve or reduce impacts on the local environment. Flyers on the importance of proper pet waste are distributed along with promotional pet waste bag dispensers to promote picking up after pets. The City also provides used oil containers for residents to facilitate the proper disposal of used oil, keeping it out of our storm water system.

In additional to the booth at the Family Festival, the City provides environmental information and storm water education material at all major city events including: Concerts in the Park, National Night Out, Fourth of July, and Arbor Day.

The City of Walnut also conducts two free composting workshops per year through SmartGardening. This workshop covers backyard composting as well as water-wise gardening. An information table and storm water education is provided at these events as well.

3.1.3- Public Education Materials

The City of Walnut develops a recreation brochure on a quarterly basis which has a section dedicated to environmental issues in Walnut. This section highlights environmental topics including storm water pollution. This section also promotes the "Go Green with Walnut" page of the City's website. The "Go Green with Walnut" page is where residents can find educational material related to environmental issues. The City also produces a quarterly mailer that is sent to every resident four times a year.

On the "Go Green with Walnut" page there is a specific page for Storm Water Pollution Prevention. This page provides a brief overview of the storm drain system and the importance of keeping common forms of storm water pollution out of the system. Here residents can find information on ways that they can contribute to Walnut's commitment to protect the environment and water resources. Listed are best management practices (BMPS) that they can implement as residents and business owners.

There are a number of helpful links to information sheets that outline proper procedures for handling and disposal of vehicle waste fluids, household waste materials, construction waste materials, gardening related materials and animal wastes. Copies of these information sheets have been included in Attachment C of this document. These information sheets are also distributed to local auto parts stores, home improvements centers, garden centers and pet supply stores. Additionally, the City includes environmental related education on a City mailer that is sent out quarterly.

The City's storm water pollution prevention page is easily accessible from the City Services tab on the City's website. The page is maintained by City staff and continuously updated with new information as it becomes available. The following is a direct link to the City's storm water pollution prevention page:

http://www.ci.walnut.ca.us/general.asp?id=282

The environmental services department is present at all of the City's special events where material regarding the City's storm water pollution prevention program is handed out. All the city facilities have access to and post the material for patrons. An environmental services brochure was created by the City which contains an overview of the storm water pollution prevention program and is passed out at the City facilities.

3.1.4- Storm Water Education in Schools

City staff works closely with environmental clubs at local educational sites. The City works with student groups at the high school, middle school, and elementary school levels to host park cleanup events twice a year. The City also interacts with other student community groups including the Boy Scouts of America and Girl Scouts of America which have partnered with the City of Walnut to host additional educational events throughout the year. Education material is made available to all of the local environmental clubs and the school district, as well as available at all of the park clean up events.

The City reaches out to the environmental club participants when looking for volunteers for the environmental services booth at the Family Festival. Staff is available for outreach to the local school districts and continuing to foster that partnership.

3.1.5- PIPP Outreach to Multi Cultural Communities

The City of Walnut has a number of culturally diverse communities that live and/or work in the City. Effectively communicating educational materials related to storm water quality can be a challenge when there is a language barrier. To address this hurdle, multilingual City staff located at City Hall are available to translate and answer any questions including environmental issues such as storm water pollution. Members of city staff are fluent in Spanish, Mandarin, Tagalog, German, Japanese, and Korean. All members of the public with questions or concerns relating to storm water or any other topic are encouraged communicate with City staff.

3.2- Industrial/Commercial Facilities Program

The industrial Facilities Program is designed to prevent illicit discharges from industrial and commercial facilities into the MS4 and receiving waters. It will also reduce storm water discharges from industrial and commercial facilities and prevent industrial and commercial discharges from causing or contributing to a violation of receiving water limitations. The MS4 permit identifies the minimum components of this program to include tracking, education, inspection and enforcement.

3.2.1- Industrial/Commercial Facilities Tracking

The City's tracking program will include an electronic based inventory that will identify all qualifying commercial and industrial facilities within the city boundaries. Information regarding the facility location and operations will be logged into the tracking system.

The City land use is primarily dedicated to single family residential and open space, allowing for only a small portion of the City to be utilized for commercial and industrial facilities. The MS4 Permit recommends that a Geographic Information System (GIS) is utilized for this task, however due to the relatively small number of these facilities a spreadsheet program will be utilized to track qualifying facilities. As the city develops its GIS program, the tracking information gathered as part of this plan will be reassessed to determine if adding a GIS element to the tracking program will improve effectiveness of the system.

The MS4 Permit requires that commercial and industrial facilities that are tracked. The following list outlines four categories that tracking is mandatory for.

1. Commercial Facilities
    - Restaurants
    - Automotive service facilities (including facilities located at automotive dealerships)
    - Retail Gasoline
    - Nurseries and Nursery Centers
2. USEPA "Phase I" Facilities [as specified in 40 CFR §122.26(b)(14)(i)-(xi)]
3. Other federally-mandated facilities [as specified in 40 CFR §122.26(d)(2)(vi)(C)]
    - Municipal Landfills
    - Hazardous waste treatment, disposal and recovery facilities
    - Industrial facilities subject to section 313 "Toxic Release Inventory" reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986 (EPCRA) [42 U.S.C. § 11023]
4. All other commercial or industrial facilities that the permittee determines may contribute a substantial pollutant load to the MS4.

The MS4 Permit requires the City to track minimum parameters under the commercial and industrial facilities program. Not all of this information is currently tracked by the City. Although the City has a limited number of commercial facilities and no industrial facilities, gathering and organizing the required data is a demanding task. Upon receipt of the Regional Boards approval of the City's WMP, the City will begin the process of organizing and centralizing all available tracking information.

Outstanding tracking information will be assessed and gathered within a reasonable time frame. Once a complete inventory is developed, the City's Planning department will maintain and update the database on an as needed basis with the frequency of updates occurring at least annually. The information for new Commercial/Industrial site data will be gathered from the City's permitting program and field inspections.

The following list includes the minimum parameters to be included in the tracking program:

- Name of facility
- Name of owner/ operator and contact information
- Address of Facility (physical and mailing)
- North American Industry Classification System (NAICS) code
- Standard Industrial Classification (SIC) code
- A narrative description of the activities performed and/or principal produces produced
- Status of exposure of materials to storm water
- Name of receiving water
- Identification of whether the facility is tributary to a CWA §303(d) listed water body segment or water body segment subject to a TMDL, where the facility generates pollutants for which the water body segment is impaired.
- Ability to denote if the facility is known to maintain coverage under the State Water Board's General NPDES Permit for the Discharge of Storm water Associated with Industrial Activities (Industrial General Permit) or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Water Board pertaining to storm water discharges.
- Ability to denote if the facility has filed a No Exposure Certification with the State Water Board.

3.2.2- Industrial/Commercial Education

Per section VI.D.6.c, the City of Walnut is required to notify commercial and industrial site owners/operators of applicable BMPs based on the activities that take place at the site. City Staff will utilize the commercial and industrial facilities tracking data base to identify sites requiring notice. Notices sent will include a list of BMPs and related BMP implementation information applicable to the commercial site. Notices will be directed to the owner/operator of each of the inventoried commercial and industrial sites. This notice will occur at least once during the five year period of the MS4 permit. The City Environmental Services Department will utilize the commercial/industrial facility tracking database to document when such notification is made.

In coordination with the City's BMP education notice, the City will provide all commercial/industrial facility owners with contact information for a City Business Assistance Program. The program will provide additional information to businesses, upon request, to facilitate their efforts in the reduction of pollutant discharges. The Business Assistance Program will also further target business sectors or small businesses that have been determined as potential sources of pollutant loads to the MS4 or receiving water. The City will utilize the results from the monitoring of MS4 outfalls and receiving waters to better direct efforts in reducing or eliminating pollutant loading.

Additional technical information provided to businesses in the City of Walnut may include the following items listed below:

- Provision of education materials
- Telephone and/or e-mail consultation
- On-site technical assistance

A determination of what will be provided to the business will be made on a case by case basis and will be tailored to the needs of the businesses that fit the criteria for providing additional assistance. All additional information and support provided to will be at the discretion of the City.

3.2.3- Commercial Facility Inspection

Per section VI.D.6.d of the MS4 permit the City of Walnut will implement a commercial facility inspection program. Inspections at all of the facilities identified in the City's database will take place at least twice during the five year term of the MS4 Permit. The first inspection will take place no later than December 28, 2014, two years after the effective date of the permit (December 28, 2012). The second inspection will have a minimum interval of at least six months following the first inspection.

Parameters to be included in the above mentioned inspections are as follows:

- Proper Implementation of storm water and non-storm water BMPs
- Proper maintenance of storm water and non-storm water BMPs
- Verification of effective source control BMP implementation
- Review/Enforcement for proper BMP implementation in areas that drain to a Significant Ecological Areas (SEA), water body subject to a TMDL or CWA § 303(d) listed impaired water body.
- Require additional BMPs if necessary

In the past City inspectors have performed random inspections on commercial businesses that the City has identified as having a higher potential for contributing to storm water pollution. These random inspections were not previously tracked. The City will develop a system to track and log these drop in type inspections for recording purposes.

3.2.4- Industrial Facility Inspection

Per section VI.D.6.e of the MS4 permit the City of Walnut will implement an industrial facility inspection program. Currently, there are no Industrial facilities within the Jurisdictional boundaries of the City. Should that change in the future the following inspection program will be implemented.

Inspections at all of the facilities identified in the City's database will take place at least once during the five year term of the MS4 Permit. The deadline established by the MS4 permit of December 28, 2015 will not apply to the City of Walnut due to the lack of industrial facilities at the time of adoption of this plan. Should that change, the City will inspect the industrial site within a reasonable time period after the site begins normal operations. After the initial inspection, all facilities that have not filed a No Exposure Certification with the State Water board are subject to a second mandatory inspection to take place at least six months after the first inspection.

As part of the first industrial facility inspection, the City will identify if a facility has filed a No Exposure Certification with the State Water Board. Approximately three to four years after the effective date of the MS4 Permit, the City will evaluate its inventory of industrial facilities and perform a secondary inspection for at least 25% of the facilities identified to have a No Exposure Certification if any exist in the City.

Industrial facilities that have been inspected by the Regional Water Board within prior a 24 period are not required to be inspected. The City will review the State Water Board's Storm Water Multiple Application and Report Tracking System (SMARTS) database on an annual basis if an industrial site opened in the City. If a facility is subject to a second inspection, it shall take place approximately four years following the effective date of the MS4 Permit. Similar to the conditions of the first inspection, a second inspection is not required if the Regional Water Board has previously inspected the site within a 24 month period.

Parameters to be included in the above mentioned inspections are as follows:

- Verify Waste Discharge Identification (WDID) number for coverage under the Industrial General Permit.
- Verify that a Storm Water Pollution Prevention Plan (SWPPP) is on site; or
- Verify the site has applied for, and has received a current No Exposure Certification for facilities subject to the requirement
- Verify BMPs are effectively implemented in compliance with municipal ordinances. Facilities must implement the source control BMPs identified in table 3-1 below.

Applicable industrial facilities identified as not having either a current WDID or No Exposure Certification shall be notified that they must obtain coverage under the Industrial General Permit and shall be referred to the Regional Water Board per the Progressive Enforcement Policy identified in part VI.D.2.

Table 3-1

Industrial Facility BMP Applications	
Pollutant-Generating Activity	**BMP Narrative Description**
Unauthorized Non-Storm water Discharges	Effective elimination of non-storm water discharges
Accidental Spills/Leaks	Implementation of effective spills/leaks prevention and response procedures
Vehicle/Equipment Fueling	Implementation of effective fueling source control devices and practices
Vehicle/Equipment Cleaning	Implementation of effective equipment vehicle cleaning practices and appropriate wash water management
Vehicle/Equipment Repair	Implementation of effective vehicle/equipment repair practices and source control devices
Outdoor Liquid Storage	Implementation of effective outdoor liquid storage control devices and practices
Outdoor Equipment Operations	Implementation of effective outdoor equipment source control devices and practices
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices

Table 3-1 (Continued)

Industrial Facility BMP Applications	
Pollutant-Generating Activity	**BMP Narrative Description**
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/handling practices and appropriate control measures
Building and Grounds Maintenance	Implementation of effective facility maintenance practices
Parking/Storage Area Maintenance	Implementation of effective parking /storage area designs and housekeeping/maintenance practices
Storm water conveyance system maintenance practices	Implementation of proper conveyance system operation and maintenance protocols
Sidewalk Washing	Remove trash, debris, and free standing oil/grease spills/leaks (use absorbent material, if necessary) from the area before washing; and Use high pressure, low volume spray washing using only potable water with no cleaning agents at an average usage of 0.006 gallons per square feet of sidewalk area.
Street Washing	Collect and divert wash water to the sanitary sewer – publically owned treatment works (POTW) Note: POTW approval may be needed.

3.3- Planning and Land Development Program

Per section VI.D.7 the City of Walnut will implement a Planning and Land Development Program for all new development and redevelopment projects. The goal of the Planning and Land Development Program is to lessen the potential water quality impact from new or redevelopment through implementation of water quality driven development practices.

The program will promote smart growth practices that minimize adverse impacts from storm water runoff on the biological integrity of Natural Drainage Systems, and the beneficial uses of water bodies in accordance with requirements under the California Environmental Quality Act (CEQA). Future developments will focus on minimizing the percentage of impervious surfaces and utilize Low Impact Development features and BMPs to maintain a site's predevelopment hydrology in accordance with the MS4 Permit requirements.

3.3.1- Low Impact Development Ordinance

On November 13, 2013, the Walnut City Council adopted a Low Impact Development (LID) Ordinance in compliance with the requirements VI.C.4.c.ii. and section VI.D.7 of the MS4 permit. A copy of the adopted ordinance is included in Attachment B of this document. The LID Ordinance is an enforcement

tool the City will utilize when reviewing and permitting development projects that qualify under the triggering requirements of the ordinance.

The list below outlines project parameters that qualify for implementation of LID design requirements under the City of Walnut's LID Ordinance.

- All Development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.
- Industrial parks 10,000 square feet or more of surface area.
- Commercial malls 10,000 square feet or more of surface area.
- Retails gasoline outlets with 5,000 square feet or more of surface area.
- Restaurants (SIC of 5812) with 5,000 square feet or more of surface area.
- Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.
- Streets and roads construction of 10,000 square feet or more of impervious surface area.
- Automotive service facilities (SIC of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.
- Projects located in or directly to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
    - Discharge storm water runoff that is likely to impact a sensitive biological species or habitat; and
    - Create 2,500 square feet or more of impervious surface area
- Single family hillside homes (see ordinance for definition)
- Redevelopment Projects
    - Land Disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.
    - Where redevelopment would result in an alteration to more than 50% of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction storm water quality control requirements, only the alteration must be mitigated, and not the entire development.
    - Where redevelopment results in an alteration of less than 50% of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction storm water quality control requirements, only the alteration must be mitigated, and not the entire development.
    - Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

- Existing single-family dwelling and accessory structures area exempt from the redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

3.3.2- New Development/Redevelopment Project Performance Criteria

Qualifying development projects will be subject to storm water pollution control requirements including retention of all storm water resulting from a specified rain event as outlined in more detail in the City's LID ordinance. The City Planning department will work with developers to ensure that all requirements set forth in the LID ordinance are met.

Should a project applicant find that technical infeasibilities prevent a new or re-development project from meeting the storm water pollution control requirements, they must demonstrate to the City that the project cannot retain 100% of the water resulting from the design storm volume on-site. The technical infeasibility demonstration must include the maximum application of City approved BMPs. Such a demonstration would include a site-specific hydrologic and/or design analysis conducted and endorsed by a registered professional engineer, geologist, architect and/or landscape architect.

Alternative compliance measures are available in instances of technical infeasibility or if there is the opportunity for regional ground water replenishment. These options include on-site biofiltration, offsite infiltration, ground water replenishment projects, and offsite retrofits to existing development.

3.4- Development Construction Program

The MS4 Permit requires that the City of Walnut develop and implement a Development Construction Program. The general nature of construction activities has a high potential for discharges of pollutants and/or sediment from a site. Conditions on construction sites often include potential sources of pollution including but not limited to disturbed soils, stockpiled materials and construction vehicles. General construction activities or storm water surface flow can often result in transport and discharge of these pollutants. It is the internet of the development construction program to prevent discharges from construction sites to the MS4.

The program shall prevent illicit construction-related discharges of pollutants into the MS4, require the implementation and maintenance of structural and non-structural BMPs to reduce pollutants in storm water runoff from construction sites, reduce construction site discharges of pollutants to the MS4 or to the maximum extent practicable, and prevent construction site discharges to the MS4 from causing or contributing to a violation of water quality standards. The Development Construction Program shall also include an enforceable erosion control and sediment control ordinance for all construction sites that disturb soil.

3.4.1- Construction Sites of Less Than One Acre

Construction sites of less than one acre are required to comply with the provisions of this section and section VI.D.8.d of the MS4 Permit. Construction activities covered by this section include but are not limited to grading, vegetation clearing, soil compaction, paving re-paving and linear underground/overhead projects (LUPs).

The City of Walnut will require that all qualifying construction sites implement the BMPs identified in Table 3-2 in an effective manner to prevent erosion and the discharge of construction wastes.

The City will maintain an inventory of construction sites with soil disturbing activities requiring a permit. The City will conduct inspections at these sites on an as-needed basis. When determining the need for inspection the City will take into account factors that may result in the discharge of construction site pollutants. Factors in the construction site assessment may include soil erosion potential, site slope, project size and type, receiving water body sensitivities, past record of construction site compliance by the operator of the construction site. The City will also utilize a progressive enforcement policy to ensure that construction sites found to be out of compliance are brought back into compliance with the requirements of the MS4 Permit.

Table 3-2

Applicable Set of BMPs for All Construction Sites	
BMP Type	**BMP**
Erosion Control	Scheduling
	Preservation of Existing Vegetation
Sediment Controls	Silt Fence
	Sand Bag Barrier
	Stabilized Construction Site Entrance/Exist
Non-Storm Water Management	Water Conservation Practices
	Dewatering Operations
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management
	Concrete Waste Management
	Sanitary/Septic Waste Management

3.4.2- Construction Site Inventory

The City of Walnut will develop and maintain permit tracking data base for all grading, encroachment, demolition, building and construction permits issued by the City. The database will be an electronic system that includes the following site specific information.

- Owner and Contractor Contact Information
- Site location, size, status and disturbed area
- Proximity of Water Bodies to the Construction Site
- Significant threat to water quality status (Appendix 1 of the Construction General Permit)
- Current Phase of Construction
- Required Inspection Frequency
- Start and anticipated end date
- Is the project covered under the Construction General Permit
- Date of City approval of the Erosion and Sediment Control Plan (ESCP)
- Post Construction Structural BMPs subject to operation and maintenance requirements

3.4.3- Construction Plan Review and Approval Procedures

The City of Walnut will review and approve relevant construction documents prior to issuing permits. Each operator of a construction activity within the City's jurisdiction will be required to prepare and submit to the City, for review and approval, an Erosion and Sediment Control Plan (ESCP). An ESCP shall include site specific BMPs that are appropriate for the activities that will take place on the site and elements of a Storm Water Pollution Prevention Plan (SWPPP). SWPPPs that conform to the requirements of the Construction General Permit may be accepted as a project's ESCP.

ESCP Shall include the Following:

- Methods used to minimize the foot print of disturbed area and to prevent soil compaction of outside of the disturbed area
- Methods used to protect native vegetation and trees
- Sediment and Erosion Control
- Controls to prevent tracking on and off site
- Non-storm water controls
- Materials Management
- Spill Prevention and Control
- Waste Management
- Site Risk Level as classified by the Construction General Permit
- BMP Selection Rationale including expected soil loss
- ESCP Developed and certified by QSD
- BMPs are designed by a California licensed Engineer

Additionally the City will require that the landowner or the landowner's agent include and sign the following certification statement on the ESCP:

> *"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/ or inaccurate information, failing to update the ESCP to reflect current conditions or failing to properly and/or adequately implement the ESCP may result in revocation of grading and/ or other permits or other sanctions provided by law."*

Prior to issuing a grading or building permit, The City of Walnut will verify that the construction site operators have existing coverage under applicable permits, including, but not limited to the State Water Board's Construction General Permit, and State Water Board 401 Water Quality Certification.

The City of Walnut will also develop and implement an ESCP checklist for City staff to use when conducting a document review of each ESCP.

3.4.4- BMP Implementation Requirements

The City of Walnut will develop and implement a construction site BMP program that adequately addresses the potential for construction site pollutants reaching the City's MS4. The City will utilize the Los Angeles County Department of Public Works BMP Design Manual as a technical reference for construction site operators to select, design and maintain BMPs on their construction site.

All construction sites shall undergo a risk assessment during the ESCP development process. The risk assessment shall identify a projects risk level on a low risk (Risk 1) to high risk (Risk 3) scale. The project risk assessment will be based on the potential for erosion from the site and the sensitivity of the receiving water. Receiving waters listed on the Clean Water Act (CWA) section 303(d) list for sediment or siltation are considered to be high risk. Receiving water bodies that have beneficial uses of SPWN, COLD and MIGR will also be categorized high risk. The risk assessment shall conform to the procedures defined in Appendix 1 of the California Construction General Permit. Minimum BMPs for high risk construction sites shall include BMPs identified in Table 3-3.

Table 3-3

Enhanced BMPs for High Risk Sites	
BMP Type	**BMP**
Erosion Controls	Hydraulic Mulch
	Hydroseeding
	Soil Binders
	Straw Mulch
	Geotextiles and Mats
	Wood Mulching
	Slope Drains
Sediment Controls	Silt Fence
	Fiber Rolls
	Sediment Basin
	Check Dam
	Gravel Bag Berm
	Street Sweeping and / or Vacuum
	Sand Bag Barrier
	Storm Drain Inlet Protection
Additional Controls	Wind Erosion Controls
	Stabilized Construction Entrance/ Exit
	Stabilized Construction Roadway
	Entrance/ Exit Tire Wash
	Advanced Treatment Systems
Non-Storm Water Management	Water Conservation Practices
	Dewatering Operations (Ground water dewatering only under NPDES Permit No. CAG994004)
	Vehicle and Equipment Washing
	Vehicle and Equipment Fueling
	Vehicle and Equipment Maintenance
Waste Management	Material Delivery and Storage
	Stockpile Management
	Spill Prevention and Control
	Solid Waste Management

BMPs identified in Table 3-4 and the List of Minimum BMPs for Paving Projects shall be utilized for all construction sites of one acre or more and paving projects.

Table 3-4

Applicable Set of BMPs for All Construction Sites	
BMP Type	**BMP**
Erosion Controls	Hydraulic Mulch
	Hydroseeding
	Soil Binders
	Straw Mulch
	Geotextiles and Mats
	Wood Mulching
Sediment Controls	Fiber Rolls
	Gravel Bag Berm
	Street Sweeping and / or Vacuum
	Storm Drain Inlet Protection
	Scheduling
	Check Dam
Additional Controls	Wind Erosion Controls
	Stabilized Construction Entrance/ Exit
	Stabilized Construction Roadway
	Entrance/ Exit Tire Wash
Non-Storm Water Management	Vehicle and Equipment Washing
	Vehicle and Equipment Fueling
	Vehicle and Equipment Maintenance
Waste Management	Material Delivery and Storage
	Spill Prevention and Control

Paving Project Minimum BMPs

- Restrict paving and re-paving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions.
- Install gravel beds and filter fabric or to the equivalent inlet protection at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat.
- Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or receiving waters.
- Minimize non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
- Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
- Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly.
- Cover the “Cold-mix” asphalt (i.e. per-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm.
- Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
- Minimize airborne dust by using water spray or other approved dust suppressants during grinding.

Paving Project Minimum BMPs (continued)

- Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or receiving waters.
- Protect stockpiles with a cover or sediment barriers during rain.

All ESCPs submitted to the City shall include BMP cut sheets, design guidelines and maintenance expectations that are approved by the City of Walnut. BMPs design guidelines shall conform to the Los Angeles County Department of Public Works BMP Design Manual or a City approved equal.

3.4.5- Construction Site Inspection

The construction site inspection program is critical to the Development and Construction Program. Construction site inspections aid the City in verifying and enforcing the requirements of an ESCP or standard practices focused on maintain water quality in the City. The City of Walnut will continue to implement a construction site inspection program and train inspectors on NPDES related concerns that may originate from construction sites.

Inspection frequencies will vary based on construction site size and activities. Sites of one acre or larger that discharge to a receiving water listed on the CWA section 303(d) for sedimentary or turbidity list, or determined to pose a significant threat to water quality shall be inspected at minimum, prior to a rain event of two or more consecutive days with greater than 50% chance of rain fall forecasted by NOAA, within 48 hours of a ½-inch rain event and at least once every two weeks. All other construction sites of one acre or more shall be inspected at least monthly.

The City will inspect construction sites during all phases of construction. The first inspection will take place prior to disturbance of soil to ensure that all required BMPs are in place. Site inspections shall also take place during active construction activities to ensure that all applicable BMPs are in place and properly maintained. A final inspection shall take place as a condition of, and prior to issuing a Certificate of Occupancy. The final inspection will confirm that the site has reached final stabilization and that all temporary erosion and sediment BMPs are removed.

Construction site inspections shall include:

- Verification of active coverage under the Construction General Permit (sites >1 acre)
- Review of applicable ESCP and verification of installation of all selected BMPs
- Assessment of appropriateness of the planned and installed BMPs
- Observation of record keeping of non-storm water discharges
- Development of a written or electronic inspection report
- Tracking of inspections

When a site inspection results in observed deficiencies in an ESCP implementation or other NPDES related requirements, the City will notify the construction site operator of the issues identified. The site operator will be assigned a reasonable time period to fix the issue prior to the enforcement being escalated through the progressive enforcement policy.

3.5- Public Agency Activities

The City of Walnut is required to develop and implement a Public Agency Activities Program. It is the intent of this program to minimize storm water pollution impacts from city owned or operated facilities and activities. The program will also identify opportunities to reduce storm water pollution impacts from areas of existing development.

Requirements for Public Facilities and Activities Program shall include the following:

- Public Construction Activities Management
- Public Facilities Inventory
- Inventory of Existing Development for Retrofitting Opportunities
- Public Facility and Activity Management
- Vehicle and Equipment Wash Areas
- Landscape, Park, and Recreational Facilities Management
- Storm Drain Operational and Maintenance
- Emergency Procedures
- Municipal Employee and Contractor Training

3.5.1- Public Construction Activities Management

The City of Walnut's public construction activities shall conform to the Planning and Development (Section 3.3) and Development Construction Programs (Section 3.4) included in this document. The City will require that all contractors and construction related activities that take place under a City contract will conform to the requirements of the MS4 Permit and the California Construction General Permit.

3.5.2- Public Facility Inventory

The City will develop an inventory of all City owned or operated facilities that are potential sources of storm water pollution within its jurisdiction. Facilities that are required to be tracked are as follows:

- Chemical Storage Facilities
- Composting Facilities
- Equipment Storage and Maintenance Facilities
- Fueling or Fuel Storage Facilities
- Material Storage Yards
- Pesticide Storage Facilities
- Fire Stations
- Public Restrooms
- Public Parking Lots
- Public Pools
- Public Parks
- Public Works Yard
- Vehicle Storage and Maintenance Yards
- Storm Water Management Facilities
- All Other City Owned Facilities

Not all of the facilities listed in the MS4 Permit are included in the above list. City owned facilities excluded from the list are not found within the City's jurisdiction.

Of the facilities identified in this document, the following minimum information shall be tracked by the City:

- Name of the Facility
- Name of the Facility Manager
- Address of the facility (physical and mailing)
- Narrative of the activities performed at the site
- If the site has coverage under the Industrial General Permit

The City will update the inventory at least once during the five year term of the MS4 Permit.

3.5.3- Inventory of Existing Retrofitting Opportunities

The MS4 Permit requires that Permittees develop an inventory of retrofitting opportunities with in the public right of way. The inventory of retrofitting opportunities will be utilized by permittees when considering potential projects. All opportunities considered for retrofitting are required to undergo a screening process. Factors that may be considered when screening a project are outlined below.

- Feasibility
- Cost Effectiveness
- Pollution Removal Effectiveness
- Tributary Area Potentially Treated
- Maintenance Requirements
- Land Owner Cooperation
- Neighborhood Acceptance
- Aesthetic Qualities
- Potential Improvements to Public Health and Safety

Projects determined to have high levels of feasibility and effectiveness in water quality improvement shall be given the highest priority for implementation. High priority projects should be considered when off-site mitigation is required for a re-development or new development project. The City of Walnut will work with residents and land owners to develop and implement an effective retrofitting program. The City will educate residents and landowners of the benefits for implementing BMPs through the education and outreach program. City staff will work with owners of development projects subject to the requirements of the LID Ordinance to ensure that feasible opportunities for water quality improvement are maximized. At the discretion of the City, retrofit projects may also be included in other public infrastructure projects.

3.5.4- Public Agency Facility and Activity Management

Permittees are required to obtain coverage under the Industrial General Permit for all permittee owned or operated facilities that require coverage based on activities that take place at the sites. The City of Walnut does not currently have any public facilities that require separate coverage under the Industrial General Permit.

All other City owned or operated sites shall implement activity based BMPs identified in Table 3-5:

Table 3-5

BMPs for Public Agency Facilities and Activities	
Activity	**BMP**
General BMPs	Scheduling and Planning
	Spill Prevention and Control
	Sanitary/Septic Waste Management
	Material Use
	Safer Alternative products
	Vehicle/Equipment Cleaning, Fueling and Maintenance
	Illicit Connection Detection, Reporting and Removal
	Illegal Spill Discharge Control
	Maintenance Facility Housekeeping Practices
Flexible Pavement	Asphalt Cement Crack and joint Grinding/ Sealing
	Asphalt Paving
	Structural Pavement Failure (Digouts) Pavement Grinding and Paving
	Emergency Pothole Repairs
	Sealing Operations
Rigid Pavement	Portland Cement Crack and Joint Sealing
	Mudjacking and Drilling
	Concrete Slab and Spall Repair
Slope/Drains/ Vegetation	Shoulder Grading
	Non-landscape Chemical Vegetation Control
	Non-landscape Mechanical Vegetation Control/
	Mowing
	Nonlandscape Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal
	Fence Repair
	Drainage Ditch and Channel Maintenance
	Drain and Culvert Maintenance
Litter/ Debris/ Graffiti	Sweeping Operations
	Litter and Debris Removal
	Emergency Response and Cleanup Practices
	Graffiti Removal
Landscaping	Chemical Vegetation Control
	Manual Vegetation Control
	Landscape Mechanical Vegetation Control
	Landscape Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal
	Irrigation Line Repairs
	Irrigation (Watering), Potable and Non-potable
Environmental	Storm Drain Stenciling
	Roadside Slope Inspection
	Roadside Stabilization
	Storm Water Treatment Devices
	Traction Sand Trap Devices

Table 3-5 (Continued)

BMPs for Public Agency Facilities and Activities	
Activity	**BMP**
Bridges	Welding and Grinding
	Sand Blasting, Wet Blast with Sand Injection and Hydroblasting
	Painting
	Bridge Repairs
Other Structures	Pump Station Cleaning
	Tube and Tunnel Maintenance and Repair
	Tow Truck Operations
	Toll Booth Lane Scrubbing Operations
Electrical	Sawcutting and Loop Installation
Traffic Guidance	Thermoplastic Striping and Marking
	Paint Striping and Marking
	Raised/ Recessed Pavement Marker Application and Removal
	Sign Repair and Maintenance
	Median Barrier and Guard Rail Repair
	Emergency Vehicle Energy Attenuation Repair
Storm Maintenance	Minor Slides and Slipouts Cleanup/ Repair
Management and Support	Building and Grounds Maintenance
	Storage of Hazardous Materials (Working Stock)
	Material Storage Control (Hazardous Waste)
	Outdoor Storage of Raw Materials
	Vehicle and Equipment Fueling
	Vehicle and Equipment Cleaning
	Vehicle and Equipment Maintenance and Repair
	Aboveground and Underground Tank Leak and Spill Control

**These BMPs may not all apply to the public facilities and activities that are conducted by the City of Walnut. These have been included in the WMP to conform to the requirements of the MS4 Permit.*

3.5.5- Vehicle and Equipment Washing

All vehicle and equipment washing activities that take place at a City owned or maintained facility will conform to the requirements of the MS4 Permit. Per section VI.D.9.f of the MS4 Permit, the City of Walnut will implement and maintain applicable BMPs identified in table 3-5 of this document.

All vehicles washing of public vehicles and equipment takes place at the City yard. The City retains all runoff from washing activities in an on-site take which is emptied on an as-needed basis. The contents of the tank are hauled off site and disposed outside of the City of Walnut in accordance with all local and state requirements.

No vehicle or equipment maintenance takes place at a City owned or operated facility. City staff are trained to address spills and prevent discharge of pollutants to the MS4. The City also works with Los Angeles County Fire and Public Works to provide spill response for spills that are beyond the City's ability to mitigate.

3.5.6- Landscape, Park, and Recreational Facilities Management

All landscape, park and recreational facilities that are City owned or maintained will conform to the requirements of the MS4 Permit. Per section VI.D.9.g of the MS4 Permit, the City of Walnut will implement and maintain applicable BMPs identified in Table 3-5 of this document.

The MS4 Permit requires that the City implement an Integrated Pest Management (IPM) program. The intent of the IPM is to limit or prevent the impact on water quality from the use of pesticides. The IPM is required to have the following provisions:

- Pesticides are only used if monitoring indicates that they are needed, and pesticides are applied according to applicable permits and established guidelines.
- Treatments are made with the goal of removing only the target organism.
- Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial non-targeted organisms, and the environment.
- The use of pesticides, including Organophosphates and Pyrethroids, does not threaten water quality.
- Partner with other agencies and organizations to encourage the use of IPM.
- Adopt and verifiably implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and encouraging the use of IPM techniques (including beneficial insects) for Public Agency Facilities and Activities.
- Policies, procedures, and ordinances shall include commitments and a schedule to reduce the use of pesticides that cause impairment to surface waters by implementing the following procedures:
    - Prepare and annually update an inventory of pesticides used by all internal departments, divisions, and other operational units.
    - Quantify pesticides use by staff and hired contractors.
    - Demonstrate implementation of IPM alternatives where feasible to reduce pesticide use.

As part of a normal landscaping maintenance program, the City does utilize fertilizers. The City of Walnut does not use pesticides or herbicides on a regular basis. On an as needed basis, pesticides are used to eliminate fire ants and gofers. Pesticides are applied by qualified staff that have been trained on the proper application methods and potential impacts of the pesticides utilized. Pesticides and fertilizers are not applied prior to forecasted rain and irrigation is ceased during the days following application. All use of pesticides is recorded and reported to the Los Angeles County Agriculture Commission.

3.5.7- Storm Drain Operation and Maintenance

The City of Walnut is required to conform to the requirements of the section VI.D.9.h of the MS4 Permit. The City of Walnut will implement and maintain applicable BMPs identified in table 3-5 of this document.

The City has an effective trash management program in place for public events. If required, additional trash receptacles are placed throughout the area that an event is to take place. Following the conclusion of the event trash receptacles are emptied with in one business day after the event.

The City utilizes staff and volunteers in an effort to minimize trash and litter generated at an event. Sites of public events are restored to their daily operation following the conclusion of an event.

The City contracts to Los Angeles County Public Works for maintenance of the City's storm drain system and catch basins. City owned catch basins are cleaned of any trash or debris present on an annual basis prior to the start of the rainy season. Also included in the Los Angeles County Departments maintenance services is the painting of "No Dumping" messages on catch basins. There is no current Trash TMDL for the San Gabriel River thus no Catch Basin Connector Pipe Screens have been installed in the City.

The City of Walnut is required to prevent infiltration from the sanitary sewer system into the MS4. The City of Walnut utilizes the following program controls:

- Adequate plan checking for construction and new development
- Incident response training for its municipal employees that identify sanitary sewer spills
- MS4 maintenance and inspections
- Interagency coordination with sewer agencies
- Proper education of municipal staff and contractors conducting field operations on the sanitary sewer or MS4

The City of Walnut has a Sanitary Sewer management Plan (SSMP) in place to prevent or minimize the effects on receiving waters and public health from a sanitary sewer overflow. One of the measures put in place by the SSMP involves video inspection of the City's Sanitarily Sewer System. The video inspection in addition to the City's plan check and inspection system and clean up response coordination with the Los Angeles County maintenance crews are critical programs that the City utilizes to eliminate sewer leaks from infiltrating into the MS4.

The City owned treatment control BMPs shall be maintained per the requirements of the MS4 Permit. The City shall implement an inspection program that ensures that BMPs are properly maintained. The City will conduct inspections of all City owned Structural BMPs on a quarterly basis or as required by manufacture recommendations or special site conditions.

Any residual water that is produced by a treatment control BMP not being internal to the BMP performance shall be removed by an approved method. The MS4 Permit allows residual water to be hauled away and legally disposed of, applied to the land without runoff, discharged to the sanitary sewer system, or treated/filtered to remove bacteria, sediments, and nutrients to limitations identified in Table 3-6.

Table 3-6

Discharge Limitations for Dewatering Treatment BMPs		
Parameter	**Units**	**Limitation**
Total Suspended Solids	mg/L	100
Turbidity	NTU	50
Oil and Grease	mg/L	10

3.5.8- Streets, Roads and Parking Facilities Maintenance

Streets, Roads and Parking Facilities play a major role in the generation and transportation of pollutants to the MS4. The City of Walnut plans to utilize aggressive programs to limit or reduce the contamination of surface flow water in an effort.

The City of Walnut has classified all of the street segments in the City as "Priority C" streets. The City is predominately single family residential developments which generate low volumes of trash and debris. Priority C streets are required to be swept at least once per year, however the City of Walnut utilizes a bi-monthly street sweeping frequency for all of the streets in the City's jurisdiction.

Road reconstruction shall include the following BMPs:

- Restrict Paving and repaving activity to exclude periods of rainfall of predicted rainfall unless required by emergency conditions.
- Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat.
- Prevent the discharge of release agents including soybean oil, other oils or diesel into the MS4 or receiving waters.
- Prevent non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
- Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
- Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly.
- Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused recycled or disposed of properly.
- Cover the "cold-mix" asphalt with protective sheeting during a rain storm.
- Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
- Minimize airborne dust by using water spray during grinding.
- Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in our near MS4 or receiving waters.
- Protect stockpiles with a cover or sediment barriers during a rain.

City owned or operated parking lots exposed to storm water shall be kept clear of debris and excessive oil buildup and cleaned no less than two times per month on the same schedule as the City's street sweeping.

3.5.9- Emergency Procedures

The City of Walnut is a Contract City and depends on outside agencies or contractors to provide maintenance services. In the event of an NPDES emergency, the City will contact the applicable agency

or contractor that the City contracts with for maintenance services that are related to the emergency. Contact information is distributed to City staff and residents.

NDPES Emergency Contacts- City of Walnut

Emergency Contacts for the City of Walnut:		(909) 595-7543
Los Angeles County Sewer Maintenance District:		(800) 675-HELP
Los Angeles County Department of Public Works:		(888) CLEAN-LA
Los Angeles County Fire Department:	Non-Emergency	(909) 595-3001
	Emergency	911

The MS4 Permit allows for permittees to conduct repairs essential to public service systems and infrastructure in emergency situations with a self-waiver of the provisions of the order as follows:

- The City shall abide by all other regulatory requirements, including notification to other agencies as appropriate.
- Where the self-waiver has been invoked, the City of Walnut shall submit to the Regional Water Board Executive Officer a statement of the occurrence of the emergency, an explanation of the circumstances, and the measures that were implemented to reduce the threat to water quality, no later than 30 business days after the situation of emergency has passed.
- Minor repairs of essential public services systems and infrastructure in emergency situation (that can be completed in less than one week) are not subject to the notification provisions. Appropriate BMPs to reduce the threat to water quality shall be implemented.

3.5.10- Employee and Contractor Training

The City of Walnut has implemented an employee training program that targets job specific and general BMP training to City maintenance staff. City staff receive training on NPDES related topics and procedures at least once per year.

The City's training program address the potential for pesticide-related surface water toxicity, proper use and disposal of pesticides, least toxic methods of pest prevention and control and the reduction of pesticide use.

3.6- Illicit Connection and Illicit Discharge Elimination Program

The City of Walnut is required to develop and implement an illicit connection and illicit discharge elimination program. The program will be utilized by City staff to identify and eliminate illicit connections and discharges to the MS4. MS4 discharges containing illicit connections and discharges have been known to contain pollutants which may cause or contribute to the impairment of a receiving water body. The program shall include the following components:

- Procedures for conducting source investigations for IC/IDs
- Procedures for eliminating the source of IC/IDs
- Procedures for public reporting of illicit discharges

- Spill response plan
- IC/IDs education and training for Permittee staff

3.6.1- Illicit Discharge Source Investigation and Elimination

The City of Walnut will make a reasonable effort to initiate an illicit discharge source investigation as soon as staff receives notification of an event. All reports of illicit discharges will be investigated. As required by the MS4 Permit, the City will initiate an illicit discharge source investigation within 72 hours of becoming aware to the illicit discharge. Investigations will be conducted by available qualified City or County Staff in the applicable department based on the initial details reported.

Illicit discharges suspected to contain sanitary sewage shall be the highest priority for investigation. The source of sanitary sewer discharges should be traced back to the point of origination and stopped immediately if possible. Discharges of sanitary sewage from the sanitary sewer system shall be differed to Los Angeles County Sewer Maintenance District. The City has a Sewer System Management Plan (SSMP) in place to address sanitary sewer overflows (SSOs). The City of Walnut, as a member of the Consolidated Sewer Maintenance District (CSMD) utilizes the County reporting hotline 1-800-675-HELP (4357) for sewer related emergencies. The SMD reporting hotline is posted on the City website for residents should an event occur after business hours. City Staff are also trained to contact SMD if a report is received directly by the City.

The City will track all reports and investigations of illicit discharges that are determined to originate from or enter the jurisdictional area of the City of Walnut. Minimum information included in the City's tracking program is as follows:

- Date and time of observed illicit discharge
- Location of observed illicit discharge
- Results of the investigation
- Date the investigation was closed

Illicit discharge inspection and response procedures shall conform to the following:

1. Following receipt of a reported illicit discharge qualified staff will be directed to investigate as soon as possible but no later than 72 hours after initial receipt of the report.
   a. Suspected discharge from construction site, private residents, or commercial site: Staff shall contact the on call building inspector to conduct an investigation.
   b. Suspected discharge from public works project site: Staff shall contact the City Engineer's office. The project manager will conduct an investigation or coordinate with the public works inspector to investigate.
   c. Suspected Hazmat discharge: Staff shall contact Los Angeles County Fire Department. Station 61 is located at 20011 La Puente Road, Walnut. Phone:(909) 595-3001; Emergency: 911
   d. All other suspected discharges: Staff shall contact Los Angeles Flood Control District at 1-888-CLEAN-LA.
2. Staff dispatched to the reported discharge site shall conduct an investigation and if possible identify the source of the discharge.

3. Dispatched staff shall notify the responsible party of the issue and require that corrective measures are taken to eliminate the illicit discharge. It shall be noted by staff if the illicit discharge has made it to the MS4 by catch basin or other route.
4. The City shall conduct a follow up investigation following the elimination of the illicit discharge to confirm that the illicit discharge is eliminated and that the site has been cleaned to the satisfaction of the City.
5. If the source is determined to be upstream from the City's jurisdiction, staff dispatched to the site shall report back to the City's Community Services Department staff. City staff will provide notice of the illicit discharge to the agency as soon as possible. City staff will notify in writing the upstream agency and the Regional Board of the illicit discharge no later than 30 days following the determination of the discharge origination.
6. If the source of an ongoing illicit discharge is unidentified the City shall proceed with the required actions identified in section VI.D.10.v of the MS4 Permit.

3.6.2- Illicit Connection Source Investigation and Elimination

The City of Walnut will make a reasonable effort to initiate an illicit connection source investigation as soon as staff receives notification. As required by the MS4 Permit, the City will initiate an illicit connection source investigation within 21 days of becoming aware of the illicit connection. Investigations will be conducted by available qualified City or County Staff.

During the initial investigation of a reported or identified illicit connection, Staff shall record the following conditions:

- Source of the connection
- Nature and volume of discharge from the connection
- Responsible party for the connection

Upon confirmation that the reported/identified connection is illicit the City shall ensure that the connection is permitted and documented only if the connection discharges storm water and exempt or conditionally exempt non-storm water discharges allowed under the MS4 Permit or other individual or general NPDEs permits. If the illicit connection does not qualify for undergoing the permitting or documentation option it shall be eliminated within 180 days of completion of the investigation. Formal enforcement authority shall be used if necessary, to eliminate the illicit connection. All illicit connection investigations shall be documented.

3.6.3- Public Reporting of Non-Storm Water Discharges and Spills

The City of Walnut publicizes and promotes the importance of public reporting of illicit discharges on the City's website and through the public outreach and education program. The City participates in the Los Angeles County Reporting hotline, and has made the hotline number available through the City website, quarterly mailers, and education materials. The City of Walnut has also implemented and will continue to maintain signage adjacent to open channels or creeks that display information regarding dumping prohibitions.

City staff will be trained to document all reports of complaint calls received by the City. Complaints will be documented and tracked. The City will investigate all complaints in a timely manner and will include the results and follow up actions if needed on the tracking system selected by the City to document complaints.

3.6.4- Spill Response Plan

The City of Walnut is a Contract City. Upon receipt of a complaint or notice of an illicit discharge during normal business hours the City will determine based on the details reported to either dispatch an inspector to investigate or forward the complaint to Los Angeles County. The County reporting hotline is available to residents and City Staff.

Once reported to Los Angeles County through the reporting hotline. County hotline operators direct the call to the appropriate maintenance crew. The County crew will then be dispatched to the location reported to address the issue identified.

3.6.5- Illicit Connection and Illicit Discharge Education and Training

The City of Walnut will continue to train all City staff on the critical impact that illicit discharges and connections play in MS4 discharge water quality. Field staff will receive annual training to reinforce how to recognize an illicit discharge or connection. Field staff will also receive training on the City's procedures for documenting and reporting illicit discharges and connections.

City field staff will be trained to properly eliminate and cleanup a site of an illicit discharge. City staff will only be trained to address sediment related illicit discharges that have not made it into the MS4. All other illicit discharges will be referred to the Los Angele County Department of Public Works reporting hotline. The City of Walnut is a contract City and relies on the Los Angeles County Department of Public Works for spill response related to illicit discharges that are beyond the City's ability to address.

4.0- Reasonable Assurance Analysis

The Permit allows an agency to customize their storm water programs through the development and implementation of a Watershed Management Program to demonstrate compliance with relevant receiving water limitations through a Reasonable Assurance Analysis. Following the adoption of the Permit, the City of Walnut elected to develop an individual WMP.

The Permit specifies that a viable RAA must identify a suite of best management practices, both structural and non-structural, that demonstrates compliance with appropriate water quality standards as developed through applicable Total Maximum Daily Loads and other Permit limitations (water quality based effluent concentrations, receiving water limitations, and water quality objectives).

This section summarizes the City of Walnut's RAA approach and results of the following steps:

- Setting target load reductions based on Permit limitations;
- Modeling identified structural BMPs and quantifying their associated load reductions;
- Demonstrating, with reasonable assurance, that target load reductions (and therefore Permit limitations) can be met by the final compliance dates; and
- Phasing of structural and non-structural BMPs to achieve interim milestones.

The RAA modeling approach presented herein conforms to Part VI.C.5.b.iv(5) of the Permit, which states:

> *"Permittees shall conduct a Reasonable Assurance Analysis for each water body-pollutant combination addressed by the [WMP]. [The] RAA shall be quantitative and performed using a peer-reviewed model in the public domain. Models to be considered for the RAA, without exclusion, are the Watershed Management Modeling System (WMMS), Hydrologic Simulation Program-FORTRAN (HSPF), and the Structural BMP Prioritization and Analysis Tool (SBPAT)…. The objective of the RAA shall be to demonstrate the ability of [the WMP] to ensure that Permittees' MS4 discharges achieve applicable water quality based effluent limitations and do not cause or contribute to exceedances of receiving water limitations."*

The Regional Board has developed a guidance document titled, "Guidelines for Conducting Reasonable Assurance Analysis in a Watershed Management Program, Including an Enhanced Watershed Management Program (March 25, 2014)." Although the guidance document presents guidelines and not necessarily requirements, the results of the RAA presented in this section have been developed to conform to the Regional Board guidance document where appropriate. The approach outlined in this section was presented to the Regional Board by Geosyntec during meetings on January 30, 2014 and April 9, 2014 (each for other Watershed Management Groups) and was found to be consistent with their guidelines.

4.1- Dry Weather RAA

The City of Walnut's dry weather compliance approach is to eliminate 100% of non-exempt dry weather MS4 discharges using a suite of non-structural source controls (e.g., water conservation incentives, enhanced IC/ID efforts, and enhanced education/outreach and inspection/enforcement to prevent non-sources of storm water flow) and source investigations following dry weather outfall screening. By eliminating flows, this is equivalent to 100% load reduction for all pollutants, thereby demonstrating reasonable assurance of meeting all applicable Permit limitations during dry weather. Elimination of discharges is a pathway for compliance with RWLs and WQBELs in the MS4 permit (per section VI.E.2.e.i.(3)); without discharges there can be no "cause or contribute" to receiving water issues.

The remainder of the RAA addresses wet weather.

4.2- Water Body Pollutant Combinations

Permit Attachment K indicates that the Walnut Watershed Management Area (WMA) drains to two receiving water bodies, San Jose Creek to the south and Walnut Creek Wash to the north, and that the San Gabriel River and Impaired Tributaries Metals and Selenium TMDL applies to both. Both of these receiving waters are tributary to San Gabriel River Reach 3, which is itself tributary to San Gabriel River Reach 2. Permit Attachment P sets a daily waste load allocation (WLA) for lead[1] for San Gabriel River Reach 2 and all tributaries at 81.34 µg/L x daily storm volume (L) for periods when the maximum daily flow of the River is greater than or equal to 260 cfs as measured at USGS station 11085000, which is located at the base of Reach 3 above the Whittier Narrows Dam. Therefore lead in San Jose Creek and Walnut Creek Wash are the only Category 1 (Highest Priority) Water Body Pollutant Combinations (WBPCs) evaluated in this RAA.

San Jose Creek and Walnut Creek Wash are 303(d) listed for indicator bacteria. These water bodies are also listed for other pollutants including ammonia, total dissolved solids, toxicity, pH, and benthic macroinvertebrate bioassessment; however, these pollutants are either not able to be modeled given currently available datasets or are not typically associated with MS4 wet weather discharges. Therefore indicator bacteria in San Jose Creek and Walnut Creek Wash are the only Category 2 (High Priority) WBPCs evaluated in this RAA. Applicable wet weather bacteria water quality objectives used for the RAA are identified in Table 4-1.

There are no Category 3 (Medium Priority, based on other receiving water exceedances) pollutants identified by the City.

[1] For selenium, based on the 1994-2000 LA County land use monitoring dataset, selenium concentrations are below the 5 ug/L detection level – which is equivalent to the applicable CTR freshwater chronic criterion -- in 100% of the 38 single family residential (SFR) samples. These data are available at http://dpw.lacounty.gov/wmd/NPDES/Int_report/Tables/Table_4-12.pdf. In the City of Walnut, SFR is the dominant land use. Therefore we do not believe there is any evidence to link Walnut's MS4 discharges to elevated selenium concentrations that have been observed in the receiving waters, and no further response actions are proposed.

Table 4-1

Bacteria Objectives Used for the Walnut RAA		
Receiving Water Segment	**Recreational Beneficial Use**	**Water Quality Objective**
San Jose Creek	REC1 (potential) and REC2 (intermittent) with High Flow Suspension*	400/100mL fecal coliform* (single sample limit)
Walnut Creek Wash	REC1 (intermittent), REC2 (intermittent)	400/100mL fecal coliform* (single sample limit)

REC1 = water contact recreation

REC2 = non-water contact recreation

* While the REC1 fecal coliform objective was removed from the Los Angeles Basin Plan through Order R10-005, fecal coliform is used in this RAA as the modeling surrogate for *E. coli* due to its more robust modeling input datasets. Therefore, the old REC1 objective for fecal coliform (400 mpn/100mL) is used in this RAA for setting target load reductions, and this objective is considered equally protective of public health to the 235 mpn/100mL REC1 objective for *E. coli* based on illness relationships reported in the 1986 USEPA recreational water quality criteria documents.

There are no Category 3 (Medium Priority, based on other receiving water exceedances) pollutants identified by the City.

4.3- Target load Reductions, Critical Conditions

The Regional Board's RAA guidance document requires that RAAs consider critical conditions when evaluating load removals for structural and non-structural BMPs. For bacteria, the critical condition is defined as the 90th percentile TMDL year (Nov 1-Oct 31, consistent with various Los Angeles region bacteria TMDLs). For lead, the critical condition, based on the metal TMDL WLA, is defined as the 90th percentile daily lead load for metal TMDL wet days (i.e., days with measured flowrates in the river above a certain threshold). The 90th percentile bacteria TMDL year for the Walnut WMA, based on both number of bacteria TMDL wet days (i.e., days with 0.1 inch of rain and the three days that follow, a definition taken from Los Angeles region bacteria TMDLs) and total rainfall depth, is 1993.[2] This is based on the most representative Los Angeles County Flood Control District precipitation gauge, or Mt. San Antonio College Station (D255), for the 1989-2011 period[3]. This gauge location is shown in Figure 4-1. A data summary for this gauge for each year in this period is shown in Table 4-2.

[2] The Regional Board's definition of "TMDL year" (for example, as used in the Los Angeles River Bacteria TMDL), was used throughout this RAA. For 1993, this is November 1, 1992 to October 31, 1993.

[3] The period of Nov 1, 1988 to Oct 31, 2011 (TMDL years 1989-2011) is based on the range of precipitation data available in Los Angeles County's WMMS model. The model contains data between 1/28/1986 and 4/26/2012, but the model requires at least one year of "spin-up" time from initial conditions, and only whole TMDL years were used. Therefore, TMDL years 1989-2011 were chosen as the representative period for model outputs.

Wet days for lead are defined in the San Gabriel River metals TMDL as days in which the maximum daily flow at USGS gauge 11085000 is 260 cfs or greater; this value was set in the TMDL based on the 90th percentile flows at this gauge between 1990 and 2005. The 90th percentile daily lead load for wet days in the November 1, 1989 to October 31, 2011 period was determined based on modeling output as described below. An electronic file with daily model-predicted lead loads for the entire period at the outlets to San Jose Creek and Walnut Creek Wash, as well as at all catchments within the model domain is available .

Table 4-2

Annual Rainfall and Number of Wet Days at Mt. San Antonio College Station Rain Gauge for TMDL years 1989-2011

TMDL Year	Annual Rainfall Depth (inches)	Percentile by Rainfall Depth (%)	Number of Bac. TMDL Wet Days*	Percentile by Number of Wet Days(%)
1989	6.12	5%	68	68%
1990	9.01	23%	49	27%
1991	18.68	68%	45	5%
1992	25.24	86%	70	73%
1993	**26.67**	**91%**	**77**	**91%**
1994	8.81	18%	67	64%
1995	24.74	77%	75	82%
1996	18.12	64%	54	45%
1997	14.61	45%	52	36%
1998	33.23	100%	118	100%
1999	4.76	0%	46	9%
2000	11.12	32%	47	14%
2001	15.6	50%	48	23%
2002	8.69	14%	41	0%
2003	16.33	55%	47	14%
2004	20.11	73%	63	59%
2005	25.13	82%	93	95%
2006	10.47	27%	62	55%
2007	6.34	9%	49	27%
2008	17.56	59%	53	41%
2009	11.52	36%	59	50%
2010	29.88	95%	72	77%
2011	11.88	41%	76	86%

*Wet days for bacteria are days in which 0.1" or greater rainfall occurs plus the three days following as defined in various Los Angeles area Bacteria TMDLs.

Los_Angeles P:\GIS\Projects\LA0305\Fig1-RainGageLocation.mxd SM 20150107

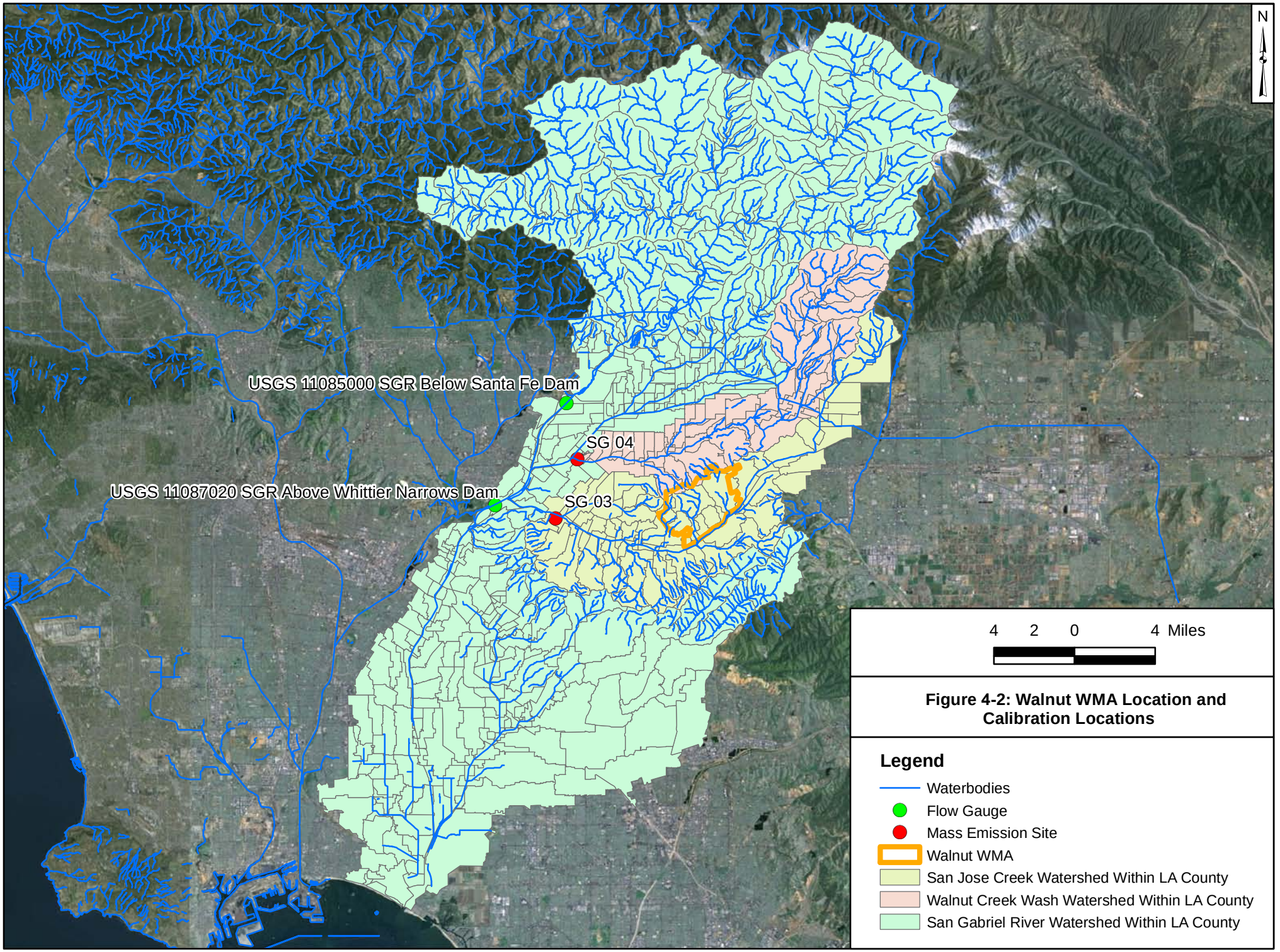


Figure 4-2: Walnut WMA Location and Calibration Locations

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4.4- Baseline Loads, Critical Conditions

The Los Angeles County Loading Simulation Program C++ (LSPC) model was used to compute baseline and allowed loads, and to determine target load reductions for the RAA. The Los Angeles County LSPC model is a publically available watershed model that was developed for Los Angeles County in connection with the greater Watershed Management Modeling System (WMMS) framework. LSPC uses Hydrologic Simulation Program Fortran (HSPF) algorithms to simulate hydrology, sediment transport, water quality, and the fate and transport of pollutants within receiving waters and through a watershed. GIS is used for the spatial component of the analysis as well as general visualization. WMMS' LSPC model has been calibrated for hydrology as well as water quality in the San Gabriel River Watershed. Default model settings and input parameter values were not changed for this project, therefore the original County calibration results still apply and are summarized here to the extent that documentation exists for the San Gabriel River Watershed. Additional documentation regarding the development and calibration of LSPC within the greater WMMS modeling framework can be found in the Los Angeles County Department of Public Works' WMMS portal (Los Angeles County DPW, 2010c).

The original County hydrology calibration of the LSPC model was done by comparing predicted flow rates with measured values at 30 stream gauge locations throughout Los Angeles County including four locations within the San Gabriel River Watershed (Los Angeles County Department of Public Works, 2010a). Areas with a single or dominant land use were calibrated first to establish attributes for that land use throughout the rest of the county. Attributes for other land uses were then calibrated using areas where the previously calibrated land uses had fixed attributes. Point sources and hydromodification features (such as dams and spreading grounds) were then calibrated once all land use attributes were calibrated. Analyses included both graphical and statistical comparisons of model prediction with measured stream gauge data, including comparisons of mean daily, monthly, and seasonal flow as well as flow exceedance probabilities.

The County calibrated the LSPC model for water quality in much the same way, where an area with a dominant land use was calibrated first, then the attributes of that land use were held fixed to calibrate the other land uses (Los Angeles County Department of Public Works, 2010b). Predicted pollutant concentrations were compared with land-use specific water quality data collected by the Southern California Coastal Water Research Project (SCCWRP) (SCCWRP, 2007) in order to adjust model input parameters for each pollutant for each land use. The County water quality calibration report includes visual comparisons only. The model was validated by comparing predicted versus measured water quality data for receiving water mass emission sites, again using measured data collected by SCCWRP.

The Walnut WMA represents 1.3% of the overall San Gabriel River watershed area (Figure 4-2). No stream gauge or mass emission site exists that represents stormwater discharges exclusively from the Walnut WMA. The nearest downstream flow gauge (USGS gauge #11087020 is located 10 miles downstream and drains an area 49 times larger than the Walnut WMA. The County used two San Gabriel River stream gauges for hydrology calibration of the LSPC model: one immediately upstream of the confluence with Walnut Creek Wash (USGS gauge #11085000 San Gabriel River below Santa Fe Dam near Baldwin Park, CA) and one immediately downstream of the confluence with San Jose Creek (USGS gauge #11087020 San Gabriel River above Whittier Narrows) (Figure 4-2). Although both of

these gauges were used for calibration of the model, the calibration statistics are only provided in the County hydrology calibration report for the downstream gauge. At this location, an average difference of 12.4% was computed based on a comparison between predicted and measured total volumes between October 1, 1986 and September 30, 1992 (Los Angeles County Department of Public Works, 2010a). For comparison, the RAA guidelines provided by the Los Angeles Regional Water Quality Control Board (LARWQCB) state that a difference between predicted and measured values of 10-15% is "good" for hydrology and flow (LARWQCB, 2014). An excerpt from the calibration report showing the mean daily and mean monthly flows measured at the stream gauge versus those predicted by the model is shown in Figure 4-3.

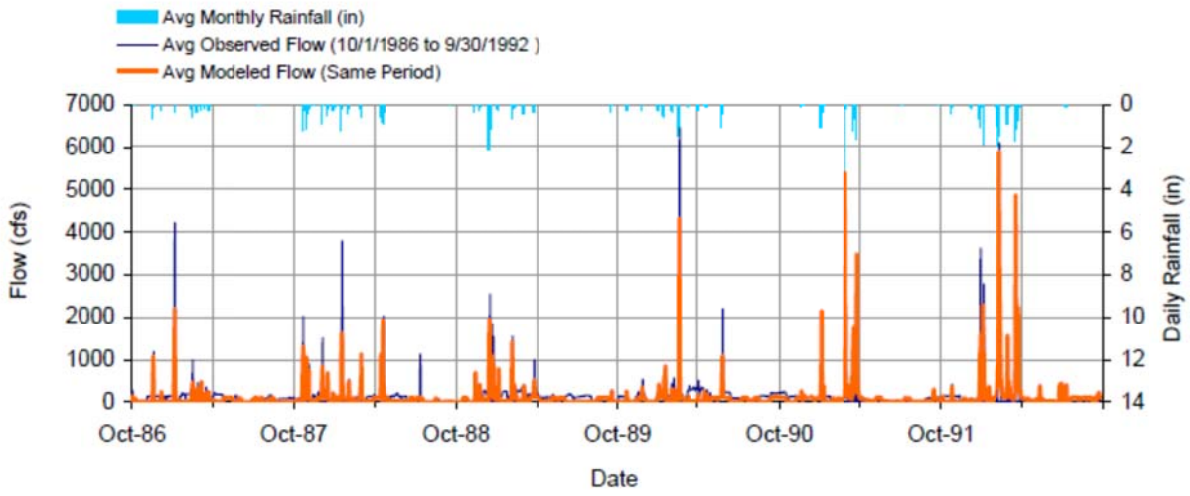

Figure F-1. Mean daily flow: Model Outlet 5156 vs. USGS 11087020 San Gabriel R Ab Whittier Narrows Dam CA

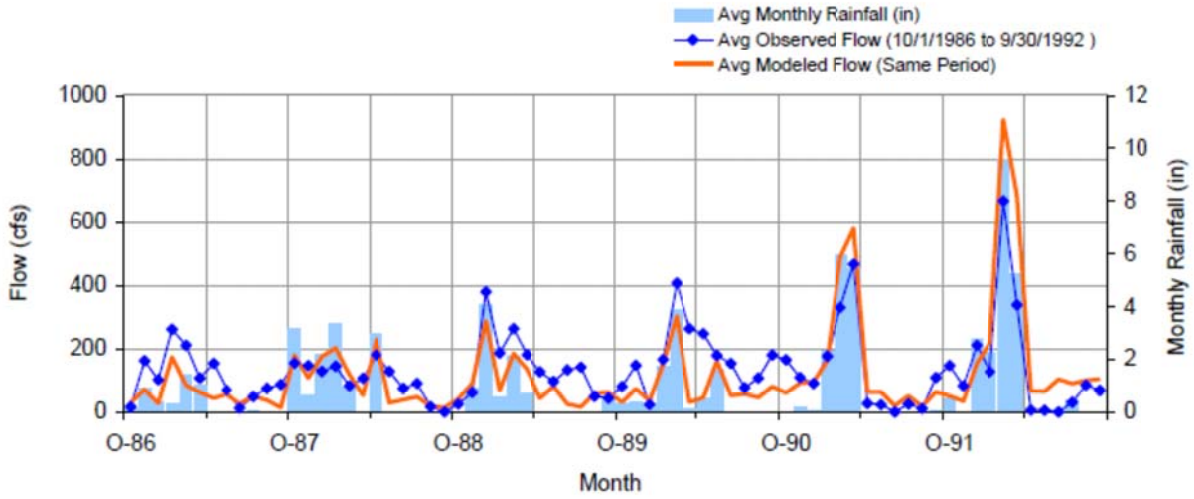

Figure F-2. Mean monthly flow: Model Outlet 5156 vs. USGS 11087020 San Gabriel R Ab Whittier Narrows Dam CA

Figure 4-3: LSPC Predicted vs Measured Stream Flow Rates. (Figure from Los Angeles County Department of Public Works, 2010a)

For water quality calibration, the County's water quality calibration report evaluates four locations in the San Gabriel River Watershed, including mass emission sites on San Jose Creek (SG03) and Walnut Creek Wash (SG04), each located downstream of the WMA (Figure 4-2) (Los Angeles County Department of Public Works, 2010b). SG03 is located approximately 7 miles downstream of the WMA and has a drainage area of 85 square miles, of which the WMA makes up less than 10%. SG04 is located approximately 5.5 miles downstream of the WMA and has a drainage area of 59 square miles, of which the WMA makes up approximately 1%. Each site had 19-20 lead and 27-29 total coliform bacteria samples collected by SCCWRP between 2004 and 2005, which were used for model validation (as described earlier, SCCWRP land use monitoring sites were used for model water quality calibration). A time series of the predicted lead concentrations compared with measured concentrations at these mass emission sites is shown in Figures 4-4 and 4-5.

Through the WMP adaptive management process, as monitoring data from the Walnut WMA become available, the RAA models will be recalibrated – thus better reflecting site specific conditions – and the RAA results will be revised.

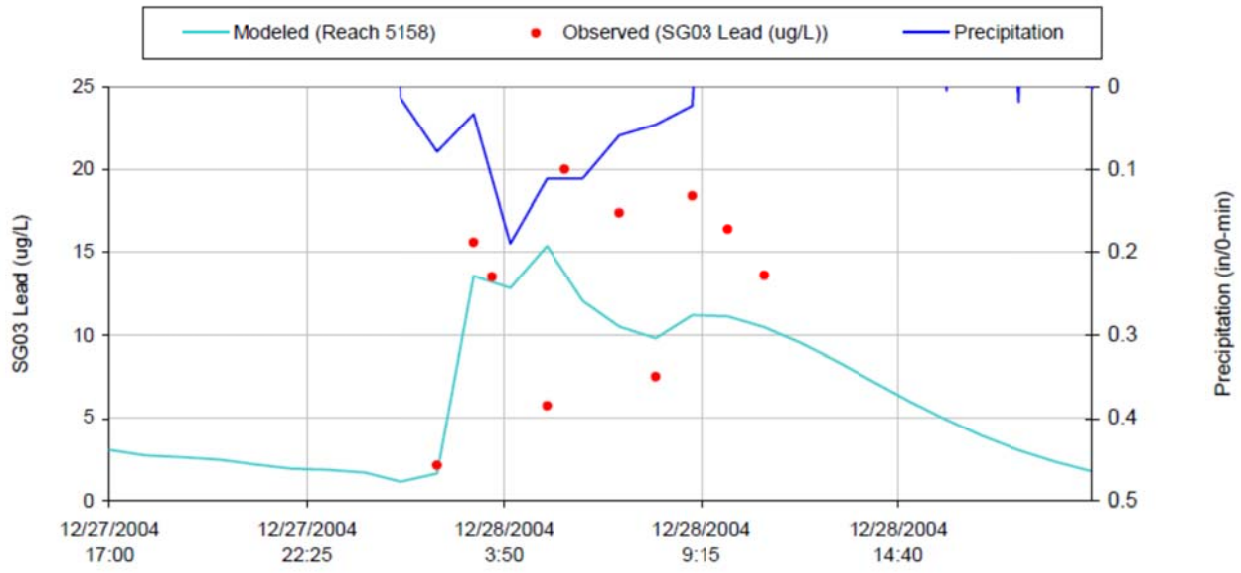

Figure 4-4: LSPC Predicted vs Measured Lead Concentrations at Mass Emission Site SG 03. (Figure from Los Angeles County Department of Public Works, 2010b)

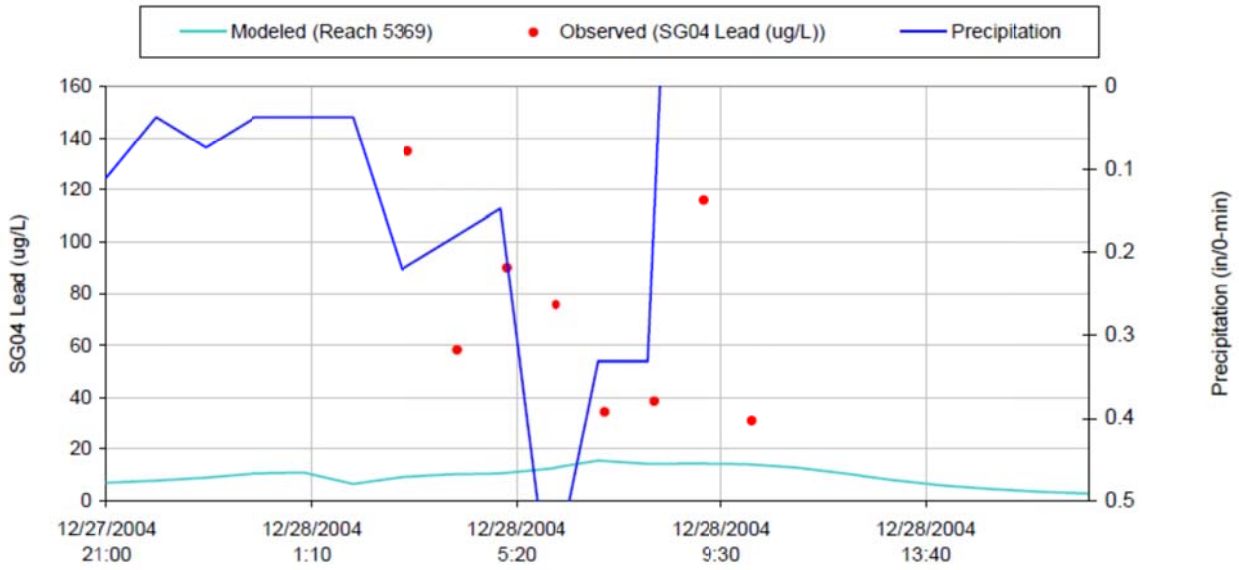

Figure 4-5: LSPC Predicted vs Measured Lead Concentrations at Mass Emission Site SG 04. (Figure from Los Angeles County Department of Public Works, 2010b)

4.4.1- Methodology

The County LSPC model's catchments were clipped to the boundary of the Walnut WMA. Figure 4-6 presents revised LSPC model catchments, storm drains, and receiving waters for the WMA. The majority of the WMA (93%) drains towards San Jose Creek.

LSPC land uses in the San Gabriel River Watershed are unchanged from the County's published LSPC model, and represent 2000 conditions. While new development has occurred in the City since 1996 (and therefore this developed area isn't captured by the existing LSPC model), the stormwater impacts of this development have been at least partially mitigated through Standard Urban Stormwater Management Plan (SUSMP) implementation consistent with requirements from the 2001 MS4 permit.

In order to establish baseline (or existing condition) pollutant loads, pollutant concentrations, and runoff volumes, a single model run without any BMPs or treatment control measures was carried out for both the San Jose Creek and Walnut Creek Wash sides of the WMA. Baseline bacteria loads (modeled using fecal coliform[4]) were predicted for the 90th percentile TMDL year by rainfall. Baseline lead loads were predicted for the 90th percentile lead load wet day, using the metals TMDL definition of wet day where the measured flow at USGS gauge #11085000 was 260 cfs or greater. These dates were found to be 5/10/1998 for both San Jose Creek and Walnut Creek Wash. Baseline predicted loads for both fecal coliforms and lead are shown in Table 4-3. LSPC-predicted daily flows, concentrations, and volumes for individual as well as summed catchments that drain to San Jose Creek and Walnut Creek Wash for the entire November 1, 1989 to October 31, 2011 modeling period, along with the LSPC modeling files, are available.

[4] Fecal coliform is used as the representative indicator bacteria for RAA modeling given its relatively larger land use event mean concentration datasets and given that it is the basis for the REC2 objective, which is the applicable recreational use for the water body that most of the City drains to.

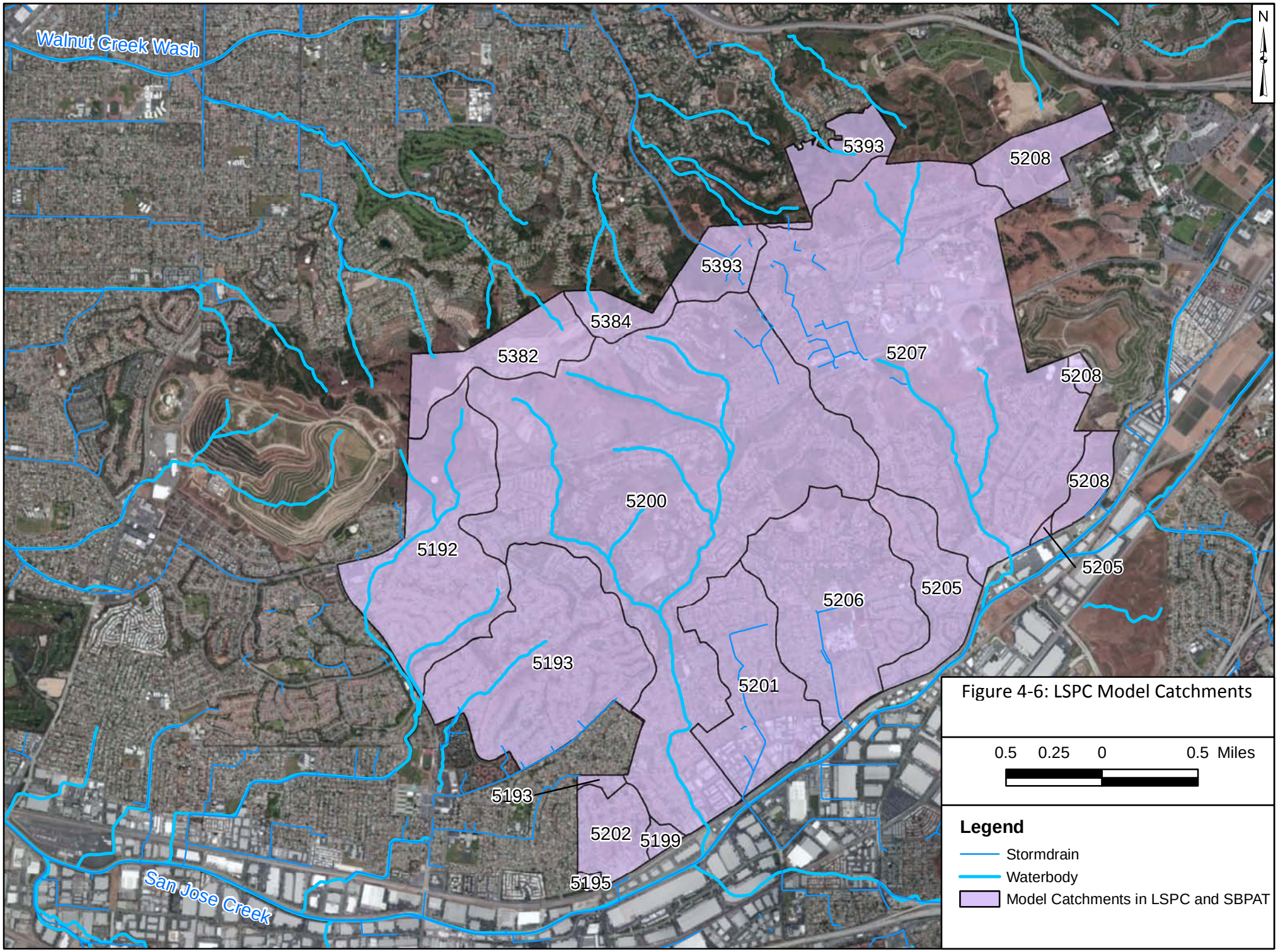

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Table 4-3

Baseline Loads Derived from LSPC for the Critical Condition		
Receiving Water Segment	**90th Percentile Daily Lead Load on Wet Days (lbs)**	**90th Percentile Annual Fecal Coliform Load (MPN*10^12)**
San Jose Creek	0.62 (for 5/10/1998)	436 (for 11/1/1992-10/31/1993)
Walnut Creek Wash	0.018 (for 5/10/1998)	7.4 (for 11/1/1992-10/31/1993)

4.5- Allowable Loads

4.5.1- Lead

The allowable lead load for the WMA was computed by multiplying the concentration-based WQBEL (81.34 µg/L) by LSPC-predicted runoff volumes on the wet day with the 90th percentile lead load for the areas draining to San Jose Creek and Walnut Creek Wash. For both San Jose Creek and Walnut Creek Wash, the allowable load is approximately an order of magnitude greater than the baseline load (Table 4- 4).

Table 4-4

Allowable Daily Lead Loads (Computed for the Baseline Wet Day with the 90th Percentile Lead Load)			
Receiving Water Segment	**Baseline Daily Runoff Volume (acre feet)**	**WQBEL (ug/L)**	**Allowable Daily Lead Load (lb)**
San Jose Creek	26	81.34	5.7
Walnut Creek Wash	0.81	81.34	0.18

4.5.2- Bacteria

Since there is currently no adopted bacteria TMDL for the San Gabriel River Watershed, the bacteria allowable load is based on assumed allowable exceedance day[5] (AED)-based limitations consistent with the Los Angeles River Bacteria TMDL, which allows a 19 percent wet weather exceedance percentage (of REC1 freshwater single sample objectives) based on SCCWRP reference stream monitoring data. The 90th percentile TMDL year (1993) has 77 wet days (i.e., days with 0.1 inch of rain and the three days that follow). In San Jose Creek, 30 of these days are exempt from recreational objectives through the High Flow Suspension (HFS)[6], and 19 percent of the remaining wet days (47) are allowed to exceed REC1 objectives, resulting in 9 AEDs (in addition to the HFS days). The net result for San Jose Creek is

[5] An exceedance day is a day in which bacteria concentrations exceed the applicable recreational objectives.

[6] The HFS applies during days with greater than or equal to 0.5 inches of rain and the following day.

that, of the 77 wet days that occur during 1993, 39 are allowed to exceed recreational objectives (the combination of the HFS and reference-based AEDs). For Walnut Creek Wash, consistent with the Los Angeles region bacteria TMDLs for creeks, 19 percent of the 77 wet days are allowed to exceed REC1 objectives based on average reference stream exceedance rates, resulting in 15 AEDs. For both creeks, these AEDs were used to directly calculate target load reductions through a methodology that is described in the next section. Allowable loads were then calculated by subtracting target load reductions from baseline loads. Table 4-5 summarizes the allowable loads for lead and bacteria for the 90th percentile year.

Table 4-5

Allowable Bacteria Loads for 90th percentile year	
Receiving Water Segment	**Annual Fecal Coliform Load (MPN*10^12)**
San Jose Creek	320
Walnut Creek Wash	3.6

4.6- Target Load Reductions

4.6.1- Lead

Target load reductions (TLRs) are the reduction of baseline loads needed to achieve allowable loads for the critical condition. The TLRs for lead were determined to be zero since baseline loads are already below allowable loads. The zero TLR serves as reasonable assurance demonstration that the lead WQBEL will be met in both receiving water bodies without the need for new BMPs. Therefore, quantification of BMP load reductions for lead are not reported in the BMP sections of this RAA. However, the BMPs proposed for addressing bacteria will also have a substantial load reduction benefit for lead and other metals.

4.6.2- Bacteria

TLRs for bacteria were established as the load reductions from baseline conditions that are required to decrease the number of wet-weather exceedance days (i.e., non-HFS wet days with receiving water concentrations above 400 MPN/100 mL) in the 90th percentile year to the AEDs described earlier. In order to calculate this required load reduction, a single regional retention basin was modeled at the outlets of the San Jose Creek and Walnut Creek Wash drainage areas in LSPC. Each basin was iteratively sized until the number of exceedance days was equivalent to the number of AEDs for the downstream receiving water body. Exceedance days for each basin were calculated as any non-HFS wet day with a predicted fecal coliform concentration in the basin discharge (i.e., during overflow events) that was above the applicable fecal coliform objective. Therefore, it was possible for each retention basin to overflow and not cause an exceedance as long as it either occurred on a dry day or an HFS day, or if concentrations did not exceed the criteria. Once each basin was sized appropriately so that the number of exceedance days did not exceed the allowable number of exceedance days in TMDL year 1993, TLRs

were calculated as the load reductions that were achieved by each infiltration basin. The percent reduction in the bacteria load relative to baseline was calculated by comparing the predicted annual bacteria loads from the WMA with the retention basin in place to the predicted annual bacteria loads from the WMA from the baseline conditions for the 90th percentile TMDL year. Table 4-6 summarizes the TLRs for lead and bacteria as a percentage reduction from the respective baseline loads.

Table 4-6

Target Load Reductions for the Critical Condition (as a percent of baseline load)

Receiving Water Segment	Total Lead*	Fecal Coliforms**
San Jose Creek	0%	27%
Walnut Creek Wash	0%	51%

*Applicable on the 90th percentile lead load wet day where wet days are days where the maximum flow rate at USGS 11085000 is 260 cfs or greater.

**Applicable on the 90th percentile bacteria TMDL year for number of wet days where wet days are days with 0.1" or precipitation or greater plus the next three days

4.7- Modeling assumptions for WMP Control Measures

4.7.1- BMP Model Description

SBPAT, a public domain GIS-based water quality analysis tool was used to evaluate structural BMP performance for the purposes of this RAA. SBPAT links a modified USEPA Storm Water Management Model (SWMM) hydrologic engine to a Monte Carlo analysis capable of repeated random sampling of pollutant event mean concentrations (EMCs) and BMP effectiveness distributions to obtain numerical results regarding the expected performance of a specific BMP configuration (Geosyntec Consultants, 2012). SBPAT was designed specifically for the purpose of identifying structural retrofit BMP opportunities, and quantifying their benefits and costs. Each Monte Carlo analysis typically involves 10,000 iterations of EMC lognormal distributions fitted to Los Angeles region land use EMC datasets (the same datasets that were also used to calibrate LSPC), as well as BMP effluent EMC distributions based on recent data from the International BMP Database. SBPAT's land use EMC log statistics are presented in Table 4-7. SBPAT is capable of quantifying model output variability, which is a component of the Regional Board's RAA guidance. The model:

- Calculates and tracks inflows to BMPs, treated discharge, bypassed flows, evaporation, and infiltration at a user-defined time step (e.g., 15 minutes);
- Distinguishes between individual runoff events by defining six-hour minimum inter-event times in the rainfall record, yet tracks inter-event antecedent conditions;
- Tracks volume treated by BMPs and summarizes and records these metrics by storm event; and
- Produces a table of each BMP's hydrologic performance, including concentration and load metrics by storm event, and consolidates these outputs on an annual basis.

SBPAT is specifically referenced in the MS4 Permit Part VI.C.5.b.iv and was presented at the first two Permit Group Technical Advisory Committee (TAC) RAA Subcommittee meetings. Additional information regarding SBPAT can found in the SBPAT portal at www.SBPAT.net.

Table 4-7

SBPAT Fecal Coliform Event Mean Concentrations for the Walnut WMA – Arithmetic Estimates of the Lognormal Summary Statistics (means with standard deviations in parentheses)[a]

Land Use	Fecal Coliform MPN/100mL
Single Family Residential	31,100[b] (94,200)
Commercial	51,600 (173,400)[c]
Industrial	3,760 (4,860)
Education (Municipal)	11,800[d] (23,700)
Transportation	1,680 (456)
Multi-Family Residential	11,800[e] (23,700)
Agriculture (Row Crop)	60,300 (153,000)
Vacant / Open Space	484 (806)

[a] Fecal coliform EMC statistics are calculated based on 2000-2005 SCCWRP Los Angeles region land use data (SCCWRP, 2007). These EMC datasets are summarized in the SBPAT User's Guide (Geosyntec, 2012).

[b] The fecal coliform EMC for the single-family residential land use is based on SCCWRP's dataset for "low-density residential".

[c] The default log distribution best fit summary statistics for this land use-pollutant combination produced an unreasonably high deviation, therefore the arithmetic estimate of the log mean was held constant while the log summary statistics were recomputed based on the log CoV for SFR (SCCWRP's low-density residential EMC).

[d] Multi-family residential EMC used here since educational land use site not available in the SCCWRP fecal coliform dataset.

[e] The fecal coliform EMC for the multi-family residential land use is based on SCCWRP dataset for "high-density residential". High density single-family residential land use areas are also assigned this EMC.

4.7.1- BMP Model Calibration

The LSPC-derived TLRs were expressed as *percentages* of baseline loads to allow comparison with SBPAT's BMP load reductions even if the LSPC and SBPAT baseline loads didn't exactly match. However, some input parameter adjustments were made to SBPAT to improve the comparability between SBPAT output and the County-calibrated LSPC output for the baseline condition. First, SBPAT-predicted runoff volumes were calibrated to the LSPC-predicted runoff volumes. SBPAT uses the same catchment delineations as LSPC, and the dominant rain gauge used by LSPC (which applies to 93% of the total area in the WMA) is the rain gauge used by SBPAT. SBPAT was calibrated by adjusting the saturated hydraulic conductivity rates (Ksats) of the underlying soils until the predicted annual runoff volumes for the entire 1989-2011 modeling period and for TMDL year 1993 were within 10% of the LSPC-predicted volumes (after removal of base flows), to meet the "very good" threshold from the RAA guidance calibration performance criteria. Base flows were removed from the LSPC results using the Web-based Hydrograph Analysis Tool for porous aquifers with ephemeral streams; this tool was developed by Purdue University to separate base flows and runoff (Lim et al., 2005). Table 4-8 summarizes the annual runoff volume comparisons for the entire modeling period and for TMDL year 1993. In the future, through the WMP adaptive management process, as WMA-specific monitoring data become available, the LSPC and SBPAT calibrations may be updated, and the RAA revisited.

Table 4-8

Annual Runoff Volume Comparison Between LSPC and SBPAT Models

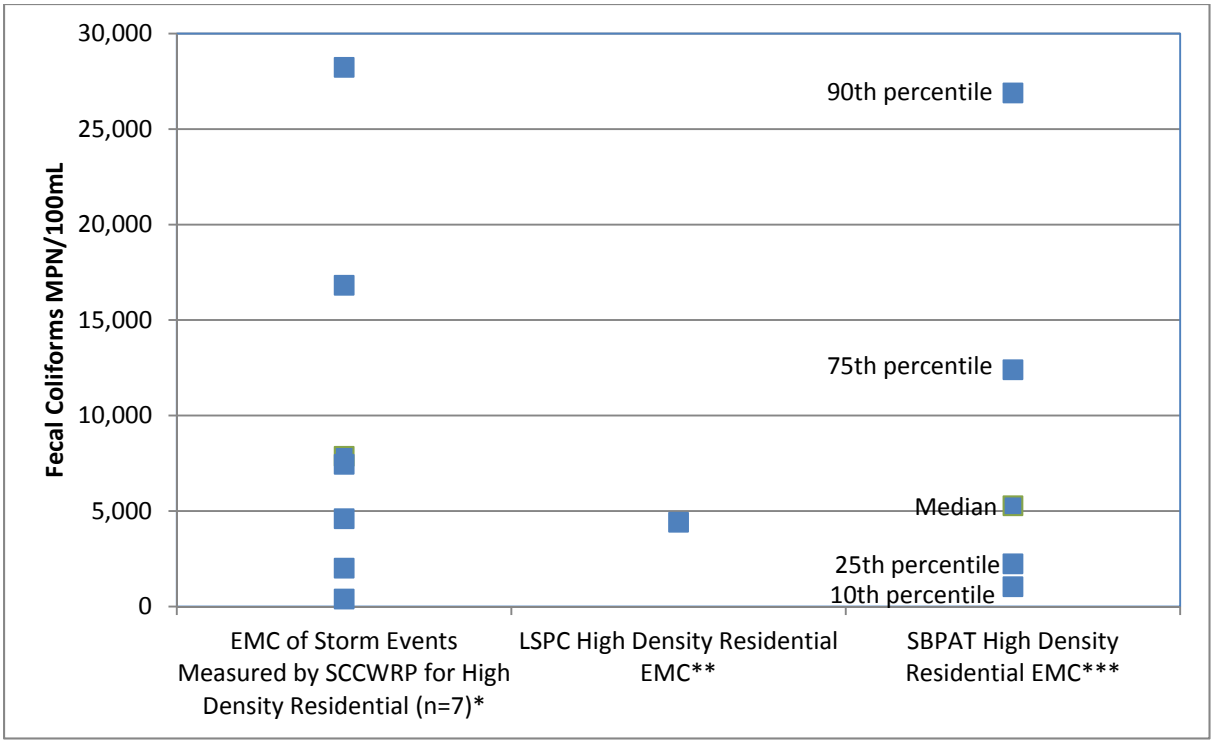
TMDL Year	San Jose Creek			Walnut Creek Wash		
	LSPC Runoff Volume (acre ft)	SBPAT Runoff Volume (acre ft)	Diff (%)	LSPC Runoff Volume (acre ft)	SBPAT Runoff Volume (acre ft)	Diff (%)
1993	6,542	7,156	9%	311	340	9%
1989-2011	61,337	65,501	7%	2,197	2,230	2%

Next, SBPAT's land use pollutant EMC statistics – which are the only water quality parameters used by the model to compute baseline pollutant loads – were compared with raw SCCWRP land use EMC datasets and LSPC's calibrated input values. The EMCs used by SPBAT for fecal coliforms are log-normal distributions calculated directly from the land use-specific monitoring data collected by SCCWRP. These were the same data used by the County to calibrate LSPC. These data are used directly in SBPAT by assigning each storm event a random concentration that is drawn from the log-normal distribution; then the modeling period is repeated for 10,000 iterations, to capture the effect of input variability on the variability of predicted output (a feature that makes SBPAT a "stochastic" model for water quality). While LSPC also used the SCCWRP land use data for calibration, static average land use EMC values are used deterministically, with no adjustment to capture variability.

The model EMC comparison was performed for the most representative urban land use in the WMA. Based on LSPC land use designations, 75% of the developed area in the Walnut WMA is high density single family residential (a land use the was originally calibrated by the County to the SCCWRP "high density residential" data), and 73% of the runoff volume is from this land use. In SBPAT, this areas is labeled "single family residential," but because of its high density classification it is assigned the SCCWRP high density residential EMC distribution. Therefore, this is the land use category that is evaluated in Figure 4-7.

Even though LSPC and SBPAT use the same data to set their EMC input values, the EMCs are used differently in each model. This is illustrated in Figure 4-7, which compares fecal coliform EMC values for the high density residential land use category between the original SCCWRP measured dataset, the volume-weighted EMC used by the County's calibrated LSPC model (extracted based on a runoff volume weighting of the high density residential impervious, urban pervious, and secondary street land use types which make up the whole high density single-family residential area), and the non-parametric summary statistics from the log-normal distribution used by SBPAT. Here it is evident how SBPAT's distributional statistics well represent the variability that is inherent to the measured data. And while both land use EMC inputs used by the models are "correct" and based on the same measured data, it is evident how each model can produce different concentration and load results due to their statistical representations. It was therefore decided not to make changes to SBPAT's land use EMC statistics based on a review of either LSPC concentration or load results or the raw SCCWRP measured land use EMC data.

To account for the difference in land use EMC statistics used by the two models, and to ensure comparability between the LSPC-derived TLRs and SBPAT's BMP load reductions, the TLRs expressed as a *percentage* of the total baseline load for both models. Therefore, even if the resulting baseline loads differed between the models, the relative differences in loads resulting from BMP implementation were similar. The retention basins used in LSPC to determine the TLRs, as well as most of the BMPs chosen for implementation in SBPAT, rely primarily on reducing runoff volume to achieve bacteria load reductions. Therefore, the effect on the loads relative to baseline loads is similar, even with differing land use EMC statistics.



*Values from Table B-14 from Appendix B of SCCWRP, 2007

** Flow-weighted mean from Walnut WMA using high density single family residential, and the portion of urban pervious and secondary roads within the single-family residential land use area.

***Based on a ln mean of 8.38 and the ln standard deviation of 1.24.

Figure 4-7: Comparison of Fecal Coliform High Density Residential EMC Values Between SCCWRP Measurements (n=7), LSPC (only an average value is used by the model), and SBPAT Models (a full log distribution is used by the model, but non-parametric summary statistics are shown for comparison)

The following sections describe the approach for modeling each BMP category. An iterative process was employed to identify the final proposed suite of structural and non-structural BMPs that were found to be capable of achieving the bacteria TLRs.

4.8- Low Impact Development Ordinance

Implementation of Low Impact Development (LID) as a result of redevelopment was modeled uniformly throughout the WMA. Permit Section VI.C.4.c.i(1) requires permittees to develop and implement a LID ordinance applicable to redevelopment meeting minimum criteria thresholds of disturbance. City staff indicated that approximately one residential redevelopment project per year would meet the Permit's post-construction onsite retention applicability requirements. Average residential lots within the Walnut WMA were assumed to be 0.15 acres. The redevelopment of a single lot would therefore account for 0.0053% of the WMA's single family residential land use area. The City's LID ordinance was assumed to become effective in 2014 and the area redeveloped each year was sampled without replacement (i.e., areas that had undergone redevelopment in previous years were not available to undergo redevelopment again in subsequent years). Extrapolating the annual redevelopment rate without replacement for 10 years, or until the 2024 final compliance date, suggests that 1.6 acres or

0.058% of the City's residential land use area would be required to implement onsite retention LID BMPs.

Areas treated by LID as a result of the ordinance were modeled assuming unlined (with infiltration) bioretention systems sized for the 85th percentile, 24 hour storm depth for the WMA, or 0.98 in (Los Angeles County DPW, 2004a), with a saturated hydraulic conductivity (Ksat) of 0.15 in/hr, which is similar in magnitude to the Ksats of the underlying soils throughout the WMA.

4.9- Green Streets

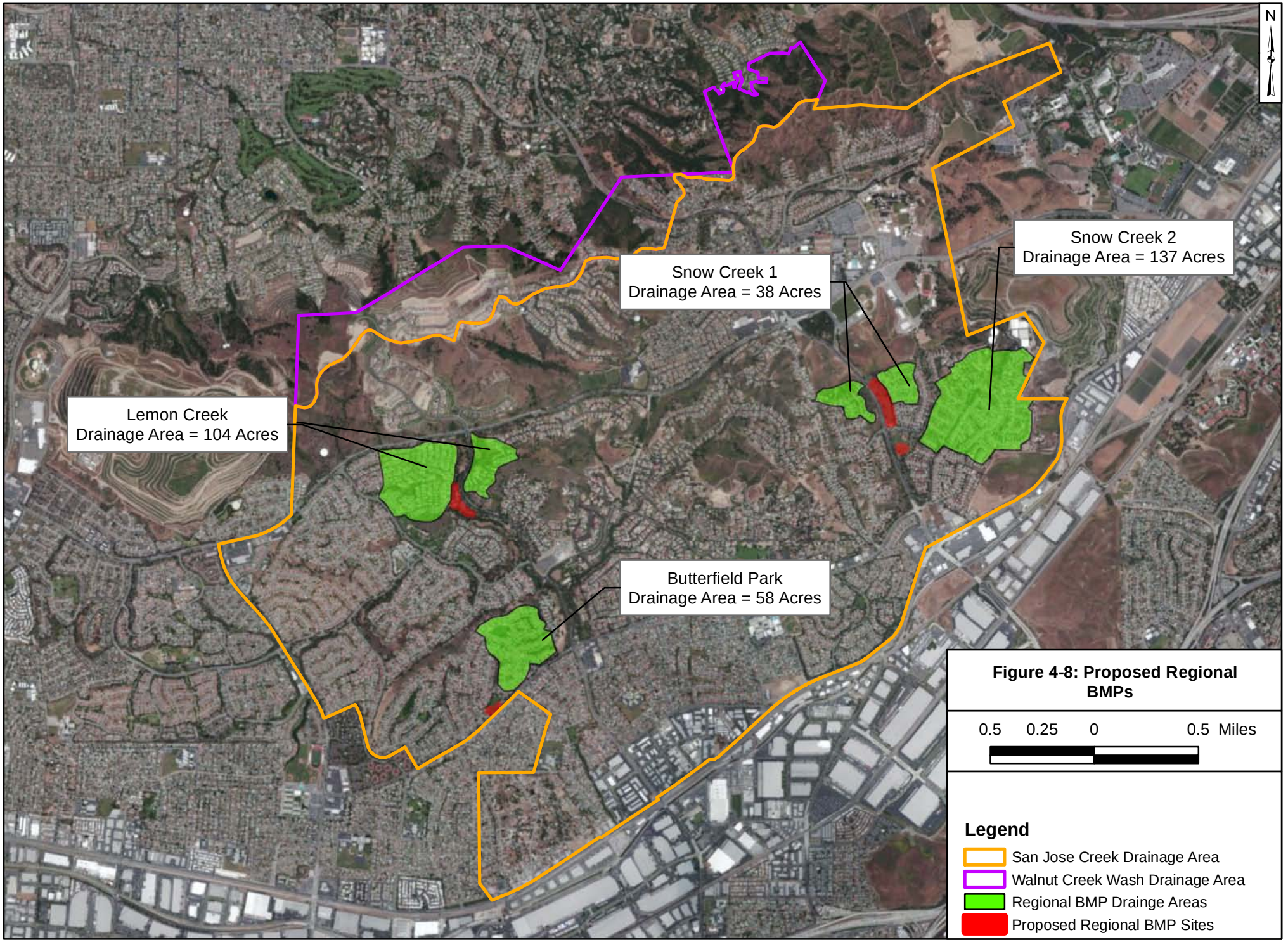
Green streets were applied to treat 30%[7] of commercial and residential land uses in areas that were not tributary to a proposed regional BMP in the San Jose Creek portion of the WMA. A total of 748 acres of residential and 46 acres of commercial land uses were assumed to be treated by green streets on the San Jose Creek side of the WMA for the purposes of this analysis. Green streets were applied to treat 41 acres or 75% of the residential area on the Walnut Creek Wash side of the WMA. Green street treatment was modeled assuming bioretention systems with underdrains sized to treat 150% of the 85th percentile design storm of 0.2 in/hr. The bioretention with underdrain systems were modeled in SBPAT using the volume capture of bioswales and the pollutant effluent EMCs of bioretention systems.

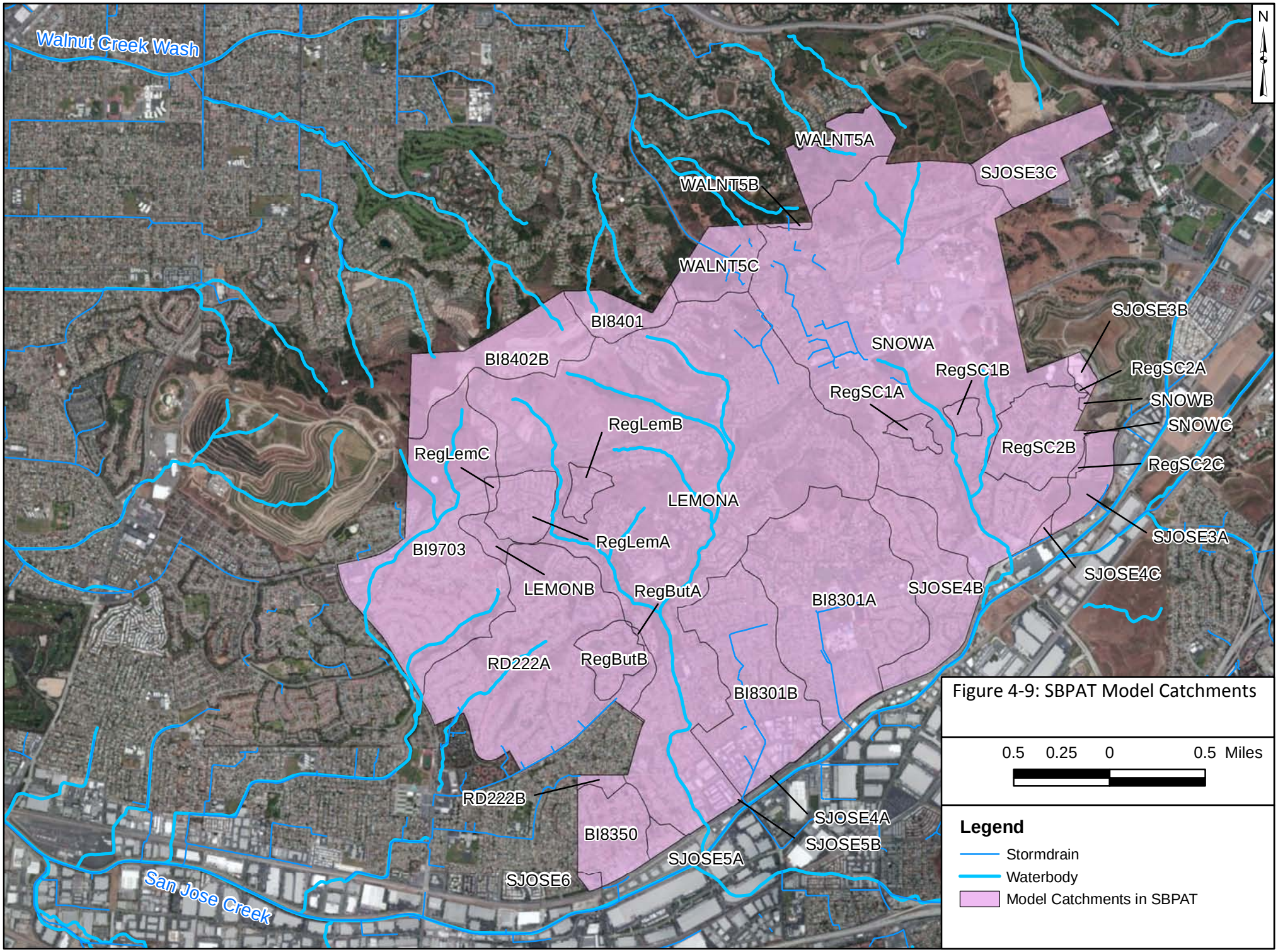
4.10- Regional BMPs

The regional type BMPs described in this section are included in the RAA on the basis of a number of assumptions that include construction feasibility and project funding. For the purpose of this document, only a desktop level investigation was conducted for establishing potential sites and footprints. No field samples of existing soil conditions or underground utility research have been completed.

Four publicly-owned potential regional BMP opportunity parcels have been identified for the purpose of this study. The locations of these regional BMPs and their drainage areas are shown in Figure 4-8. In SBPAT, the catchments were modified to enable modeling of the drainage areas to these regional BMPs, as shown in Figure 4-9. All regional BMPs were sized to the maximum footprint available based on local siting constraints. Side slopes and pre-treatment were assumed to occupy 15% of the available footprint. Infiltration basins and subsurface infiltration structures were assumed to account for the remaining 85% of the available footprint while the remaining subsurface flow wetland footprint is assumed to be comprised of an equalization basin and the wetland itself. Regional BMP conceptual design attributes that were used for SBPAT modeling are summarized in the following subsections. The most effective (for bacteria reduction) implementable regional BMP type was modeled at each project site – i.e., where soil types indicated that infiltration rates might be sufficient for infiltration based BMPs to be feasible, an infiltration basin or a subsurface infiltration system was modeled (infiltration basins were assumed at parks where existing uses could accommodate periodic temporary flooding, whereas subsurface systems were assumed at parks where existing land uses, such as ball fields, were to be maintained); otherwise subsurface flow wetlands (which could alternatively be implemented as any equivalent-performing flow-through or filtration-based BMP type) were assumed.

[7] The percent of area that drains to green street BMPs was iteratively determined based on meeting the TLRs.


N
Snow Creek 2
Drainage Area = 137 Acres
Snow Creek 1
Drainage Area = 38 Acres
Lemon Creek
Drainage Area = 104 Acres
Butterfield Park
Drainage Area = 58 Acres
Figure 4-8: Proposed Regional BMPs
0.5 0.25 0 0.5 Miles
Legend
San Jose Creek Drainage Area
Walnut Creek Wash Drainage Area
Regional BMP Drainge Areas
Proposed Regional BMP Sites
Los_Angeles P:\GIS\Projects\LA0305\Fig8-BMPDrainageAreas.mxd SM 20150106



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The project details in this section demonstrate a potential route to establish reasonable assurance as required by the Los Angeles Regional Water Quality Control Board adopted Order R4-2012-0175. The inclusion of these projects in this document does not assume that they will be constructed as identified in this document. No regional funding sources have been identified for these projects. Design and construction timelines cannot be estimated at this time.

4.10.1- Butterfield Creek Subsurface Flow Wetland

A subsurface flow wetland project opportunity was identified at Butterfield Park on the southwest portion of the WMA. A schematic representation of the regional BMP footprint is presented in Attachment F. This regional BMP was modeled in SBPAT using the following design parameters and assumptions:

- Approximate Footprint Area: 93,000 sq ft
- Drainage Area: 58 acres
- Design Storm Intensity: 0.06 in/hr
- Treatment Flow Rate: 1.6 cfs
- Equalization Volume[8]: 270,000 cu ft
- Hydraulic Residence Time: 24 hrs
- Infiltration Rate: [no infiltration modeled]
- Depth: 8 ft
- Treatment Assumption: Concentration[9] and volume reduction

4.10.2- Lemon Creek Infiltration Basin

An infiltration basin project opportunity was identified in open space adjacent to North Lemon Avenue. A schematic representation of the regional BMP footprint is presented in Attachment F. This proposed facility was modeled as an infiltration basin in SBPAT using the following design parameters and assumptions:

- Approximate Footprint Area: 48,000 sq ft
- Drainage Area: 104 acres
- Water Quality Design Volume: 53,000 cu ft
- Design Storm: 0.3 in
- Infiltration Rate[10]: 0.30 in/hr
- Depth: 1.3 ft[11]
- Treatment Assumption: Volume reduction

[8] The equalization volume is the total volume required to attenuate peak flows after pretreatment occurs and before entering the SSF wetland.

[9] Subsurface flow wetlands are not well represented by BMP categories in the International BMP Database, which is used as the basis for SBPAT's BMP performance statistics. Therefore, a percent removal of 90 percent (1 log removal) was conservatively estimated for fecal coliform, consistent with methodologies documented in Geosyntec's Combined Load Reduction Plans from the San Diego region (which can be found here: www.sbpat.net/example.html). FC based on review of various SSF wetland studies

[10] Infiltration rate extracted from Los Angeles County Department of Public Works Soil Types dataset for the footprint area (Los Angeles County DPW, 2004b).

[11] Infiltration basin depth limited by infiltration rate and 48 hour drawdown limit for vector control.

4.10.3- Snow Creek 1 Subsurface Flow Wetland

A subsurface flow wetland project opportunity was identified north of the intersection of Grand Ave. and Snow Creek Dr. in the eastern portion of the WMA. A schematic representation of the regional BMP footprint is presented in Attachment F. This regional BMP was modeled in SBPAT using the following design parameters and assumptions:

- Approximate Footprint Area: 110,000 sq ft
- Drainage Area: 38 acres
- Design Storm Intensity: 0.11 in/hr
- Treatment Flow Rate: 1.8 cfs
- Equalization Volume: 310,000 cu ft
- Hydraulic Residence Time: 24 hrs
- Infiltration rate: [no infiltration modeled]
- Depth: 8 ft
- Treatment Assumption: Concentration and volume reduction

4.10.4- Snow Creek 2 Subsurface Infiltration System

A subsurface infiltration project opportunity was identified at the baseball field in Snow Creek Park. A schematic representation of the regional BMP footprint is presented in Attachment F. The water quality design volume of this subsurface infiltration facility was modeled as an infiltration basin in SBPAT using the following design parameters and assumptions:

- Approximate Footprint Area: 130,000 sq ft
- Drainage Area: 137 acres
- Water Quality Design Volume: 190,000 cu ft
- Design Storm: 0.9 in
- Infiltration Rate[12]: 0.77 in/hr
- Depth: 2 ft[13]
- Treatment Assumption: Volume reduction

4.11- Non-Modeled Non-Structural BMPs

A range of load reductions derived from non-modeled non-structural BMPs were assumed based on Geosyntec discussion with Regional Board staff during an RAA meeting on April 9, 2014. A total of 8% of the baseline fecal coliform load was assumed to be removed for the average load reduction scenario, and a range of 5% to 10% was assumed for the "low" and "high" load reduction scenarios, respectively. These non-structural BMPs will include the following program enhancements (i.e., beyond the Permit minimum), with an emphasis on those BMPs that most effectively target urban stormwater bacteria sources:

[12] Infiltration rate extracted from Los Angeles County Department of Public Works Soil Types dataset for the footprint area (Los Angeles County DPW, 2004b).

[13] BMP depth is based on approximate capture of the 85th percentile, 24 hour storm event. Alternatively, equivalent load reduction could be achieved by a larger depth and smaller area, as long as total volume is maintained.

- enhanced street sweeping,
- enhanced catch basin and stormdrain cleaning,
- enhanced commercial and food outlet inspection,
- enhanced pet waste controls,
- enhanced education and outreach,
- septic inspection/enforcement, and
- enhanced Illicit Discharge Detection Elimination (IDDE)

Further details of implementation and frequency for the above noted program enhancements is included in section 5.1 of this document.

4.12- Final Milestone Load Reductions

The following tables present individual and summed BMP load reductions for fecal coliform for the San Jose Creek and Walnut Creek Wash drainage areas as a percentage of the baseline loads for the 90th percentile year. Bacteria load reduction results (Tables 4-9 and 4-10) are shown for the final wet weather bacteria TMDL compliance date of 2024 (based on an assumed compliance schedule of 10 years from the WMP submittal date), modeled using rainfall data from the 90th percentile year (1993). Average (mean) load reduction results are shown, as well as the interquartile ranges (25th to 75th percentiles, to reflect the Monte Carlo-derived variability of these model output. A total BMP load reduction that exceeds the TLR indicates that reasonable assurance (of meeting the Permit limits) has been demonstrated for that drainage area.

Lead load reductions are not quantified here since target load reductions were determined to be zero, however lead loads will be reduced considerably through implementation of the proposed non-structural and structural BMPs.

Table 4-9

Fecal Coliform Load Reductions as a Percentage of Total Baseline Load for the San Jose Creek Drainage Area for the 90th Percentile Year

BMP Program	Average	Low (25th %ile)*	High (75th %ile)*
Non-Structural BMPs			
LID Ordinance	0.01%	0.01%	0.02%
Other non-modeled	8%	5%	10%
Regional BMPs			
Butterfield (RBMP_01)	0.9%	0.6%	1.0%
Lemon Creek (RBMP_02)	0.3%	0.3%	0.4%
Snow Creek 1 (RBMP_03)	0.7%	0.4%	0.8%
Snow Creek 2 (RBMP_04)	1.3%	0.9%	1.3%
Distributed BMPs			
Green Streets	12.1%	7.7%	14.4%
Target Load Reduction	**27%**		

Total BMP Load Reduction	**23%**	**15%**	**28%**

*All percentages shown are percentages of the average baseline load

Table 4-10

Fecal Coliform Load Reductions as a Percentage of Total Baseline Load for the Walnut Creek Wash Drainage Area for the 90th Percentile Year

BMP Program	Average	Low (25th %ile)*	High (75th %ile)*
Non-Structural BMPs			
LID Ordinance	0.02%	0.01%	0.02%
Other non-modeled	8%	5%	10%
Distributed BMPs			
Green Streets	35.4%	20%	42%
Target Load Reduction	**51%**		
Total BMP Load Reduction	**43.4%**	**25%**	**52%**

*All percentages shown are percentages of the average baseline load

4.13- Interim Milestones

Fecal coliform bacteria is a Category 2 pollutant; therefore, a compliance schedule and interim milestones must be developed in the WMP. An interim milestone date was set as the end of the Permit term, or December 2017. The interim target for this date is assumed to be the estimated load reduction resulting from the BMPs that will be implemented by that date based on the City's proposed phasing of BMPs. The final compliance date is set to 2036 consistent with the Draft San Gabriel River Bacteria TMDL.

Table 4-11 identifies the proposed BMP implementation schedule, based on City input. The resulting bacteria load reductions for the interim and final milestones are presented in Figures 4-14 and 4-15 for the San Jose Creek and Walnut Creek Wash drainage areas, respectively.

Table 4-11

Assumed BMP Implementation Schedule	
BMP Program	**Assumed Date BMP is Implemented by:**
LID Ordinance	June, 2024*
Non-Modeled Non-Structural BMPs	December, 2017*
Butterfield (RBMP_01)**	TBD
Lemon Creek (RBMP_02)**	TBD
Snow Creek 1 (RBMP_03)**	TBD
Snow Creek 2 (RBMP_04)**	TBD
Green Streets	June, 2036

* Non-structural program implementation may be continuous and ongoing, however the estimated load reduction for this BMP category is applied to this date for the purpose of this phasing analysis.

** The Regional BMPs identified in this section are major projects with no current or potential funding source identified at this time. The City has not established an implementation schedule for these projects due to the unforeseeable future of funding for projects of this magnitude. If a funding is established this schedule will be updated as part of the Adaptive Management Process.

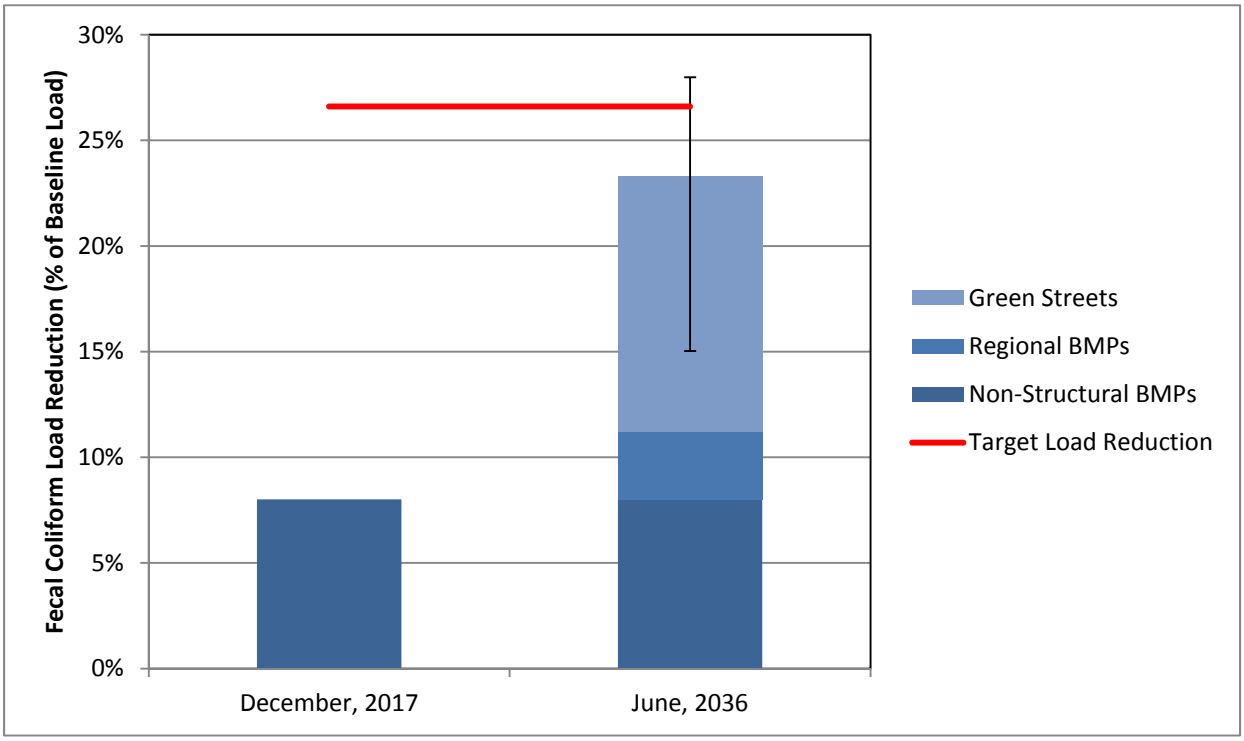

Figure 4-14: Fecal Coliform Interim and Final Load Reductions for the San Jose Creek Drainage Area. Bars Represent the Average Predicted Load Reduction and the Whiskers Represent the High and Low Estimates Using the Range of Load Reductions Non-Structural BMPs and the 75th and 25th Percentile Load Reductions from Modeled BMPs

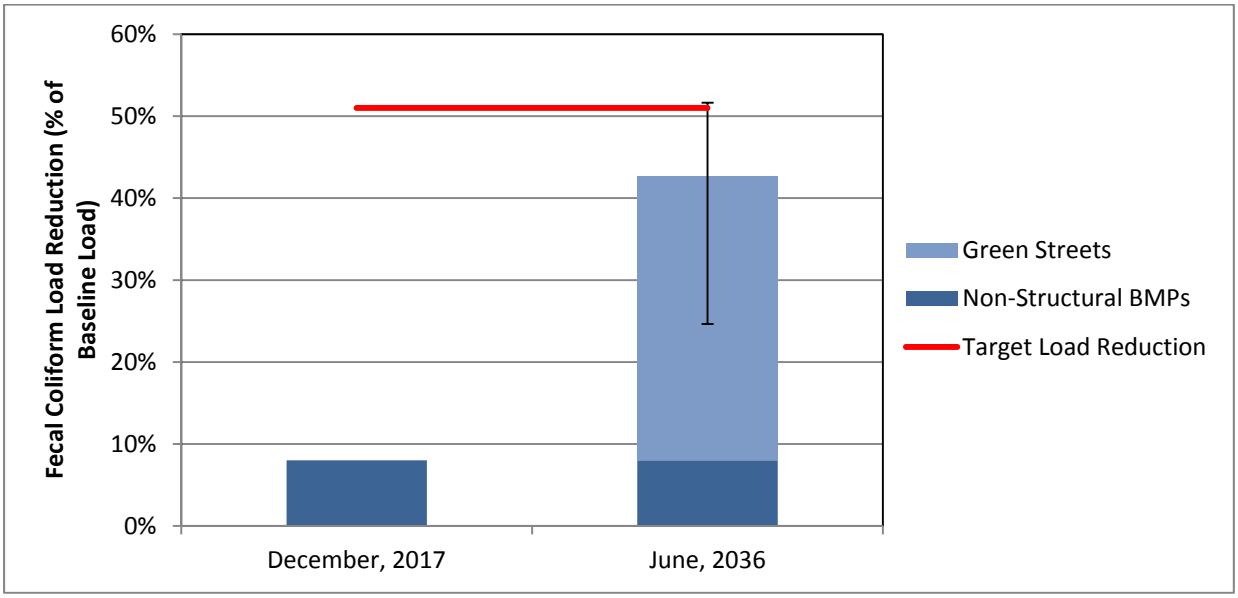

Figure 4-15: Fecal Coliform Interim and Final Load Reductions for the Walnut Creek Wash Drainage Area. Bars Represent the Average Predicted Load Reduction and the Whiskers Represent the High and Low Estimates Using the Range of Load Reductions Non-Structural BMPs and the 75th and 25th Percentile Load Reductions from Modeled BMPs.

4.14- Conditions for RAA Revision

As part of the WMP adaptive management process, as outfall and/or receiving water data specific to the Walnut WMA are accumulated, the RAA models will be recalibrated and/or validated, and the RAA will be updated as appropriate. This has the potential to result in modification of the proposed suite of structural and non-structural BMPs. Similarly, if the applicable recreational uses or bacteria objectives change, then relevant modeling assumptions and/or TLRs, and the resulting suite of structural and non-structural BMPs, will be adjusted accordingly. For example, during the compliance period, the City may elect to perform special studies to refine any Waste Load Allocations (WLAs) that become effective through the San Gabriel River Bacteria TMDL. Various pathways will be available to reopen the TMDL and modify the WLAs, including use of microbial source tracking to support a natural source exclusion, quantitative microbial risk assessment to develop site specific objectives, and/or use attainability analysis (or equivalent procedures) to support a high flow suspension of recreational uses on Walnut Creek Wash, all of which are procedures that may be clarified through the pending statewide bacteria objectives update. Therefore, through the WMP adaptive management process, this RAA may be reevaluated after any changes to the water quality objectives, TMDL WLAs, and/or MS4 Permit limits become effective.

4.15- Reasonable Assurance Demonstration

Lead TLRs were found to be zero for both drainage areas of the WMA, therefore new BMPs were not needed to demonstrate reasonable assurance of compliance with the applicable lead WQBEL. However, lead loads will be reduced considerably through implementation of the proposed non-structural and structural BMPs for bacteria. For bacteria in San Jose Creek and Walnut Creek Wash, total estimated BMP load reductions, using 75th percentile values[14], meet or exceed the TLRs. Therefore, reasonable assurance has been demonstrated for both pollutants for both water bodies based on the proposed suite of non-structural and structural BMPs for the Walnut WMA.

[14] In the future, through the adaptive management process, as the RAA models are revisited, different load reduction output statistics may be used to demonstrate compliance; for example, as compliance deadlines approach, the City's risk tolerance may narrow and therefore BMPs may be added to increase the average load reductions above the TLRs (whereas currently only the 75th percentile load reductions exceed the TLRs).

5.0- Proposed WMP Implementation Plan

The City of Walnut has developed an approach for complying with the MS4 Permit water quality requirements that includes a combination of Source Control BMPs and Structural BMPs in coordination with the MCMs outlined in section 3.0 of this document. The City's proposed BMP plan has been confirmed through the RAA process to be effective in reducing the modeled pollutant loads to the allowable levels established by applicable TMDLs and the Basin Plan. Source control BMPs proposed by the City include policies, programs and ordnances that support practices that improve or prevent additional pollution from being deposited into the local rivers and creeks. A majority of the pollutant reductions will come from the proposed structural BMP plan.

The City's planned structural BMPS include Regional and Local approaches. The combination of structural BMPs has been formulated to reach the water quality goals established by the Basin Plan and applicable TMDLs through the treatment of wet weather runoff originating from the City.

5.1- MCM Implementation

The City has proposed the implement an enhanced MCM program that will aid in the protection and improvement of water quality in the City. Much of the MCM program is prescribed by the MS4 Permit, but the City has elected to focus additional resources in some areas. Table 5-1a highlights the enhancements to the MCM program. Table 5-1b outlines the program enhancements and their implementation and frequency/duration.

Table 5-1a

MCM Program Enhancements	
Public Information and Participation Program	• Storm water education available at community events • Focused education materials provided to key businesses for distribution to public
Commercial Tracking and Inspections	• Random commercial site inspections of critical potential sources
Streets, Roads and parking Facilities Maintenance	• Streets are swept bi-monthly
Landscape, Park, and Recreational Facilities Management	• Installation of Pet waste stations
Other Non-Modeled Enhancements	• Stream Restoration projects to reduce erosion and improve local vegetation adjacent to the stream

Table 5-1b

Enhanced MCM Implementation Schedule and Frequency				
MCM Enhancement	**Start**	**Permit Minimum**	**Frequency/Enhancement**	**Complete by December 28, 2017**
Street Sweeping	FY 2014-2015	Once Per year for Priority C areas	Bi Monthly (24 times per year)	Continuous through Permit Term
Pet Waste Stations	FY 2015-2016	No Requirement	4 New stations installed per year	10 New Stations Installed, Locations to be determined by City staff.
Storm Water Education Materials	FY 2014-2015	The City is a partner with the Los Angeles County PIPP	At least two City Community events per year will have educational materials and staff present to answer questions. All other opportunities to be considered depending on staff availability	Continuous through Permit Term. Events attend will be tracked and reported in the annual report.
Random Commercial Inspections	FY 2015-2016	No Requirement	At least once a year for critical potential locations as determined by the inspectors	Continuous through Permit Term. Inspections to be documented tracked and reported in the annual reports.
Public Education Materials	FY 2015-2016	The City is a partner with the Los Angeles County PIPP	Materials Available on City's "Go Green" page	Materials to be maintained and updated as necessary with new material added based on monitoring program and Inspection findings
Stream Restoration Project (Snow Creek)	FY 2016-2017	No Requirement	Grant Applications and Conceptual Engineering	Efforts to apply for grant funds will be documented as well as all conceptual engineering and related permitting coordination. This project is not considered in the RAA however it will have some water quality benefits if funding is identified for construction.

5.2- Regional BMPs

The City has identified four potential regional BMPs to be located at existing parks modeled as sub-surface wetlands. The proposed regional BMPs will be complimentary to existing park uses after construction. As described in previous sections, no funding source for the design and construction of these BMPs has been identified. The City will continue to study potential funding opportunities for these projects during the duration of the Permit. Should a regional funding source be established, the project implementation schedule for these BMPs will be updated during the adaptive management process.

5.3- Local BMPs

In coordination with the regional BMPS, the City has developed a plan for local BMPs that has been demonstrated in the RAA portion of this document to provide adequate treatment for the City's storm water. As identified in the Section 4.9, the RAA calls for Green Streets BMPs to be implemented on a scale that covers a specified area summarized in Table 5-2. Bio filtration and bio retention BMPs will be utilized in the local BMP program, but other localized BMPs may be considered in the future.

Table 5-2

Green Streets BMPs	
San Jose Creek Watershed	
Land Use	**Acreage Treated by BMPs**
Residential	748
Commercial	46
Walnut Creek Wash	
Residential	41

Implementation of the local BMP program will be dependent on the results of the IMP. The monitoring results will help establish where the greatest need is within the City. If the local BMPs are necessitated through the results of the IMP, the City will initiate an annual CIP program over the remaining life of the permit to ensure the BMPs are cost feasible and contribute to pollutant load reductions. This stepped approach will enable the City to implement the BMPs with the most effective approach.

Pending the results of the IMP the City has established a planned implementation schedule. In an effort to maximize the programs initial impact, the City will review at least two years of monitoring data from the integrated monitoring plan to prioritize the potential Green Streets Project locations. Following the development of the prioritized projects schedule the City will begin implementation of an annual CIP program that will include the construction of Green Street type BMPs. The projected schedule for first 10 years of the WMP is identified in Table 5-3. Projects will continue on an annual schedule beyond 2025 as necessitated by monitoring results with the goal of meeting 100% compliance requirements by 2036.

Table 5-3

City of Walnut Green Streets Interim Implementation Schedule		
Task	Design Completion Date	Construction Completion Date
Project No. 1	December 31, 2018	December 31, 2019
Project No. 2	December 31, 2019	December 31, 2020
Project No. 3	December 31, 2020	December 31, 2021
Project No. 4	December 31, 2021	December 31, 2022
Project No. 5	December 31, 2022	December 31, 2023
Project No. 6	December 31, 2023	December 31, 2024
Project No. 7	December 31, 2024	December 31, 2025

5.4- Dry Weather Flow Elimination Program

The City of Walnut is proposing to eliminate manmade dry weather discharges to prevent exceedances in the receiving waters. The City will coordinate this program with the IMP and wet weather BMP program to maximize efficacy of available resources.

5.4.1- Dry Weather Water Quality Considerations

As outlined in Section 2.0 ”Water Quality Priorities” the City is subject to a dry weather WAL for Category 1 pollutant Selenium. The source of selenium in the watershed is suspected to be natural. The man made dry weather flows originating from residential land uses are not expected to be a source of selenium with in the City.

Bacteria will be regarded as the primary Category 2 pollutant receiving focus during dry weather conditions. To reach the WQBEL established for bacteria the City proposes to utilize the dry weather source elimination program outline in this section. Eliminating all dry weather flows will also carry over to meet WQBELs for all of the other established Category 2 pollutants.

5.4.2- Dry Weather Flow Elimination Program Implementation

The IMP includes a dry weather flow source investigation program that will include water quality testing and field source investigations. The City will utilize City staff and contractors to assess the sources of dry weather flows. Additionally, City field staff will be utilized to identify upstream dry weather flows within the City. Flows identified in the gutter, day lighted channel connections and a city outfall will be tracked during the first two years of the WMP implementation.

All the available data will be gathered and analyzed to best determine how to address the identified flows. The City of Walnut will utilize education, legal jurisdiction and BMP programs to eliminate dry weather flows. Table 5-4 highlights how the City will address the anticipated dry weather flows once a source is identified.

Table 5-4

Dry Weather Flow Elimination Program	
Over Irrigation	Illicit Discharge program / Education
Pool Draining	Illicit Discharge program / Education
Driveway/Sidewalk Walking	Illicit Discharge program / Education
Vehicle Washing	Education
Commercial Discharge	Illicit Discharge program / Education

Land use within the City of Walnut is primarily single family residential development. Dry weather flows are anticipated to be relatively small in volume and inconsistent in frequency. Dry weather flows within the City may also include conditionally exempt discharges. Should a flow be determined conditionally exempt or of an unidentifiable manmade source the City may consider structural BMPs to mitigate the dry weather flow. These considerations will also be included in the prioritization of the Green Streets Projects to address wet weather conditions.

Natural spring flows are known to exist within the City's two soft bottom streams. Separating natural spring flows from man-made discharges will be a formidable task. The City will rely on the IMP results to confirm the water quality of dry weather flows. Additionally, the City will utilize staff to inspect storm drain connections to the streams for flows.

5.4.3- Implementation Schedule

The source tracking portion of program will be partially implemented upon the approval of the WMP. The remainder of the source tracking will be implemented with the dry weather source assessment conducted under the IMP. The City will take action on easily identified dry weather sources following identification. The more difficult sources to identify will be address later on in the program once a better understanding of the dry weather discharges form the city has been established. The following schedule highlights the interim implementation schedule (Table 5-5):

Table 5-5

Dry Weather Flow Elimination Program Implementation Schedule	
Task	**Start Date**
Develop Source Tracking Program	June 1, 2015
Field Staff Training	June 30, 2015
Establish Data Gathering Procedures	June 1, 2015
Coordinate IMP Dry weather flow Data	30 days following start of dry weather monitoring
Eliminate Identified Dry Weather Flow Sources	Ongoing during dry seasons starting 2015
Establish Potential Structural BMP Locations	Include in considerations for 2019 Green Streets

6.0- Interim and Final Compliance Schedule

The City of Walnut is subject to the interim TMDL compliance schedule established by Regional Board Resolution R13-004. The MS4 Permit requirements the City develop a compliance schedule for all categories of pollutants as part of the WMP. Source control BMPs will begin implementation during the remaining term of the MS4 Permit. The planning and cost required for the implementation of structural BMPs pushes actual implementation of structural water treatment options farther into and beyond the current MS4 Permit's term.

Implementing a program of this size and cost requires that the City fully understand the nature of storm water quality within the City's boundaries. The City has proposed that data gathering and source investigations take place during the first two years of the program. Following that period the City plans to begin scheduling design and construction of phased projects that will ensure the best application of available resources. The funding need that this program represents is also a considerable encumbrance that the City has been required to assume. Establishing and funding this program and its subsequent projects is a major task that will take time and planning. Currently there is no substantial funding source that has been identified to aid the City in implementing this program.

The City holds water quality in high regard. While the program demands are great, the City also recognizes that impacts on the watershed need to be address in a timely fashion. In consideration of the proposed San Gabriel River Bacterial TMDL currently in development and in an effort to balance budgetary demands, the City is proposing a 21 year compliance term associated with the proposed BMP implementation schedule. Results from the RAA process indicate that the City's existing category 1 pollutants have a zero load reduction necessary for compliance. Thus the next priority pollutant of concern is bacteria. It is also anticipated that the San Gabriel River Bacteria TMDL will be approved in the near future which would elevate the pollutant to a category 1 level. The use of a 21 year compliance schedule is in anticipation of the adoption of the proposed Bacteria TMDL.

Table 4-11 outlines the City's proposed BMP implementation schedule. Table 6-1 outline the proposed compliance schedules for all TMDL and 303(d) listed pollutants that the City is currently subject to.

Table 6-1

Compliance Schedule											
Selenium Waste Load Allocation (5µg/L) Compliance Schedule – Dry Weather TMDL											
Watershed	**2017**	[redacted]	**2020**	[redacted]	**2023**	[redacted]					
San Jose Creek Reach 1	30%		70%		100%						
Lead Waste Load Allocation (81.34µg/L) Compliance Schedule – Wet Weather TMDL											
City of Walnut	**2017**	**2020**	[redacted]	**2023**	[redacted]	**2026**	[redacted]				
	10%	35%		65%		100%					
E Coli RWL Compliance Schedule (Percent of Land Area In Compliance with RWL)											
Watershed	**2016**	**2017**	**2020**	**2022**	**2024**	**2026**	**2028**	**2030**	**2032**	**2034**	**2036**
San Jose Creek Reach 1	-	8%	10%	20%	30%	40%	50%	60%	70%	80%	100%
Walnut Creek Wash	-	8%	10%	20%	30%	40%	50%	60%	70%	80%	100%
pH RWL Compliance Schedule (Percent of Land Area In Compliance with RWL)											
City of Walnut	**2016**	**2018**	**2020**	**2022**	**2024**	**2026**	**2028**	**2030**	**2032**	**2034**	**2036**
	1%	3%	10%	20%	30%	40%	50%	60%	70%	80%	100%
Total Dissolved Solids RWL Compliance Schedule (Percent of Land Area In Compliance with RWL)											
City of Walnut	**2016**	**2018**	**2020**	**2022**	**2024**	**2026**	**2028**	**2030**	**2032**	**2034**	**2036**
	1%	3%	10%	20%	30%	40%	50%	60%	70%	80%	100%
Toxicity RWL Compliance Schedule (Percent of Land Area In Compliance with RWL)											
City of Walnut	**2016**	**2018**	**2020**	**2022**	**2024**	**2026**	**2028**	**2030**	**2032**	**2034**	**2036**
	1%	3%	10%	20%	30%	40%	50%	60%	70%	80%	100%
Cyanide RWL Compliance Schedule (Percent of Land Area In Compliance with RWL)											
City of Walnut	**2016**	**2018**	**2020**	**2022**	**2024**	**2026**	**2028**	**2030**	**2032**	**2034**	**2036**
	1%	3%	10%	20%	30%	40%	50%	60%	70%	80%	100%
Benthic- Macroinvertebrates RWL Compliance Schedule (Percent of Land Area In Compliance with RWL)											
City of Walnut	**2016**	**2018**	**2020**	**2022**	**2024**	**2026**	**2028**	**2030**	**2032**	**2034**	**2036**
	1%	3%	10%	20%	30%	40%	50%	60%	70%	80%	100%

7.0- Adaptive Management Process

The City of Walnut will utilize the MS4 Permit required adaptive management process to review and potentially modify the WMP in an effort to improve the effectiveness of the plan. The adaptive management process will take place every two years from the date of approval by the Regional Water Quality Control Board. The review process of the plan will include consideration of the following items:

- Progress toward achieving interim and/or final water quality-based effluent limitations and/or receiving water limitations in Part VI.E and Attachment L through R, according to established compliance schedules.
- Progress toward achieving improved water quality in MS4 discharges and achieving receiving water limitations through implementation of the watershed control measures based on an evaluation of outfall-based monitoring data and receiving water monitoring data.
- Achievement of interim milestones.
- Re-evaluation of water quality priorities identified for the WMA based on more recent water quality data for discharges from the MS4 and the receiving water(s) and a reassessment of sources of pollutants in MS4 discharges.
- Availability of new information and data from sources other than the monitoring program with in the WMA that informs the effectiveness of the actions implemented by the WMP.
- Regional Water Board recommendations.
- Recommendations for modifications to the Watershed Management Program solicited through a public participation process.

The findings of the adaptive management review process can result in modifications to the WMP including changes to compliance deadlines, interim milestones necessary to improve the effectiveness of the program. Modifications to compliance deadlines established by TMDLs will not be allowed through the adaptive management process. Proposed modifications to the WMP shall be reported by the City of Walnut in the Annual Report. Proposed modifications identified through the adaptive management process shall be implemented upon approval by the Regional Board Executive Officer within 60 days of their submittal if the Regional Board Executive has not expressed any objections to the modifications.

8.0- References

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Los Angeles County Department of Public Works, 2010b. Los Angeles County Watershed Model Configuration and Calibration-Part II: Water Quality. Submitted by Tetra Tech, Inc. August 6, 2010

SCCWRP. 2007. Technical Report 510 Sources, Patterns, and Mechanisms of Storm Water Pollutant Loading from Watersheds and Land Uses of the Greater Los Angeles Area, California, USA. Written by E.D. Stien, L.L. Tiefenthaler, and K.C. Schiff. March 2007.

Attachment A

City of Walnut

Notice of Intent

P.O. Box 682, Walnut, CA 91788-0682
21201 La Puente Road
Walnut, CA 91789-2018
Telephone (909) 595-7543
FAX (909) 595-6095
www.ci.walnut.ca.us

CITY OF WALNUT

June 26, 2013

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Regional Board Staff:

Enclosed please find the Notice of Intent (NOI) for the City of Walnut required as part of the new National Pollution Discharge Elimination System Municipal Separate Storm Sewer Systems Permit. As stated in the NOI, the City of Walnut will be developing a Watershed Management Plan and associated Integrated Monitoring Plan.

Please do not hesitate to contact me should you require any additional information. Thank you in advance for your time and assistance.

Sincerely,

Alicia Jensen

Alicia Jensen
Senior Management Analyst
City of Walnut
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Notice of Intent

City of Walnut

Watershed Management Plan

Submitted to:

California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Submitted by:

The City of Walnut
21201 La Puente Road
Walnut, CA 91789

June 28, 2013

Notice of Intent to Develop a Watershed Management Plan and Integrated Monitoring Plan
The City of Walnut hereby notifies the Los Angeles Regional Water Quality Control Board (LARWQCB) of the City's intent to proceed with the development of a Watershed Management Plan (WMP). Per Order No. R-2012-0175, NPDES Permit No. CAS 004001, Section VI.C.4.b.i. The City of Walnut will develop a Draft WMP and submit the plan for the Regional Board's review by June 28, 2014. Draft versions of the Low Impact Development Ordinance and Green Streets Policy are included in Appendix A and B. As required in Section VI.C.7 of NPDES Permit No. CAS 004001, the City will develop and submit an Integrated Monitoring Plan (IMP) in conjunction with the WMP.

Total Maximum Daily Loads (TMDL) & Water Quality Based Effluent Limitations (WQBEL)
In accordance with Section VI.C.4.b.ii of NPDES Permit CAS004001, the jurisdictional area of the City of Walnut discharges to tributaries subject to the TMDLs listed in Table A. Currently, the City is not subject to any interim or final Water Quality Based Effluent Limitations (WQBELs), however, the City will continue its existing programs and Minimum Control Measures until the WMP is approved and implemented.

Table A TMDLs Applicable to the City of Walnut

TMDL	Resolution Number	Effective Date	EPA Approval Date	Water Body	Impairment
San Gabriel River and Impaired Tributaries Metals and Selenium	2006-014	July 13, 2006	TBD	San Jose Creek	Dry Weather WLA for Selenium*

**As noted at the Board's June 6, 2013, LA Basin Plan Public Hearing, Walnut objects to the inclusion of the San Gabriel River Metals TMDL in the LA Basin Plan amendment since Selenium was removed as a TMDL on the USEPA's 2010 303(d) list.*

City Contact Information

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Attachment A

Draft LID Ordinance
City of Walnut

DRAFT LID ORDINANCE

ORDINANCE NO._____

AN ORDINANCE AMENDING [MUNICIPAL CODE SECTION REFERENCE(S)] OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING [NAME OF POST-CONSTRUCITON REQUIREMENTS – LIKELY "SUSMP" FOR MOST MUNICIPALITIES] REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

CITY COUNCIL OF THE CITY OF WALNUT HEREBY ORDAINS THE FOLLOWING:

(A) The City of Walnut is authorized by Article XI, §5 and §7 of the State Constitution to exercise the police power of the State by adopting regulations to promote public health, public safety and general prosperity.

(B) The City of Walnut has authority under the California Water Code to adopt and enforce ordinances imposing conditions, restrictions and limitations with respect to any activity which might degrade the quality of waters of the State.

(C) The city is a permittee under the "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," issued by the California Regional Water Quality Control Board--Los Angeles Region," (Order No. R4-2012-0175) which also serves as an NPDES Permit under the Federal Clean Water Act (NPDES No. CAS004001), as well as Waste Discharge Requirements under California law (the "Municipal NPDES permit"). In order to participate in a Watershed Management Program and/or Enhanced Watershed Management Program, the Municipal NPDES permit requires permittees to develop and implement a LID Ordinance.

(D) The City of Walnut has applied an integrated approach to incorporate wastewater, stormwater and runoff, and recycled water management into a single strategy through its (_____) Plan.

(E) The City of Walnut is committed to a stormwater management program that protects water quality and water supply by employing watershed-based approaches that balance environmental, social, and economic considerations.

(F) It is the intent of the City of Walnut to expand the applicability of the existing Standard Urban Stormwater Mitigation Plan (SUSMP) requirements by providing stormwater and rainwater LID strategies for Development and Redevelopment projects as defined under "Applicability."

[MUNICIPAL CODE SECTION REFERENCE(S)] of the [CITY NAME] Municipal Code is amended in its entirety to read as follows:

Definitions.

Except as specifically provided herein, any term used in this [SECTION REFERENCE] shall be defined as that term in the current Municipal NPDES permit, or if it is not specifically defined in either the Municipal NPDES permit, then as such term is defined in the Federal Clean Water Act, as amended, and/or the regulations promulgated thereunder. If the definition of any term contained in this chapter conflicts with the definition of the same term in the current Municipal NPDES permit, then the definition contained in the Municipal NPDES permit shall govern. The following words and phrases shall have the following meanings when used in this chapter:

Automotive Service Facility means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. For inspection purposes, Permittees need not inspect facilities with SIC codes 5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to stormwater (Source: Order No. R4-2012-0175).

Basin Plan means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments (Source: Order No. R4-2012-0175).

Best Management Practice (BMP) means practices or physical devices or systems designed to prevent or reduce pollutant loading from stormwater or non-stormwater discharges to receiving waters, or designed to reduce the volume of stormwater or non-stormwater discharged to the receiving water (Source: Order No. R4-2012-0175).

Biofiltration means a LID BMP that reduces stormwater pollutant discharges by intercepting rainfall on vegetative canopy, and through incidental infiltration and/or evapotranspiration, and filtration. Incidental infiltration is an important factor in achieving the required pollutant load reduction. Therefore, the term "biofiltration" as used in this Ordinance is defined to include only systems designed to facilitate incidental infiltration or achieve the equivalent pollutant reduction as biofiltration BMPs with an underdrain (subject to approval by the Regional Board's Executive Officer). Biofiltration BMPs include bioretention systems with an underdrain and bioswales (Modified from: Order No. R4-2012-0175).

Bioretention means a LID BMP that reduces stormwater runoff by intercepting rainfall on vegetative canopy, and through evapotranspiration and infiltration. The bioretention system typically includes a minimum 2-foot top layer of a specified soil and compost mixture underlain by a gravel-filled temporary storage pit dug into the in-situ soil. As defined in the Municipal NPDES permit, a bioretention BMP may be designed with an overflow drain, but may not include an underdrain. When a bioretention BMP is designed or constructed with an underdrain it is regulated by the Municipal NPDES permit as biofiltration (Modified from: Order No. R4-2012-0175).

Bioswale means a LID BMP consisting of a shallow channel lined with grass or other dense, low-growing vegetation. Bioswales are designed to collect stormwater runoff and to achieve a uniform sheet flow through the dense vegetation for a period of several minutes (Source: Order No. R4-2012-0175).

City means the City of Walnut.

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted in 1972, by Public Law 92-500, and amended by the Water Quality Act of 1987. The Clean Water Act prohibits the discharge of pollutants to Waters of the United States unless the discharge is in accordance with an NPDES permit.

Commercial Malls means any development on private land comprised of one or more buildings forming a complex of stores which sells various merchandise, with interconnecting walkways enabling visitors to easily walk from store to store, along with parking area(s). A commercial mall includes, but is not limited to: mini-malls, strip malls, other retail complexes, and enclosed shopping malls or shopping centers (Source: Order No. R4-2012-0175).

Construction Activity means any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that result in land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain the original line and grade, hydraulic capacity, or original purposes of the facility. See "Routine Maintenance" definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage by the State of California General Permit for Storm Water Discharges Associated with Industrial Activities or for Stormwater Discharges Associated with Construction Activities is required if more than one acre is disturbed or the activities are part of a larger plan (Source: Order No. R4-2012-0175).

Control means to minimize, reduce or eliminate by technological, legal, contractual, or other means, the discharge of pollutants from an activity or activities (Source: Order No. R4-2012-0175).

Development means construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail, and other non-residential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Directly Adjacent means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area (Source: Order No. R4-2012-0175).

Discharge means any release, spill, leak, pump, flow, escape, dumping, or disposal of any liquid, semi-solid, or solid substance.

Disturbed Area means an area that is altered as a result of clearing, grading, and/or excavation (Source: Order No. R4-2012-0175).

Flow-through BMPs means modular, vault type "high flow biotreatment" devices contained within an impervious vault with an underdrain or designed with an impervious liner and an underdrain (Modified from: Order No. R4-2012-0175).

General Construction Activities Storm Water Permit (GCASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from construction activities under certain conditions.

General Industrial Activities Storm Water Permit (GIASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from certain industrial activities under certain conditions.

Green Roof means a LID BMP using planter boxes and vegetation to intercept rainfall on the roof surface. Rainfall is intercepted by vegetation leaves and through evapotranspiration. Green roofs may be designed as either a bioretention BMP or as a biofiltration BMP. To receive credit as a bioretention BMP, the green roof system planting medium shall be of sufficient depth to provide capacity within the pore space volume to contain the design storm depth and may not be designed or constructed with an underdrain (Source: Order No. R4-2012-0175).

Hazardous Material(s) means any material(s) defined as hazardous by Division 20, Chapter 6.95 of the California Health and Safety Code.

Hillside means a property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is 25% or greater and where grading contemplates cut or fill slopes (Source: Order No. R4-2012-0175).

Impervious Surface means any man-made or modified surface that prevents or significantly reduces the entry of water into the underlying soil, resulting in runoff from the surface in greater quantities and/or at an increased rate, when compared to natural conditions prior to development. Examples of places that commonly exhibit impervious surfaces include parking lots, driveways, roadways, storage areas, and rooftops. The imperviousness of these areas commonly results from paving, compacted gravel, compacted earth, and oiled earth.

Industrial Park means land development that is set aside for industrial development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry (Source: Order No. R4-2012-0175).

Infiltration BMP means a LID BMP that reduces stormwater runoff by capturing and infiltrating the runoff into in-situ soils or amended onsite soils. Examples of infiltration BMPs include infiltration basins, dry wells, and pervious pavement (Source: Order No. R4-2012-0175).

LID means Low Impact Development. LID consists of building and landscape features designed to retain or filter stormwater runoff (Source: Order No. R4-2012-0175).

MS4 means Municipal Separate Storm Sewer System (MS4). The MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;

(ii) Designed or used for collecting or conveying stormwater;

(iii) Which is not a combined sewer; and

(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

(40 CFR § 122.26(b)(8)) (Source: Order No. R4-2012-0175)

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA §307, 402, 318, and 405. The term includes an "approved program" (Source: Order No. R4-2012-0175).

Natural Drainage System means a drainage system that has not been improved (e.g., channelized or armored). The clearing or dredging of a natural drainage system does not cause the system to be classified as an improved drainage system (Source: Order No. R4-2012-0175).

New Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision (Source: Order No. R4-2012-0175).

Non-Stormwater Discharge means any discharge to a municipal storm drain system that is not composed entirely of stormwater (Source: Order No. R4-2012-0175).

Parking Lot means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use, with a lot size of 5,000 square feet or more of surface area, or with 25 or more parking spaces (Source: Order No. R4-2012-0175).

Person means any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, state, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine and the singular shall include the plural where indicated by the context.

Planning Priority Projects means development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution, prior to completion of the project(s) (Modified from: Order No. R4-2012-0175).

Pollutant means any "pollutant" defined in Section 502(6) of the Federal Clean Water Act or incorporated into the California Water Code Sec. 13373. Pollutants may include, but are not limited to the following:

(1) Commercial and industrial waste (such as fuels, solvents, detergents, plastic pellets, hazardous substances, fertilizers, pesticides, slag, ash, and sludge).

(2) Metals (such as cadmium, lead, zinc, copper, silver, nickel, chromium, and non- metals such as phosphorus and arsenic).

(3) Petroleum hydrocarbons (such as fuels, lubricants, surfactants, waste oils, solvents, coolants, and grease).

(4) Excessive eroded soil, sediment, and particulate materials in amounts that may adversely affect the beneficial use of the receiving waters, flora, or fauna of the State.

(5) Animal wastes (such as discharge from confinement facilities, kennels, pens, recreational facilities, stables, and show facilities).

(6) Substances having characteristics such as pH less than 6 or greater than 9, or unusual coloration or turbidity, or excessive levels of fecal coliform, or fecal streptococcus, or enterococcus.

Project means all developmen , redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Pub. Resources Code §21065) (Source: Order No. R4-2012-0175).

Rainfall Harvest and Use means a LID BMP system designed to capture runoff, typically from a roof but can also include runoff capture from elsewhere within the site, and to provide for temporary storage until the harvested water can be used for irrigation or non-potable uses. The harvested water may also be used for potable water uses if the system includes disinfection treatment and is approved for such use by the local building department (Source: Order No. R4-2012-0175).

Receiving Water means "water of the United States" into which waste and/or pollutants are or may be discharged (Source: Order No. R4-2012-0175).

Redevelopment means land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of routine maintenance activity; and land disturbing activity related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Regional Board means the California Regional Water Quality Control Board, Los Angeles Region.

Restaurant means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812) (Source: Order No. R4-2012-0175).

Retail Gasoline Outlet means any facility engaged in selling gasoline and lubricating oils (Source: Order No. R4-2012-0175).

Routine Maintenance

Routine maintenance projects include, but are not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.
4. Update existing lines* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
5. Repair leaks

Routine maintenance does not include construction of new** lines or facilities resulting from compliance with applicable codes, standards and regulations.

* Update existing lines includes replacing existing lines with new materials or pipes.

** New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines (Source: Order No. R4-2012-0175).

Significant Ecological Areas (SEAs) means an area that is determined to possess an example of biotic resources that cumulatively represent biological diversity, for the purposes of protecting biotic diversity, as part of the Los Angeles County General Plan. Areas are designated as SEAs, if they possess one or more of the following criteria:

1. The habitat of rare, endangered, and threatened plant and animal species.
2. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis.
3. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind or are restricted in distribution in Los Angeles County.

4. Habitat that at some point in the life cycle of a species or group of species, serves as a concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or within Los Angeles County.
5. Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent an unusual variation in a population or community.
6. Areas important as game species habitat or as fisheries.
7. Areas that would provide for the preservation of relatively undisturbed examples of natural biotic communities in Los Angeles County.
8. Special areas (Source: Order No. R4-2012-0175).

Site means land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity (Source: Order No. R4-2012-0175).

Storm Drain System means any facilities or any part of those facilities, including streets, gutters, conduits, natural or artificial drains, channels, and watercourses that are used for the purpose of collecting, storing, transporting or disposing of stormwater and are located within the City of Walnut.

Storm Water or Stormwater means water that originates from atmospheric moisture (rain or snow) and that falls onto land, water, or other surfaces. Without any change in its meaning, this term may be spelled or written as one word or two separate words.

Stormwater Runoff means that part of precipitation (rainfall or snowmelt) which travels across a surface to the storm drain system or receiving waters.

SUSMP means the Los Angeles Countywide Standard Urban Stormwater Mitigation Plan. The SUSMP was required as part of the previous Municipal NPDES Permit (Order No. 01-182, NPDES No. CAS004001) and required plans that designate best management practices (BMPs) that must be used in specified categories of development projects.

Urban Runoff means surface water flow produced by storm and non-storm events. Non-storm events include flow from residential, commercial, or industrial activities involving the use of potable and non-potable water.

[MUNICIPAL CODE SECTION REFERENCE(S)] is amended to read as follows:

SEC. [X]. STORMWATER POLLUTION CONTROL MEASURES FOR DEVELOPMENT PLANNING AND CONSTRUCTION ACTIVITIES

(A) **Objective**. The provisions of this section contain requirements for construction activities and facility operations of Development and Redevelopment projects to comply with the current "Municipal NPDES permit," lessen the water quality impacts of development by using smart growth practices, and integrate LID design principles to mimic

predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use. LID shall be inclusive of SUSMP requirements.

(B) Scope. This Section contains requirements for stormwater pollution control measures in Development and Redevelopment projects and authorizes the City of Walnut to further define and adopt stormwater pollution control measures, develop LID principles and requirements, including but not limited to the objectives and specifications for integration of LID strategies, grant waivers from the requirements of the Standard Urban Stormwater Mitigation Plan, and collect funds for projects that are granted waivers. Except as otherwise provided herein, the City of Walnut shall administer, implement and enforce the provisions of this Section.

(C) Applicability. The following Development and Redevelopment projects, termed "Planning Priority Projects," shall comply with the requirements of [SECTION NUMBER]:

(1) All development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.

(2) Industrial parks 10,000 square feet or more of surface area.

(3) Commercial malls 10,000 square feet or more of surface area.

(4) Retail gasoline outlets with 5,000 square feet or more of surface area.

(5) Restaurants (Standard Industrial Classification (SIC) of 5812) with 5,000 square feet or more of surface area.

(6) Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.

(7) Streets and roads construction of 10,000 square feet or more of impervious surface area.

(8) Automotive service facilities (Standard Industrial Classification (SIC) of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.

(9) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:

a. Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and

b. Create 2,500 square feet or more of impervious surface area

(10) Single-family hillside homes.

(11) Redevelopment Projects

a. Land disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.

b. Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, the entire project must be mitigated.

c. Where Redevelopment results in an alteration of less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, only the alteration must be mitigated, and not the entire development.

d. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

e. Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

(D) **Effective Date.** The Planning and Land Development requirements contained in Section 7 of Order No. R4-2012-0175 shall become effective 90 days from the adoption of the Order (February 6, 2013). This includes Planning Priority Projects that are discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals within 90 days of adoption of the Order. Projects that have been deemed complete within 90 days of adoption of the Order are not subject to the requirements Section 7.

(E) **Stormwater Pollution Control Requirements.** The Site for every Planning Priority Project shall be designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention and/or rainfall harvest and use.

(1) A new single-family hillside home development shall include mitigation measures to:

a. Conserve natural areas;

b. Protect slopes and channels;

c. Provide storm drain system stenciling and signage;

d. Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability; and

e. Direct surface flow to vegetated areas before discharge, unless the diversion would result in slope instability.

(2) Street and road construction of 10,000 square feet or more of impervious surface shall follow USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets (December 2008 EPA-833-F-08-009) to the maximum extent practicable.

(3) The remainder of Planning Priority Projects shall prepare a LID Plan to comply with the following:

a. Retain stormwater runoff onsite for the Stormwater Quality Design Volume (SWQDv) defined as the runoff from:

i. The 85th percentile 24-hour runoff event as determined from the Los Angeles County 85th percentile precipitation isohyetal map; or

ii. The volume of runoff produced from a 0.75 inch, 24-hour rain event, whichever is greater.

b. Minimize hydromodification impacts to natural drainage systems as defined in the Municipal NPDES Permit. Hydromodification requirements are further specified in [NAME OF POST-CONSTRUCITON BMP HANDBOOK].

c. When, as determined by the City of Walnut, 100 percent onsite retention of the SWQDv is technically infeasible, partially or fully, the infeasibility shall be demonstrated in the submitted LID Plan. The technical infeasibility may result from conditions that may include, but are not limited to:

i. The infiltration rate of saturated in-situ soils is less than 0.3 inch per hour and it is not technically feasible to amend the in-situ soils to attain an infiltration rate necessary to achieve reliable performance of infiltration or bioretention BMPs in retaining the SWQDv onsite.

ii. Locations where seasonal high groundwater is within five to ten feet of surface grade;

iii. Locations within 100 feet of a groundwater well used for drinking water;

iv. Brownfield development sites or other locations where pollutant mobilization is a documented concern;

v. Locations with potential geotechnical hazards;

vi. Smart growth and infill or redevelopment locations where the density and/ or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.

d. If partial or complete onsite retention is technically infeasible, the project Site may biofiltrate 1.5 times the portion of the remaining SWQDv that is not reliably retained onsite. Biofiltration BMPs must adhere to the design specifications provided in the Municipal NPDES Permit.

i. Additional alternative compliance options such as offsite infiltration may be available to the project Site. The project Site should contact the City of Walnut to determine eligibility. Alternative compliance options are further specified in [NAME OF POST-CONSTRUCITON BMP HANDBOOK].

e. The remaining SWQDv that cannot be retained or biofiltered onsite must be treated onsite to reduce pollutant loading. BMPs must be selected and designed to meet pollutant-specific benchmarks as required per the Municipal NPDES Permit. Flow-through BMPs may be used to treat the remaining SWQDv and must be sized based on a rainfall intensity of:

i. 0.2 inches per hour, or
ii. The one year, one-hour rainfall intensity as determined from the most recent Los Angeles County isohyetal map, whichever is greater.

f. A Multi-Phased Project may comply with the standards and requirements of this section for all of its phases by: (a) designing a system acceptable to the City of Walnut to satisfy these standards and requirements for the entire Site during the first phase, and (b) implementing these standards and requirements for each phase of Development or Redevelopment of the Site during the first phase or prior to commencement of construction of a later phase, to the extent necessary to treat the stormwater from such later phase. For purposes of this section, "Multi-Phased Project" shall mean any Planning Priority Project implemented over more than one phase and the Site of a Multi-Phased Project shall include any land and water area designed and used to store, treat or manage stormwater runoff in connection with the Development or Redevelopment, including any tracts, lots, or parcels of real property, whether Developed or not, associated with, functionally connected to, or under common ownership or control with such Development or Redevelopment.

(F) **Validity.** If any provision of this Ordinance is found to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect remaining provisions of this Ordinance are declared to be severable.

(G) **Certification.** The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy.

APPROVED AND ADOPTED this __th day of _____, 20__.

_____

Mayor_____

ATTEST:

_____

Teresa De Dios, City Clerk

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF WALNUT)

I, Teresa De Dios, City Clerk of the City of Walnut, do hereby certify that the foregoing Ordinance _____ being:

AN ORDINANCE AMENDING [MUNICIPAL CODE SECTION REFERENCE(S)] OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING [NAME OF POST-CONSTRUCITON REQUIREMENTS – LIKELY "SUSMP" FOR MOST MUNICIPALITIES] REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

Said Ordinance was duly introduced at a regular meeting held on the __th day of _____, 20__, and was adopted and passed at a regular meeting of the City Council on the _____ day of _____, 20__ by the following vote, to wit:

AYES: COUNCILMEMBER(S):
NOES: COUNCILMEMBER(S):
ABSENT: COUNCILMEMBER(S):
ABSTAIN: COUNCILMEMBER(S):

ATTEST:

_____

Teresa De Dios, City Clerk

Attachment B

City of Walnut

LID Ordinance

ORDINANCE NO. 13-13

AN ORDINANCE AMENDING TITLE V, CHAPTER 21, OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING STANDARD URBAN STORM WATER MITIGATION PLAN REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS.

CITY COUNCIL OF THE CITY OF WALNUT HEREBY ORDAINS THE FOLLOWING:

(A) The City of Walnut is authorized by Article XI, §5 and §7 of the State Constitution to exercise the police power of the State by adopting regulations to promote public health, public safety and general prosperity.

(B) The City of Walnut has authority under the California Water Code to adopt and enforce ordinances imposing conditions, restrictions and limitations with respect to any activity which might degrade the quality of waters of the State.

(C) The city is a permittee under the "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," issued by the California Regional Water Quality Control Board--Los Angeles Region," (Order No. R4-2012-0175) which also serves as an NPDES Permit under the Federal Clean Water Act (NPDES No. CAS004001), as well as Waste Discharge Requirements under California law (the "Municipal NPDES permit"). In order to participate in a Watershed Management Program and/or Enhanced Watershed Management Program, the Municipal NPDES permit requires permittees to develop and implement a LID Ordinance.

(D) The City of Walnut has applied an integrated approach to incorporate wastewater, stormwater and runoff, and recycled water management into a single strategy through its Integrated Resources Plan.

(E) The City of Walnut is committed to a stormwater management program that protects water quality and water supply by employing watershed-based approaches that balance environmental, social, and economic considerations.

(F) It is the intent of the City of Walnut to expand the applicability of the existing Standard Urban Stormwater Mitigation Plan (SUSMP) requirements by providing stormwater and rainwater LID strategies for Development and Redevelopment projects as defined under "Applicability."

TITLE V PUBLIC WORKS, CHAPTER 21, ARTICLE III STORM WATER AND URBAN RUNOFF POLLUTION CONTROL, SECTION 21-61 PARAGRAPH C IS AMENDED IN ITS ENTIRETY TO READ AS FOLLOWS:

The City of Walnut is a permittee under the "Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach MS4," issued by the California Regional Water Quality Control Board--Los Angeles Region," (Order No. R4-2012-0175) which also serves as an NPDES Permit under the Federal Clean Water Act (NPDES No. CAS004001), as well as Waste Discharge Requirements under California law (the "Municipal NPDES permit").

TITLE V PUBLIC WORKS, CHAPTER 21, ARTICLE III STORM WATER AND URBAN RUNOFF POLLUTION CONTROL, SECTION 21-63 DEFINITIONS OF THE CITY OF WALNUT MUNICIPAL CODE IS AMENDED IN ITS ENTIRETY TO READ AS FOLLOWS:

Definitions.

Except as specifically provided herein, any term used in this Section 21-63 shall be defined as that term in the current Municipal NPDES permit, or if it is not specifically defined in either the Municipal NPDES permit, then as such term is defined in the Federal Clean Water Act, as amended, and/or the regulations promulgated thereunder. If the definition of any term contained in this chapter conflicts with the definition of the same term in the current Municipal NPDES permit, then the definition contained in the Municipal NPDES permit shall govern. The following words and phrases shall have the following meanings when used in this chapter:

Automotive Service Facility means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. For inspection purposes, Permittees need not inspect facilities with SIC codes 5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to stormwater (Source: Order No. R4-2012-0175).

Basin Plan means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments (Source: Order No. R4-2012-0175).

Best Management Practice (BMP) means practices or physical devices or systems designed to prevent or reduce pollutant loading from stormwater or non-stormwater discharges to receiving waters, or designed to reduce the volume of stormwater or non-stormwater discharged to the receiving water (Source: Order No. R4-2012-0175).

Biofiltration means a LID BMP that reduces stormwater pollutant discharges by intercepting rainfall on vegetative canopy, and through incidental infiltration and/or evapotranspiration, and filtration. Incidental infiltration is an important factor in achieving the required pollutant load reduction. Therefore, the term "biofiltration" as used in this Ordinance is defined to include only systems designed to facilitate incidental infiltration or achieve the equivalent pollutant reduction as biofiltration BMPs with an underdrain (subject to approval by the Regional Board's Executive

Officer). Biofiltration BMPs include bioretention systems with an underdrain and bioswales (Modified from: Order No. R4-2012-0175).

Bioretention means a LID BMP that reduces stormwater runoff by intercepting rainfall on vegetative canopy, and through evapotranspiration and infiltration. The bioretention system typically includes a minimum 2-foot top layer of a specified soil and compost mixture underlain by a gravel-filled temporary storage pit dug into the in-situ soil. As defined in the Municipal NPDES permit, a bioretention BMP may be designed with an overflow drain, but may not include an underdrain. When a bioretention BMP is designed or constructed with an underdrain it is regulated by the Municipal NPDES permit as biofiltration (Modified from: Order No. R4-2012-0175).

Bioswale means a LID BMP consisting of a shallow channel lined with grass or other dense, low-growing vegetation. Bioswales are designed to collect stormwater runoff and to achieve a uniform sheet flow through the dense vegetation for a period of several minutes (Source: Order No. R4-2012-0175).

City means the City of Walnut.

Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted in 1972, by Public Law 92-500, and amended by the Water Quality Act of 1987. The Clean Water Act prohibits the discharge of pollutants to Waters of the United States unless the discharge is in accordance with an NPDES permit.

Commercial Malls means any development on private land comprised of one or more buildings forming a complex of stores which sells various merchandise, with interconnecting walkways enabling visitors to easily walk from store to store, along with parking area(s). A commercial mall includes, but is not limited to: mini-malls, strip malls, other retail complexes, and enclosed shopping malls or shopping centers (Source: Order No. R4-2012-0175).

Construction Activity means any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that result in land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain the original line and grade, hydraulic capacity, or original purposes of the facility. See "Routine Maintenance" definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage by the State of California General Permit for Storm Water Discharges Associated with Industrial Activities or for Stormwater Discharges Associated with Construction Activities is required if more than one acre is disturbed or the activities are part of a larger plan (Source: Order No. R4-2012-0175).

Control means to minimize, reduce or eliminate by technological, legal, contractual, or other means, the discharge of pollutants from an activity or activities (Source: Order No. R4-2012-0175).

Development means construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail, and other non-residential projects, including public agency projects; or mass grading for future construction. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Directly Adjacent means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area (Source: Order No. R4-2012-0175).

Discharge means any release, spill, leak, pump, flow, escape, dumping, or disposal of any liquid, semi-solid, or solid substance.

Disturbed Area means an area that is altered as a result of clearing, grading, and/or excavation (Source: Order No. R4-2012-0175).

Flow-through BMPs means modular, vault type "high flow biotreatment" devices contained within an impervious vault with an underdrain or designed with an impervious liner and an underdrain (Modified from: Order No. R4-2012-0175).

General Construction Activities Storm Water Permit (GCASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from construction activities under certain conditions.

General Industrial Activities Storm Water Permit (GIASP) means the general NPDES permit adopted by the State Board which authorizes the discharge of stormwater from certain industrial activities under certain conditions.

Green Roof means a LID BMP using planter boxes and vegetation to intercept rainfall on the roof surface. Rainfall is intercepted by vegetation leaves and through evapotranspiration. Green roofs may be designed as either a bioretention BMP or as a biofiltration BMP. To receive credit as a bioretention BMP, the green roof system planting medium shall be of sufficient depth to provide capacity within the pore space volume to contain the design storm depth and may not be designed or constructed with an underdrain (Source: Order No. R4-2012-0175).

Hazardous Material(s) means any material(s) defined as hazardous by Division 20, Chapter 6.95 of the California Health and Safety Code.

Hillside means a property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is 25% or greater and where grading contemplates cut or fill slopes (Source: Order No. R4-2012-0175).

Impervious Surface means any man-made or modified surface that prevents or significantly reduces the entry of water into the underlying soil, resulting in runoff from the surface in greater quantities and/or at an increased rate, when compared to natural conditions prior to development. Examples of places that commonly exhibit impervious surfaces include parking lots, driveways, roadways, storage areas, and rooftops. The imperviousness of these areas commonly results from paving, compacted gravel, compacted earth, and oiled earth.

Industrial Park means land development that is set aside for industrial development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry (Source: Order No. R4-2012-0175).

Infiltration BMP means a LID BMP that reduces stormwater runoff by capturing and infiltrating the runoff into in-situ soils or amended onsite soils. Examples of infiltration BMPs include infiltration basins, dry wells, and pervious pavement (Source: Order No. R4-2012-0175).

LID means Low Impact Development. LID consists of building and landscape features designed to retain or filter stormwater runoff (Source: Order No. R4-2012-0175).

MS4 means Municipal Separate Storm Sewer System (MS4). The MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

(i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
(ii) Designed or used for collecting or conveying stormwater;
(iii) Which is not a combined sewer; and
(iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

(40 CFR § 122.26(b)(8)) (Source: Order No. R4-2012-0175)

National Pollutant Discharge Elimination System (NPDES) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA §307, 402, 318, and 405. The term includes an "approved program" (Source: Order No. R4-2012-0175).

Natural Drainage System means a drainage system that has not been improved (e.g., channelized or armored). The clearing or dredging of a natural drainage system does not cause the system to be classified as an improved drainage system (Source: Order No. R4-2012-0175).

New Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision (Source: Order No. R4-2012-0175).

Non-Stormwater Discharge means any discharge to a municipal storm drain system that is not composed entirely of stormwater (Source: Order No. R4-2012-0175).

Parking Lot means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use, with a lot size of 5,000 square feet or more of surface area, or with 25 or more parking spaces (Source: Order No. R4-2012-0175).

Person means any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, state, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine and the singular shall include the plural where indicated by the context.

Planning Priority Projects means development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate stormwater pollution, prior to completion of the project(s) (Modified from: Order No. R4-2012-0175).

Pollutant means any "pollutant" defined in Section 502(6) of the Federal Clean Water Act or incorporated into the California Water Code Sec. 13373. Pollutants may include, but are not limited to the following:

(1) Commercial and industrial waste (such as fuels, solvents, detergents, plastic pellets, hazardous substances, fertilizers, pesticides, slag, ash, and sludge).

(2) Metals (such as cadmium, lead, zinc, copper, silver, nickel, chromium, and non- metals such as phosphorus and arsenic).

(3) Petroleum hydrocarbons (such as fuels, lubricants, surfactants, waste oils, solvents, coolants, and grease).

(4) Excessive eroded soil, sediment, and particulate materials in amounts that may adversely affect the beneficial use of the receiving waters, flora, or fauna of the State.

(5) Animal wastes (such as discharge from confinement facilities, kennels, pens, recreational facilities, stables, and show facilities).

(6) Substances having characteristics such as pH less than 6 or greater than 9, or unusual coloration or turbidity, or excessive levels of fecal coliform, or fecal streptococcus, or enterococcus.

Project means all development, redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Pub. Resources Code §21065) (Source: Order No. R4-2012-0175).

Rainfall Harvest and Use means a LID BMP system designed to capture runoff, typically from a roof but can also include runoff capture from elsewhere within the site, and to provide for temporary storage until the harvested water can be used for irrigation or non-potable uses. The harvested water may also be used for potable water uses if the system includes disinfection treatment and is approved for such use by the local building department (Source: Order No. R4-2012-0175).

Receiving Water means "water of the United States" into which waste and/or pollutants are or may be discharged (Source: Order No. R4-2012-0175).

Redevelopment means land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of routine maintenance activity; and land disturbing activity related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety (Source: Order No. R4-2012-0175).

Regional Board means the California Regional Water Quality Control Board, Los Angeles Region.

Restaurant means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812) (Source: Order No. R4-2012-0175).

Retail Gasoline Outlet means any facility engaged in selling gasoline and lubricating oils (Source: Order No. R4-2012-0175).

Routine Maintenance
Routine maintenance projects include, but are not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.
4. Update existing lines* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
5. Repair leaks

Routine maintenance does not include construction of new** lines or facilities resulting from compliance with applicable codes, standards and regulations.

* Update existing lines includes replacing existing lines with new materials or pipes.
** New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines (Source: Order No. R4-2012-0175).

Significant Ecological Areas (SEAs) means an area that is determined to possess an example of biotic resources that cumulatively represent biological diversity, for the purposes of protecting biotic diversity, as part of the Los Angeles County General Plan. Areas are designated as SEAs, if they possess one or more of the following criteria:

1. The habitat of rare, endangered, and threatened plant and animal species.
2. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind, or are restricted in distribution on a regional basis.
3. Biotic communities, vegetative associations, and habitat of plant and animal species that are either one of a kind or are restricted in distribution in Los Angeles County.
4. Habitat that at some point in the life cycle of a species or group of species, serves as a concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or within Los Angeles County.
5. Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent an unusual variation in a population or community.
6. Areas important as game species habitat or as fisheries.
7. Areas that would provide for the preservation of relatively undisturbed examples of natural biotic communities in Los Angeles County.
8. Special areas (Source: Order No. R4-2012-0175).

Site means land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity (Source: Order No. R4-2012-0175).

Storm Drain System means any facilities or any part of those facilities, including streets, gutters, conduits, natural or artificial drains, channels, and watercourses that are used for the purpose of collecting, storing, transporting or disposing of stormwater and are located within the City of Walnut.

Storm Water or Stormwater means water that originates from atmospheric moisture (rain or snow) and that falls onto land, water, or other surfaces. Without any change in its meaning, this term may be spelled or written as one word or two separate words.

Stormwater Runoff means that part of precipitation (rainfall or snowmelt) which travels across a surface to the storm drain system or receiving waters.

SUSMP means the Los Angeles Countywide Standard Urban Stormwater Mitigation Plan. The SUSMP was required as part of the previous Municipal NPDES Permit (Order No. 01-182,

NPDES No. CAS004001) and required plans that designate best management practices (BMPs) that must be used in specified categories of development projects.

Urban Runoff means surface water flow produced by storm and non-storm events. Non-storm events include flow from residential, commercial, or industrial activities involving the use of potable and non-potable water.

CHAPTER 21 ARTICLE IV SECTION 21-80 IS AMENDED TO READ AS FOLLOWS: TITLE V PUBLIC WORKS, CHAPTER 21, ARTICLE IV SECTION 21-80 IS AMENDED IN ITS ENTIRETY TO READ AS FOLLOWS:

SEC. 21-80 STORMWATER POLLUTION CONTROL MEASURES FOR DEVELOPMENT PLANNING AND CONSTRUCTION ACTIVITIES

(A) **Objective.** The provisions of this section contain requirements for construction activities and facility operations of Development and Redevelopment projects to comply with the current "Municipal NPDES permit," lessen the water quality impacts of development by using smart growth practices, and integrate LID design principles to mimic predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use. LID shall be inclusive of SUSMP requirements.

(B) **Scope.** This Section contains requirements for stormwater pollution control measures in Development and Redevelopment projects and authorizes the City of Walnut to further define and adopt stormwater pollution control measures, develop LID principles and requirements, including but not limited to the objectives and specifications for integration of LID strategies, grant waivers from the requirements of the Standard Urban Stormwater Mitigation Plan, and collect funds for projects that are granted waivers. Except as otherwise provided herein, the City of Walnut shall administer, implement and enforce the provisions of this Section.

(C) **Applicability.** The following Development and Redevelopment projects, termed "Planning Priority Projects," shall comply with the requirements of Chapter 21 Article IV Section 21-80.

(1) All development projects equal to 1 acre or greater of disturbed area that adds more than 10,000 square feet of impervious surface area.

(2) Industrial parks 10,000 square feet or more of surface area.

(3) Commercial malls 10,000 square feet or more of surface area.

(4) Retail gasoline outlets with 5,000 square feet or more of surface area.

(5) Restaurants (Standard Industrial Classification (SIC) of 5812) with 5,000 square feet or more of surface area.

(6) Parking lots with 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces.

(7) Strcets and roads construction of 10,000 square feet or more of impervious surface area.

(8) Automotive service facilities (Standard Industrial Classification (SIC) of 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) 5,000 square feet or more of surface area.

(9) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:

a. Discharge stormwater runoff that is likely to impact a sensitive biological species or habitat; and

b. Create 2,500 square feet or more of impervious surface area

(10) Single-family hillside homes.

(11) Redevelopment Projects

a. Land disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on Planning Priority Project categories.

b. Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, the entire project must be mitigated.

c. Where Redevelopment results in an alteration of less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, only the alteration must be mitigated, and not the entire development.

d. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

e. Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

(D) **Effective Date.** The Planning and Land Development requirements contained in Section 7 of Order No. R4-2012-0175 shall become effective 90 days from the adoption of the Order (February 6, 2013). This includes Planning Priority Projects that are discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals within 90 days of adoption of the Order. Projects that have been deemed complete within 90 days of adoption of the Order are not subject to the requirements Section 7.

(E) **Stormwater Pollution Control Requirements.** The Site for every Planning Priority Project shall be designed to control pollutants, pollutant loads, and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention and/or rainfall harvest and use.

(1) A new single-family hillside home development shall include mitigation measures to:

a. Conserve natural areas;

b. Protect slopes and channels;

c. Provide storm drain system stenciling and signage;

d. Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability; and

e. Direct surface flow to vegetated areas before discharge, unless the diversion would result in slope instability.

(2) Street and road construction of 10,000 square feet or more of impervious surface shall follow USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets (December 2008 EPA-833-F-08-009) to the maximum extent practicable.

(3) The remainder of Planning Priority Projects shall prepare a LID Plan to comply with the following:

a. Retain stormwater runoff onsite for the Stormwater Quality Design Volume (SWQDv) defined as the runoff from:

i. The 85th percentile 24-hour runoff event as determined from the Los Angeles County 85th percentile precipitation isohyetal map; or

ii. The volume of runoff produced from a 0.75 inch, 24-hour rain event, whichever is greater.

b. Minimize hydromodification impacts to natural drainage systems as defined in the Municipal NPDES Permit. Hydromodification requirements are further specified in County of Los Angeles Department of Public Work Storm Water Best Management Practices Design and Maintenance Manual.

c. When, as determined by the City of Walnut, 100 percent onsite retention of the SWQDv is technically infeasible, partially or fully, the infeasibility shall be demonstrated in the submitted LID Plan. The technical infeasibility may result from conditions that may include, but are not limited to:

i. The infiltration rate of saturated in-situ soils is less than 0.3 inch per hour and it is not technically feasible to amend the in-situ soils to attain an infiltration rate necessary to achieve reliable performance of infiltration or bioretention BMPs in retaining the SWQDv onsite.

ii. Locations where seasonal high groundwater is within five to ten feet of surface grade;

iii. Locations within 100 feet of a groundwater well used for drinking water;

iv. Brownfield development sites or other locations where pollutant mobilization is a documented concern;

v. Locations with potential geotechnical hazards;

vi. Smart growth and infill or redevelopment locations where the density and/ or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement.

d. If partial or complete onsite retention is technically infeasible, the project Site may biofiltrate 1.5 times the portion of the remaining SWQDv that is not reliably retained onsite. Biofiltration BMPs must adhere to the design specifications provided in the Municipal NPDES Permit.

i. Additional alternative compliance options such as offsite infiltration may be available to the project Site. The project Site should contact the City of Walnut to determine eligibility. Alternative compliance options are further specified in County of Los Angeles Department of Public Work Storm Water Best Management Practices Design and Maintenance Manual.

e. The remaining SWQDv that cannot be retained or biofiltered onsite must be treated onsite to reduce pollutant loading. BMPs must be selected and designed to meet pollutant-specific benchmarks as required per the Municipal NPDES Permit. Flow-through BMPs may be used to treat the remaining SWQDv and must be sized based on a rainfall intensity of:

i. 0.2 inches per hour, or
ii. The one year, one-hour rainfall intensity as determined from the most recent Los Angeles County isohyetal map, whichever is greater.

f. A Multi-Phased Project may comply with the standards and requirements of this section for all of its phases by: (a) designing a system acceptable to the City of Walnut to satisfy these standards and requirements for the entire Site during the first phase, and (b) implementing these standards and requirements for each phase of Development or Redevelopment of the Site during the first phase or prior to commencement of construction of a later phase, to the extent necessary to treat the stormwater from such later phase. For purposes of this section, "Multi-Phased Project" shall mean any Planning Priority Project implemented over more than one phase and the Site of a Multi-Phased Project shall include any land and water area designed and used to store, treat or manage stormwater runoff in connection with the Development or Redevelopment, including any tracts, lots, or parcels of real property, whether Developed or not, associated with, functionally connected to, or under common ownership or control with such Development or Redevelopment.

(F) **Validity.** If any provision of this Ordinance is found to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such invalidity shall not affect remaining provisions of this Ordinance are declared to be severable.

(G) **Certification.** The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy.

APPROVED AND ADOPTED this 13th day of November, 2013.

A. Cartagena

Antonio Cartagena, Mayor

ATTEST:

Teresa De Dios

Teresa De Dios, City Clerk

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF WALNUT)

I, Teresa De Dios, City Clerk of the City of Walnut, do hereby certify that the foregoing Ordinance No. 13-13 being:

AN ORDINANCE AMENDING TITLE V, CHAPTER 21, OF THE CITY OF WALNUT MUNICIPAL CODE TO EXPAND THE APPLICABILITY OF THE EXISTING STANDARD URBAN STORM WATER MITIGATION PLAN REQUIREMENTS BY IMPOSING LOW IMPACT DEVELOPMENT (LID) STRATEGIES ON PROJECTS THAT REQUIRE BUILDING PERMITS

Said Ordinance was duly introduced at a regular meeting held on the 23rd day of October, 2013, and was adopted and passed at a regular meeting of the City Council on the 13th day of November 13, 2013 by the following vote, to wit:

AYES:	COUNCILMEMBER(S):	Cartagena, Ching, Pacheco, Su, Tragarz
NOES:	COUNCILMEMBER(S):	None
ABSENT:	COUNCILMEMBER(S):	None
ABSTAIN:	COUNCILMEMBER(S):	None

Teresa De Dios, City Clerk

Attachment C

City of Walnut

Public Education Materials

Storm Water Pollution Prevention

Construction

Sediment, vehicle fluids, dust and debris from construction sites can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Preventing Erosion
Avoid excavation or grading during wet weather. Plant temporary vegetation or add hydromulch on slopes where construction is not immediately planned, and permanent vegetation once excavation and grading are complete. Construct diversion dikes to channel run-off into a detention basin and around the construction site. Channels can be lined with grass or roughened pavement to reduce runoff velocity.

Maintaining Vehicles & Equipment
Maintain and refuel vehicles and equipment at a single location on-site, away from the street, gutter and storm drains. Perform major equipment repairs and washings off-site. Inspect vehicles and equipment frequently for leaks, and prevent leaks from stored vehicles by draining gas, hydraulic oil, transmission, brake and radiator fluids.

Ordering Materials & Recycling Waste
Reduce waste by ordering only the amounts of materials needed for the job. Use recycled or recyclable materials whenever possible. You can recycle broken asphalt, concrete, wood, and cleared vegetation. Non-recyclable materials should be taken to a landfill or disposed of as hazardous waste. For recycling and disposal information, call the City's exclusive franchise waste hauler, Valley Vista Services (800) 442-6454.

Cleaning & Preventing Spills
Use a drip pan and funnel when draining or pouring fluids. Sweep up dry spills, instead of hosing. Be ready for spills by preparing and using spill containment and cleanup kits that include safety equipment and dry cleanup materials such as kitty litter or sawdust. To report serious spills, call 911.

Store Materials Safely
Keep construction materials and debris away from the street, gutter and storm drains. Cover exposed excavated or stockpiled materials (such as soil, sand or gravel) with plastic sheeting to protect them from rain, wind and runoff.

Recycle Household Hazardous Waste
Household cleaners, paint and other home improvement products like wallpaper and tile adhesives are too toxic to trash. Recycle them instead, at a convenient household hazardous waste collection facility. Call (888) CLEANLA for the facility in your area.

For specific questions on storm water pollution prevention, contact: The City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact: 1 (888) CLEANLA
www.888cleanla.com

RB-AR17777

Storm Water Pollution Prevention

Home Repair

Toxic dust and debris from home repair and remodeling can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Construction Projects
Keep construction debris away from the street, gutter and storm drains. Schedule grading and excavation projects for dry weather. Cover excavated material and stockpiles of material such as soil, sand or gravel, to protect from rain, wind and runoff. Prevent erosion by planting fast-growing annual and perennial grass, which can shield and bind soil.

Landscaping & Gardening
Avoid applying fertilizers or pesticide near curbs and driveways, and store covered, protected from rain, wind and runoff. Try using organic or nontoxic alternatives. Reduce runoff and lower your water bill by using drip irrigation, soaker hoses or micro-spray systems. Recycle leaves instead of blowing, sweeping or raking them into the street, gutter or storm drain.

Concrete and Masonry
Store bags of cement and plaster away from gutters and storm drains, and cover them to protect against rain, wind and runoff. Sweep or scoop up cement washout or concrete dust instead of hosing into driveways, streets, gutters or storm drains.

Paint Removal & Cleanup
Paint stripping residue (such as chips and dust) from paints containing lead or tributyl tin are hazardous wastes. Sweep them up instead of hosing into the street and dispose of them safely at a household hazardous waste collection facility. Avoid cleaning brushes or rinsing paint containers in the street, gutter or near a storm drain. Clean water-based paints in the sink. Oil-based paints may be cleaned with thinner, which you can filter and reuse. Recycle leftover paint at a household hazardous waste collection facility, save it for touch ups or give it to someone who can use it, like a theatre group, school, or community organization.

Recycle Household Hazardous Waste
Household cleaners, paint and other home improvement products like wallpaper and tile adhesives are too toxic to trash. Recycle them instead, at a convenient household hazardous waste collection facility. Call (888) CLEANLA for the facility in your area.

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

PAINTING

Improper post-painting cleanup or disposal can lead to chemicals being picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect your health.

Water-Based Paints
When considering paint, use water-based paints whenever possible. They are less toxic than oil-based paints and easier to clean up. Look for products labeled "latex" or "cleans with water."

Paint Removal
Sweep up paint stripping residue (such as chips and dust) instead of hosing into the street. Dispose of them safely at a household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.

Painting Cleanup
Never clean brushes or rinse paint containers in the street, gutter or near a storm drain. Clean water-based paints in the sink. Clean oil-based paints with thinner, which can be reused by putting it in a jar to settle out the paint particles and then pouring off the clear liquid for future use. Wrap dried paint residue in newspaper and dispose of it in the trash.

Exterior Paint Removal
When stripping or cleaning building exteriors with high pressure water, block nearby storm drains and divert wash-water onto a designated dirt area. Ask your local wastewater treatment authority if you can collect building cleaning wastewater and discharge it to the sewer.

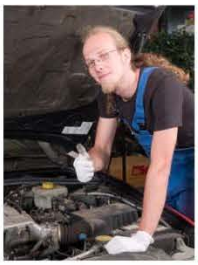
Recycling Paint
Recycle leftover paint at a household hazardous waste collection facility, save it for touch ups or give it to someone who can use it, like a theatre group, school, or community organization. Call (800) CLEANUP for the facility in your area.

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

Auto Maintenance



Oil, grease, anti-freeze and other toxic automotive fluids can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Cleaning Auto Parts
Scrape parts with a wire brush or use a bake oven rather than liquid cleaners. Arrange drip pans, drying racks and drain boards so that fluids are directed back into the parts washer or the fluid holding tank. Do not wash parts or equipment in a shop sink, parking lot, driveway or street.

Metal Grinding and Polishing
Keep a bin under your lathe or grinder to capture metal filings. Send uncontaminated filings to a scrap metal recycler for reclamation. Store metal filings in a covered container or indoors.

Cleaning Spills
Use dry methods for spill cleanup (sweeping, absorbent materials). Follow your hazardous materials response plan, as filed with your local fire department or other hazardous materials authority. Be sure that all employees are aware of the plan and are capable of implementing each phase. To report serious toxic spills, call 911.

Storing Hazardous Waste
Keep your liquid waste segregated. Many fluids can be recycled via hazardous waste disposal companies if they are not mixed. Store all materials under cover with spill containment or inside to prevent contamination of rainwater runoff.

Preventing Leaks and Spills
Place drip pans underneath vehicles to capture any leaking fluids. Use absorbent cleaning agents instead of water to clean work areas.

Proper Disposal of Hazardous Waste
Recycle used motor oil and oil filters, anti-freeze and other hazardous automotive fluids, batteries, tires and metal filings collected from grinding or polishing auto parts. Contact a licensed hazardous waste hauler. For more recycling information, call (888) CLEANLA. Use non-toxic cleaning products whenever possible.

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

Kitchen: Fats, Oil & Grease

Fats, oil and grease (FOG) from cooking poured into kitchen sinks can build up in sewer pipes causing a sewage spill into the storm drain system which flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Pipes Are For Water Only:
FOG that enters the sewer system from kitchen sinks and drains eventually hardens and coats the inside of sewer pipes. Over a short period of time FOG residues build up in the sewer pipes and begin to restrict flows until the FOG build-up completely blocks the normal flow of sewage.

The blockage causes the flow of sewage to exit from the sanitary sewer system at the nearest outlet that is most commonly a manhole, cleanout, or broken pipe, and flow into the storm drainage system.

A sewage spill due to blocked pipe from a build-up of FOG is costly to both you and the environment. However, with the proper care and attention, it may be avoidable. So do your part for yourself and your community.

To Protect Your Pipes:

1. Do not put oil, grease or greasy foods down the sink, drain or toilet.
2. Solidify cooking oil with an absorbent material such as cat litter or coffee grounds; place it in a sealed container and dispose of it in a trash receptacle.
3. Grease must be hardened in a can or container with a lid before disposing in the trash. If you soak a greasy pan, place a paper towel over the drain basket to catch grease and food particles as you pour the water down the drain.

For large amounts of household oil and grease, place in a sealed container and take it to a local Household Hazardous Waste Collection Center for proper disposal. Call (888) CLEANLA for a collection facility or mobile collection event near your area.

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www.888cleanla.com

Storm Water Pollution Prevention

Food and Restaurant

Restaurant food waste, grease, cleaning fluids, and trash can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Recycle Oil & Grease
Oil and grease wastes can be recycled. Look in the yellow pages for rendering companies, or call (888) CLEANLA for disposal information. Don't pour oil or grease into sinks, floor drains, or onto a parking lot or street. Keep grease bins covered and stored securely. Keep your grease interceptor well maintained to prevent sewer overflows or backups and keep records of grease waste hauling.

Cleaning & Maintenance
Clean your equipment, floor mats, filters and garbage cans in a mop sink, wash rack or floor drain that is connected to the sewer through a grease trap. Don't wash them, or pour wash water, on a parking lot, alley, sidewalk or street. Sweep outside areas and put the debris into a garbage bin, instead of sweeping or hosing them into the parking lot or street.

Managing Spills
Clean food spills in loading and trash areas by first using absorbent materials, followed by sweeping and then mopping (discharge mop water into the sewer through a grease interceptor). Have spill containment and cleanup kits available. To report serious toxic spills, call 911.

Dumpster Areas
Keep dumpster lids closed and the areas around them clean. Do not fill with liquid waste or hose them out. Call your trash hauler to replace any dumpsters that are damaged or leak.

Handling Toxic Chemicals
Dispose of all unwanted toxics materials like cleaners, solvents and detergents through a hazardous waste hauler. These items are not trash. For information on hazardous waste pickup, call (888) CLEANLA. Use non-toxic cleaning products

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

Garden

Yard waste, fertilizers and garden toxics (pesticides) can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

Yard Waste Disposal
Don't blow, sweep, or hose leaves, grass clippings and other yard waste into the street or gutter. Place all yard waste in your green waste refuse barrel or try grasscycling (leaving grass clippings on your lawn). Grass clippings can act as a natural fertilizer, and because grass is mostly water, it also irrigates your lawn, conserving water.

Use Fertilizers & Pesticides Safely
Fertilizers and pesticides are often carried into the storm drain system by sprinkler runoff. Try using organic or non-toxic alternatives. If you use chemical fertilizers or pesticides, avoid applying near curbs and drive-ways and never apply just before it rains.

Use Water Wisely
Cut your water costs and prevent runoff by controlling the amount of water and direction of sprinklers. The average lawn needs about an inch of water a week, including rainfall, or 10 to 20 minutes of watering. A half-inch per week is enough for fall and spring. Sprinklers should be on long enough to allow water to soak into the ground but not so long as to cause runoff.

There are three water providers serving the residents of Walnut. For links to these water providers and updates on water conservation requirements, visit the City of Walnut's "Go Green With Walnut" webpage at www.ci.walnut.ca.us (Keyword: "Go Green").

Planting in the Yard
Produce less yard waste and save water by planting low maintenance, drought-tolerant trees and shrubs. Use drip irrigation, soaker hoses or micro-spray systems for your landscaping to help reduce your water bill and prevent runoff.

Recycle Household Hazardous Waste
Household products like paint, pesticides, solvents & cleaners are too dangerous to dump and too toxic to trash. Take them to a convenient household hazardous waste collection facility. Call (800) CLEANUP for the facility in your area.

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

Pet Waste

Pet waste left on lawns, sidewalks and parks can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

What is Wrong With Pet Waste?
Pet waste, especially dog waste, is a major pollutant and contaminant of water supplies. The Federal Environmental Protection Agency views pet waste a serious source pollution and has placed it in the same category of "nonpoint source pollution" as oil and toxic chemicals.

Pet waste left on the streets, lawns and parks is a serious community health concern. A single gram of dog waste can contain 23 million fecal coliform bacteria, which are known to cause a variety of illnesses and disorders in humans.

Some sources estimate that 1/3 of all water contamination is a result of dog waste entering streams and leaching into underground well water. The average dog can produce 274 pounds of waste each year. Disease from dog waste may spread to other dogs, children, and adults.

Disposing of Pet Waste
All pet waste should be placed in your regular trash/refuse container, preferable in a bag.

Never put dog or animal waste into the green waste container. This will contaminate the entre container, and possible the entire truck load of green waste, which then cannot be reused and must go into a landfill.

Help Keep Our Parks Clean
It is for your health as well as for entire community.

Walking Your Dog: Pet Waste Pick Up Ordinance
The City would like remind pet owners to be courteous and pick up after your pet while walking your dog or animal on City sidewalks, trails, parks or other open spaces. There is an Animal Nuisance Ordinance in Los Angeles County Code (Title 10 Animals, Chapter 10.40.060, B.) which requires that owners pick up and properly dispose of their pet's waste from all public spaces and walking areas for sanitary and health reasons.

To help promote clean up, the City has installed pet waste stations at City parks. These stations provide not only Zero-Waste biodegradable bags with which to pick up your pet's waste, they also provide a sealed container in which to dispose of the waste.

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Storm Water Pollution Prevention

Used Motor Oil

Used motor oil dripped onto driveways and lawns can be picked up by rain and irrigation water and swept into the Los Angeles County storm drain system. This polluted water flows untreated into the San Gabriel River and eventually into the ocean, contaminating our waterways and making them unsafe for people and wildlife. Follow these simple tips to help prevent pollution and protect the health of your family and community.

RECYCLE USED OIL

Why Recycle Used Motor Oil and Oil Filters?
Did you know that used motor oil never wears out? It just gets dirty and can be recycled, cleaned, and used again. Recycling used motor oil conserves a natural resource (oil) and is good for the environment too! Motor oil poured onto the ground or into storm drains, or tossed into trash cans (even in a sealed container) can contaminate and pollute the soil, groundwater, streams, and rivers. Recycling your used motor oil reduces this pollution threat.

Where Can I Recycle My Used Motor Oil and Oil Filters?
Walnut residents can take up to five gallons of uncontaminated used oil and oil filters in secured, non-leaking containers to one of the following five certified Used Oil Collection Centers in Walnut (*Please call ahead for hours of operation. Used oil can only be dropped off during working hours):*

- MasterLube, 308 N. Lemon Avenue, 909.598.3881
- Firestone Tires 860 N. Nogales Street, 626.965.2224
- The Oilmen, 856 N. Nogales Street, 626.965.4798
- Kraken Auto Parts, 18724 Amir Road, 626.965.6012
- Mobil Xpress Lube, 762 N. Nogales St., 626.965.6032

Illegal Oil Dumping:
Please do not dispose of your used oil by pouring it into the gutter or onto the ground. It is not only illegal; it is a major source of water contamination. Street gutters drain directly into our local rivers and ocean; and fluid dumped on the ground can seep into rivers and ground water. So if wouldn't want you or your children to drink it, eat it or swim in it; don't pour it out!

RECYCLE USED OIL FILTERS

How to Store/Transport Used Oil: Used motor oil must be stored, transported and delivered to the Collection Centers in secured, non-leaking containers. Used oil may only be dropped off during normal hours of operation. It is not permitted to leave used oil at any Collection Center if the facility is closed. Do not risk contaminating the oil by storing it in a container formerly used for other products such as anti-freeze or paint. Walnut residents may pick up free used oil containers and used oil filter containers at the City's Maintenance and Recreation Facility at 21701 E. Valley Blvd. (proof of residency required).

What About Contaminated Oil? Certified Collection Centers will not accept used motor oil that has been contaminated with other fluids such as antifreeze, solvents, gasoline, or water. So please, don't mix your used oil with anything. Contaminated oil must be taken to a household hazardous waste collection facility. Call (888) CLEANLA for a collection facility or mobile collection event near your area.

For specific questions on storm water pollution prevention, contact:
City of Walnut
21201 La Puente Rd.
Walnut, CA 9189
909-595-7543

To report illegal dumping or for general storm water pollution prevention information, contact:
1 (888) CLEANLA
www.888cleanla.com

Attachment D

City of Walnut

Legal Authority

December 11, 2013

Mr. Samuel Unger
Executive Officer
Los Angeles Regional Quality Control Board
320 W. 4th Street, Suite 200
Los Angeles, CA 90013
sunger@waterboards.ca.gov

Re: Legal Authority of the City of Walnut to Implement and Enforce the Requirements of 40 CFR 122.26(d)(2)(i)(A-F) and RWQCB Order R4-2012-0175, NPDES Permit CAS004001

Dear Mr. Unger:

The City of Walnut (the "City"), by and through its City Attorney, hereby submits the following certification ("Statement"), pursuant to Section VI.A.2.b of Order R4-2012-0175 (NPDES Permit CAS004001), issued by the California Regional Water Quality Control Board, Los Angeles Region ("RWQCB") on November 8, 2012 and entitled "Waste Discharge Requirements for Municipal Separate Storm Sewer System ("MS4") Discharges within the Coastal Watersheds of Los Angeles County, Except Those Discharges Originating from the City of Long Beach MS4" (the "Permit").

The City is one of the Permittees under the Permit. Section VI.A.2.b of the Permit requires the City to provide the RWQCB with a statement by its chief legal counsel, certifying that the City has the legal authority to implement and enforce each of the current requirements set forth in 40 C.F.R. § 122.26(d)(2)(i)(A-F) and the Permit. The purpose of this Statement is to describe the City's compliance with Section VI.A.2.b of the Permit. As discussed in further detail herein, it is our opinion that the City has the necessary legal authority to implement the Permit and to control and prohibit discharges of pollutants into the Municipal Separate Storm Sewer System ("MS4"). However, this Statement is not, nor should it be construed as, a waiver of any rights that the City may have relating to the Permit.

1. Legal Authority Statement

In our opinion, the City has the necessary legal authority to comply with the legal requirements imposed upon it under the Permit, consistent with the requirements set forth in the U.S. Environmental Protection Agency's regulations promulgated under the Clean Water Act, and, specifically, 40 C.F.R. § 122.26(d)(2)(i)(A-F), and to the extent permitted by state and federal law and subject to the limitations on municipal action under the California and United States Constitutions, except as noted herein.

The City, as a general law city, has broad general police powers under the California Constitution to enact legislation for health and public welfare of the community to the extent not preempted by federal or state law. In addition, the City adopted ordinances for the purpose of ensuring that it has adequate legal authority to implement and enforce its storm water control program. The City has the authority under the California Constitution and state law to enact and enforce these ordinances, and these ordinances were duly enacted.

2. Ordinances

The City has adopted ordinances related to the regulation of urban runoff to control and prohibit discharges of pollutants into the MS4 and to comply with the requirements of the Permit applicable to it, as well as, to the extent applicable, 40 C.F.R. § 122.26 (d)(2)(i)(A)-(F). The City's Storm Water Management and Discharge Control Ordinance (Ord. No. 593) is the principal City ordinance addressing the control of urban runoff. Under this ordinance and Walnut Municipal Code (WMC) Title V, Chapter 21, Article III, the City has the necessary legal authority to do the following:

i. Control the contribution of pollutants to its MS4 from storm water discharges associated with industrial and construction activity and control the quality of storm water discharged from industrial and construction sites. This requirement applies both to industrial and construction sites with coverage under an NPDES permit, as well as to those sites that do not have coverage under an NPDES permit (WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities);

ii. Prohibit all non-storm water discharges through the MS4 to receiving waters not otherwise authorized or conditionally exempt pursuant to Part III.A (WMC Title V, Chapter 21, Article III, 21-65: Prohibited Activities);

iii. Prohibit and eliminate illicit discharges and illicit connections to the MS4 (WMC Title V, Chapter 21, Article III, 21-65: Prohibited Activities);

iv. Control the discharge of spills, dumping, or disposal of materials other than storm water to its MS4 (WMC Title V, Chapter 21, Article III, 21-65: Prohibited Activities);

v. Require compliance with conditions in Permittee ordinances, permits, contracts or orders (*i.e.*, hold dischargers to its MS4 accountable for their contributions of pollutants and flows) (WMC Title V, Chapter 21, Article III, 21-69: Enforcement);

vi. Utilize enforcement mechanisms to require compliance with applicable ordinances, permits, contracts, or orders (WMC Title V, Chapter 21, Article III, 21-69: Enforcement);

vii. Carry out all inspections, surveillance, and monitoring procedures necessary to determine compliance and noncompliance with applicable municipal ordinances,

permits, contracts and orders, and with the provisions of this Order, including the prohibition of non-storm water discharges into the MS4 and receiving waters. This means the Permittee must have authority to enter, monitor, inspect, take measurements, review and copy records, and require regular reports from entities discharging into its MS4 (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities);

viii. Require the use of control measures to prevent or reduce the discharge of pollutants to achieve water quality standards/receiving water limitations (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Chapter 21-68: Requirements for Industrial/Commercial and Construction Activities; WMC Title V, Chapter 21, Article III, 21-69: Enforcement; WMC Title V, Chapter 21, Article IV, 21-82: SUSMP Enforcement);

ix. Require that structural BMPs are properly operated and maintained (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities); and

x. Require documentation on the operation and maintenance of structural BMPs and their effectiveness in reducing the discharge of pollutants to the MS4 (WMC Title V, Chapter 21, Article IV, 21-80: Adoption of Standard Urban Stormwater Mitigation Plan (SUSMP); WMC Title V, Chapter 21, Article III, 21-68: Requirements for Industrial/Commercial and Construction Activities).

3. Implementation

Some of the City's ordinances are implemented through permit programs and others are implemented as regulatory programs. Under each ordinance, one or more City departments or department directors are authorized and directed in each ordinance to take the actions contemplated by the ordinance (*e.g.*, to consider evidence and make findings, to issue or deny permits, to impose conditions on projects, to inspect, to take enforcement action, etc.).

The City's Storm Water Management and Discharge Control Ordinance (WMC Title V, Chapter 21, Article III) is the principal City ordinance addressing the control of urban runoff. This ordinance is regulatory, and applies to specified new and existing residential and business communities and associated facilities and activities, as well as new development and redevelopment, and all other specified new and existing facilities and activities that threaten to discharge pollutants within the boundaries of the City and within its regulatory jurisdiction, whether or not a City permit or approval is required. The City's Storm Water Management and Discharge Control Ordinance also contains discharge prohibitions and requirements for the implementation of BMPs and other requirements necessary to implement the Permit.

Other City departments require compliance with the City's Storm Water Management and Discharge Control Ordinance as a condition for issuance of relevant City permits. City departments may also impose specific conditions of approval consistent with the City's Storm Water Management and Discharge Control Ordinance. All City environmental ordinances are also implemented, in part, through the application of the CEQA process to proposed projects.

4. Administrative and Judicial/Legal Procedures

In addition to the above authority, the City has in place various legal and administrative procedures to assist in enforcing the various urban runoff related Ordinances, including Administrative, Nuisance, Criminal, Equitable and Other Civil Remedies.

a. Title V, Chapter 21, Article III, 21-69 (Enforcement)
b. Title I, Chapter 3, Article I, 3-2 (General Penalties; Continuing Violations)
c. Title III, Chapter 16A, Article III, 16A-6.17 (Collection of costs - Special assessment)
d. Title III, Chapter 16A, Article II, 16A-6.19 (Cumulative Remedies)
e. Injunctive relief under State law and the Municipal Code (WMC Title V, Chapter 21, Article III, 21-69 (Enforcement).
f. Declaratory relief under State law.
g. Federal law claims (*e.g.*, Clean Water Act and Resource Conservation and Recovery Act Citizen Suits).
h. Remedies under the California Government Code.

Violations of the City's Storm Water Ordinance are deemed a "public nuisance", in which case enforcement actions can be completed administratively, or judicially when necessary.

Please contact me if you have any questions or if you need any additional information regarding the City's legal authority to enforce the Permit.

Very truly yours,

Michael Montgomery
City Attorney

Attachment E

City of Walnut

Exceedance Summary 2004-2014

Los Angeles County Mass Emission Station S14

Los Angeles County Storm Water Monitoring Program

San Gabriel River, Mass Emmisions Staion S-14

(Exceedance/Number of Samples)

	2003-2004		2005-2006		2006-2007		2007-2008		2008-2009		2009-2010		2010-2011		2011-2012		2012-2013		2013-2014	
	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet
E. Coli																	NF	2/5	0/1	1/3
Fecal Coliform	1/2	2/3	1/2	3/4	2/2	3/3	1/2	3/3	2/3	2/5	2/4	0/4	0/1	1/4	1/2	0/4				
Fecal Enterococcus	2/2	3/3	2/2	3/4	2/2	3/3														
Total Collform	2/2	2/3	2/2	4/4	1/2	3/3														
Dissolved Oxygen																			1/1	1/3
Chloride									1/3	0/5	1/4	0/4							1/1	0/3
Cyanide	1/2	3/3	1/2	1/4	1/2	2/3					1/4	1/4					NF	1/5		
pH									1/3	0/5			0/1	2/3			NF	1/5		
Dissolved Copper															0/2	1/4	NF	2/5		
Total Copper	1/2	2/3	1/2	1/4	2/2	4/4	0/2	2/3												
Dissolved Thallium																	NF	1/5		
Dissolved Zinc											0/4	1/4			0/2	1/4				
Total Zinc			0/2	1/4			2/2	1/3												
Sulfate											1/4	0/4								
Total Dissolved Solids									1/3	0/5										
Total Mercury									1/3	1/5										
Ammonia					2/2	2/4	1/2	1/3												
Total Nickel			1/2	0/4																
Total Aluminum			0/2	1/4			1/2	3/3												
Total Lead			0/2	1/4																

Attachment F

Regional BMP Exhibits

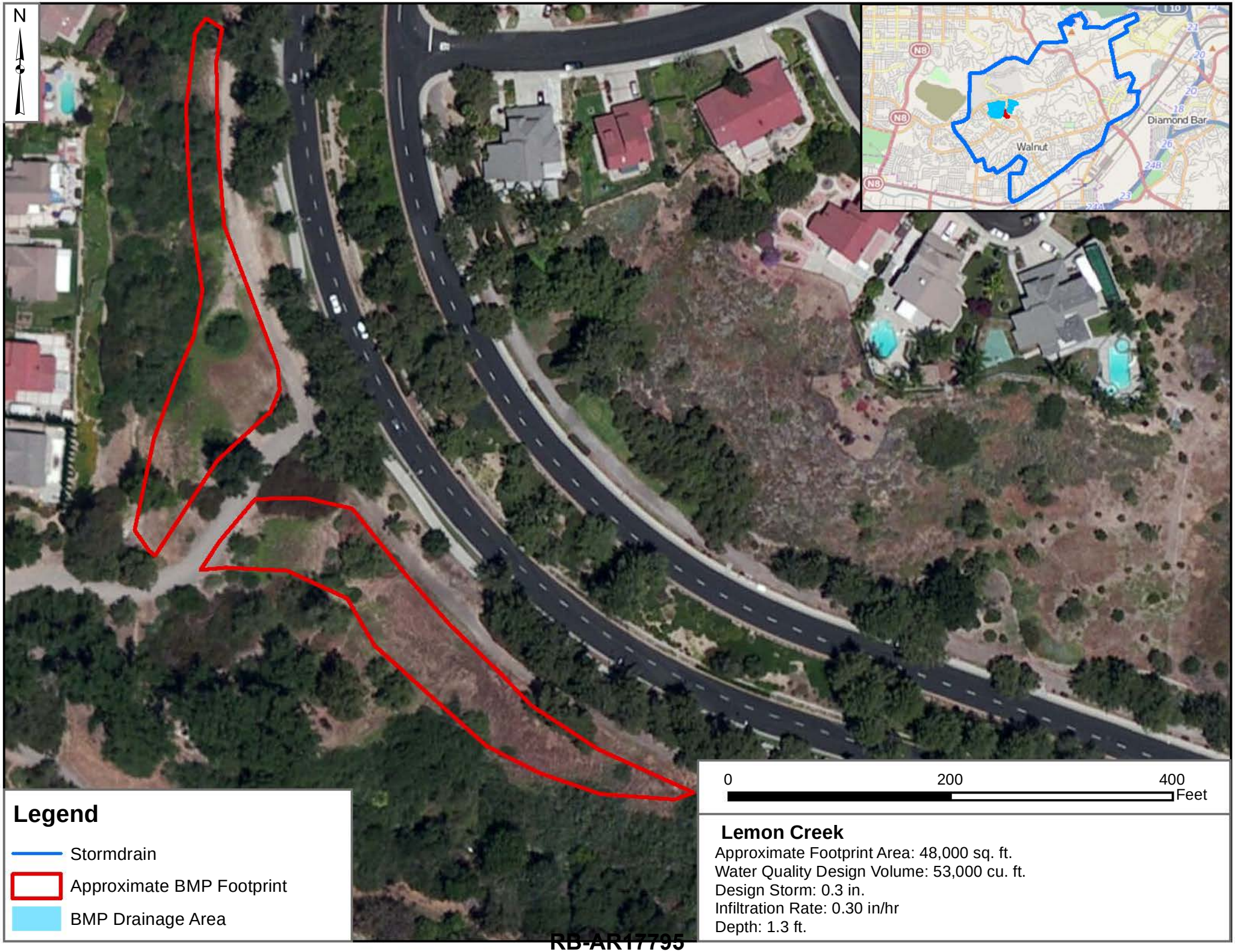
Legend

- Stormdrain
- Approximate BMP Footprint
- BMP Drainage Area

Butterfield Park

Approximate Footprint Area: 93,000 sq. ft.
Design storm intensity: 0.06 in/hr
Treatment Flow Rate: 1.57 cfs
Equalization Volume: 270,000 cu. ft.
Hydraulic Residence Time: 24 hrs
Depth: 8 ft.

RB-AR17794


N
Walnut
Diamond Bar
0
200
400
Feet
Legend
Stormdrain
Approximate BMP Footprint
BMP Drainage Area
Lemon Creek
Approximate Footprint Area: 48,000 sq. ft.
Water Quality Design Volume: 53,000 cu. ft.
Design Storm: 0.3 in.
Infiltration Rate: 0.30 in/hr
Depth: 1.3 ft.

RB-AR17795


N
Walnut
Diamond Bar
0
300
600
Feet
Legend
Stormdrain
Approximate BMP Footprint
BMP Drainage Area
Snow Creek 1
Approximate Footprint Area: 110,000 sq. ft.
Design storm intensity: 0.11 in/hr
Treatment Flow Rate: 1.80 cfs
Equalization Volume: 310,000 cu. ft.
Hydraulic Residence Time: 24 hrs
Depth: 8 ft.

RB-AR17796


N
Snow Creek Park
Snow Creek Park
West Covina
La Puente
Walnut
Diamond Bar
Chino H
0
125
250
Feet
Legend
Stormdrain
Approximate BMP Footprint
BMP Drainage Area
Snow Creek 2
Approximate Footprint Area: 130,000 sq. ft
Water Quality Design Volume: 190,000 cu. ft.
Design Storm: 0.9 in.
Infiltration Rate: 0.77 in/hr
Depth: 2 ft.

RB-AR17797

July 21, 2015

Ms. Mary Rooney
City of Walnut
Community Services Division
21201 La Puente Road
Walnut, CA 91789

FINAL APPROVED CITY OF WALNUT WATERSHED MANAGEMENT PROGRAM (WMP), PURSUANT TO THE LOS ANGELES COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT (NPDES PERMIT NO. CAS004001; ORDER NO. R4-2012-0175)

Dear Ms. Rooney:

On November 8, 2012, the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board) adopted Order No. R4-2012-0175, *Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, except those Discharges Originating from the City of Long Beach MS4* (hereafter, LA County MS4 Permit). The LA County MS4 Permit allows Permittees the option to develop either a Watershed Management Program (WMP) or an Enhanced Watershed Management Program (EWMP) to implement permit requirements on a watershed scale through customized strategies, control measures, and best management practices (BMPs). Development of a WMP or EWMP is voluntary and allows a Permittee to address the highest watershed priorities, including complying with the requirements of Part V.A (Receiving Water Limitations), Part VI.E and Attachments L through R (Total Maximum Daily Load Provisions), by customizing the control measures in Parts III.A (Prohibitions – Non-Storm Water Discharges) and VI.D (Minimum Control Measures), except the Planning and Land Development Program.

On April 28, 2015, on behalf of the Los Angeles Water Board, I approved, with conditions, the City of Walnut's (City's) WMP. My approval letter directed the City to submit a final WMP that satisfies all the conditions listed in the letter no later than June 12, 2015. On June 12, 2015 the City submitted its final WMP, as directed.

After review of the City's final WMP submitted on June 12, 2015, I have determined that the City's WMP satisfies all of the conditions identified in my April 28, 2015 approval letter. The WMP dated June 12, 2014 hereby constitutes the final approved WMP for the City.

The Los Angeles Water Board appreciates the participation and cooperation of the City in the implementation of the LA County MS4 Permit. If you have any questions, please contact Ivar Ridgeway, Storm Water Permitting, at Ivar.Ridgeway@waterboards.ca.gov or by phone at (213) 620-2150.

Sincerely,

Samuel Unger

Samuel Unger, P.E.
Executive Officer

cc: Alicia Jensen, City of Walnut
Robert Wishner, City of Walnut
Melissa Barcelo, City of Walnut
Cody Howing, Assistant Engineer, RKA Consulting Group

CALIFORNIA
Water Boards

Los Angeles Regional Water Quality Control Board

August 5, 2015

Ms. Mary Rooney
City of Walnut
Community Services Division
21201 La Puente Road
Walnut, CA 91789

APPROVAL, WITH CONDITIONS, OF THE CITY OF WALNUT INTEGRATED MONITORING PROGRAM, PURSUANT TO ATTACHMENT E, PART IV.A OF THE LOS ANGELES COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT (NPDES PERMIT NO. CAS004001; ORDER NO. R4-2012-0175)

Dear Ms. Rooney:

The Los Angeles Regional Water Quality Control Board (Los Angeles Water Board or Board) has reviewed the revised monitoring program submitted on March 9, 2015 by the City of Walnut (City). This monitoring program was submitted pursuant to the provisions of NPDES Permit No. CAS004001 (Order No. R4-2012-0175), which authorizes discharges from the municipal separate storm sewer system (MS4) operated by 86 municipal Permittees within Los Angeles County (hereafter, LA County MS4 Permit). The LA County MS4 Permit allows Permittees the option to develop and implement a coordinated integrated monitoring program (IMP) that achieves the five Primary Objectives set forth in Part II.A of Attachment E and includes the elements set forth in Part II.E of Attachment E. These programs must be approved by the Executive Officer of the Los Angeles Water Board.

The Los Angeles Water Board has reviewed the City's revised IMP and has determined that the IMP includes the elements set forth in Part II.E of Attachment E and will achieve the Primary Objectives set forth in Part II.A of Attachment E of the LA County MS4 Permit.

Public Review and Comment

On July 3, 2014, the Board provided public notice and a 46-day period to allow for public review and comment on the City's draft IMP. A separate notice of availability regarding the draft monitoring programs, including the City's IMP, was directed to State Senators and Assembly Members within the Coastal Watersheds of Los Angeles County. The Board received three comment letters that had comments applicable to the City's draft IMP. One joint letter was from the Natural Resources Defense Council (NRDC), Heal the Bay, and Los Angeles Waterkeeper, and the other letters were from the Construction Industry Coalition on Water Quality (CICWQ) and Ventura Countywide Stormwater Quality Management Program. During the review of the

draft and revised IMP, the Los Angeles Water Board considered those comments applicable to the City's proposed IMP.

Los Angeles Water Board Review

Concurrent with the public review, the Los Angeles Water Board, along with U.S. EPA Region IX staff, reviewed the draft monitoring programs. On December 8, 2014, the Los Angeles Water Board sent a letter to the City detailing the Board's comments on the draft IMP and identifying the revisions that needed to be addressed prior to the Board's approval of the City's IMP. The letter directed the City to submit a revised IMP addressing the Los Angeles Water Board's comments. The City submitted its revised IMP on March 9, 2015 for Los Angeles Water Board review and approval.

In separate correspondence to all Permittees developing IMPs and Coordinated Integrated Monitoring Programs (CIMPs), the Los Angeles Water Board will also be providing clarification of requirements for toxicity monitoring – specifically regarding additional toxicity monitoring upstream and at outfalls where toxicity is identified during a sampling event at a receiving water monitoring site.

IMP Approval

The Los Angeles Water Board hereby approves, subject to the following conditions, the City's March 9, 2015 revised IMP. The Board may rescind this approval if all of the following conditions are not met to the satisfaction of the Board within the timeframe provided below.

1. Revise the receiving water monitoring program:
    a. Include a receiving water monitoring station on San Jose Creek downstream of the City's MS4 discharges. If the City chooses to share a monitoring site on San Jose Creek with other LA County MS4 Permittees, the revised final IMP must provide information on an agreement between the City and other Permittees.
    b. Due to the small area of the City that drains to Walnut Creek Wash (i.e., 56 acres, or approximately 1%), the City may forego receiving water monitoring in Walnut Creek Wash. However, for stormwater outfall monitoring at the M3 station discharging to Walnut Creek Wash, the City must confirm that Table E-2 pollutant screening will be conducted at the M3 station (absent a corresponding receiving water station in Walnut Creek), and explain how monitoring of aquatic toxicity or TIE-identified parameters at the M3 station will be triggered based on receiving water monitoring.
    c. Make any necessary changes to Sections 2.0-2.3 and Tables 2-2 and 2-3 of the IMP based on the change in monitoring location.
2. Revise Table 2-2 (page 12) and Table 3-6 (page 22) so that *E. coli* is monitored instead of (or in addition to) "coliform bacteria."

The City shall submit a final IMP to the Los Angeles Water Board that satisfies all of the above conditions no later than **September 4, 2015**. Pursuant to Attachment E, Part IV.C.6 of the LA County MS4 Permit, the City must commence implementing its monitoring program within 30 days after this approval of the final IMP (i.e. no later than September 4, 2015). Please note that the City is responsible for complying with all reporting provisions included in Attachment E, Part

XIV – XVIII and Section E of Part XIX, "Reporting Requirements for San Gabriel River WMA TMDLs," and Attachment D, Sections IV, V, and VII.A of the LA County MS4 Permit. The Group is also responsible for complying with applicable reporting provisions included in Section C of Part XIX, "Reporting Requirements for Dominguez Channel and Greater Harbors Waters WMA TMDLs." Finally, the City is also responsible for complying with the following requirements under Annual Reporting and Adaptive Management.

Annual Reporting

Within the reporting year, through its Annual Report per Attachment E, Part XVIII of the LA County MS4 Permit, the City shall provide an Integrated Monitoring Report that summarizes all identified exceedances of:

- outfall-based stormwater monitoring data,
- wet weather receiving water monitoring data,
- dry weather receiving water monitoring data, and
- non-storm water outfall monitoring data

against all applicable receiving water limitations, water quality-based effluent limitations, non-storm water action levels, and aquatic toxicity thresholds as defined in Sections XII.F and G of this MRP. All sample results that exceeded one or more applicable thresholds shall be readily identified.

The Annual Report shall also include a Municipal Action Level (MAL) Assessment Report, which shall present the stormwater outfall monitoring data in comparison to the applicable MALs, and identify those subwatersheds with a running average of twenty percent or greater of exceedances of the MALs in discharges of stormwater from the MS4. Please note that beginning in Year 3 after the effective date of the LA County MS4 Permit, each Permittee or group of Permittees shall submit a MAL Action Plan with the Annual Report (first MAL Action Plan due with December 15, 2015 Annual Report) to the Regional Water Board Executive Officer, for those subwatersheds with a running average of twenty percent or greater of exceedances of the MALs in any discharge of storm water from the MS4. Please note that implementation of an approved Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) per Part VI.C of the LA County MS4 Permit fulfills all requirements related to the development and implementation of the MAL Action Plan, as per Attachment H of the LA County MS4 Permit, for those pollutants addressed by the WMP or EWMP.

Adaptive Management

The Regional Water Board or its Executive Officer, consistent with 40 CFR section 122.41, may approve changes to the Monitoring and Reporting Program, after providing the opportunity for public comment, either:

1. By request of the City or by an interested person after submittal of the Monitoring Report. Such request shall be in writing and filed not later than 60 days after the Monitoring Report submittal date, or

2. As deemed necessary by the Regional Water Board Executive Officer, following notice to the City.

As part of the adaptive management process, any modifications to the IMP must be submitted to the Los Angeles Water Board for review and approval. The City must implement any modifications to the IMP upon approval by the Los Angeles Water Board or its Executive Officer, or within 60 days of submittal of modifications if the Los Angeles Water Board or its Executive Officer expresses no objections. Note that the City's Report of Waste Discharge (ROWD) is due no later than July 1, 2017. To align any modifications to the IMP proposed through the adaptive management process with permit reissuance, results of the first adaptive management cycle should be submitted in conjunction with the City's ROWD.

If you have any questions, please contact Mr. Chris Lopez of the Storm Water Permitting Unit by electronic mail at Chris.Lopez@waterboards.ca.gov or by phone at (213) 620-2095. Alternatively, you may also contact Mr. Ivar Ridgeway, Chief of the Storm Water Permitting Unit, by electronic mail at Ivar.Ridgeway@waterboards.ca.gov or by phone at (213) 620-2150.

Sincerely,

Samuel Unger

Samuel Unger, P.E.
Executive Officer

cc: Alicia Jensen, City of Walnut
Robert Wishner, City of Walnut
Melissa Barcelo, City of Walnut
Cody Howing, Assistant Engineer, RKA Consulting Group

September 17, 2015

Ms. Mary Rooney
City of Walnut
Community Services Division
21201 La Puente Road
Walnut, CA 91789

FINAL APPROVED CITY OF WALNUT INTEGRATED MONITORING PROGRAM, PURSUANT TO ATTACHMENT E, PART IV.A OF THE LOS ANGELES COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT (NPDES PERMIT NO. CAS004001; ORDER NO. R4-2012-0175)

Dear Ms. Rooney:

The Los Angeles Regional Water Quality Control Board (Los Angeles Water Board or Board) has reviewed the final monitoring program submitted on September 4, 2015 by the City of Walnut (City). This monitoring program was submitted pursuant to the provisions of NPDES Permit No. CAS004001 (Order No. R4-2012-0175), which authorizes discharges from the municipal separate storm sewer system (MS4) operated by 86 municipal Permittees within Los Angeles County (hereafter, LA County MS4 Permit). The LA County MS4 Permit allows Permittees the option to develop and implement an integrated monitoring program (IMP) that achieves the five Primary Objectives set forth in Part II.A of Attachment E and includes the elements set forth in Part II.E of Attachment E. These programs must be approved by the Executive Officer of the Los Angeles Water Board.

On August 5, 2015, on behalf of the Los Angeles Water Board, I approved, with conditions, the Group's IMP. My approval letter directed the Group to submit a final IMP that satisfies all the conditions listed in the letter no later than September 4, 2015. On September 4, 2015 the Group submitted its final IMP, as directed.

After review of the Group's final IMP submitted on September 4, 2015, I have determined that the Group's IMP satisfies all of the conditions identified in my August 5, 2015 approval letter. The IMP submitted on September 4, 2015 hereby constitutes the final approved IMP for the Group. Additional direction on requirements for follow-up monitoring when aquatic toxicity is present in downstream receiving waters has been provided in separate correspondence, and must be followed as part of the Group's final approved IMP.

The Los Angeles Water Board appreciates the participation and cooperation of the Group in the implementation of the LA County MS4 Permit. If you have any questions, please contact Mr. Chris Lopez of the Storm Water Permitting Unit by electronic mail at Chris.Lopez@waterboards.ca.gov or by phone at (213) 576-6674. Alternatively, you may also contact Mr. Ivar Ridgeway, Storm Water Permitting, at Ivar.Ridgeway@waterboards.ca.gov or by phone at (213) 620-2150.

Sincerely,

Samuel Unger

Samuel Unger, P.E.
Executive Officer

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