

Figure B-2b: Ballona Creek Watershed Hydrologic Units (Santa Monica Bay WMA).

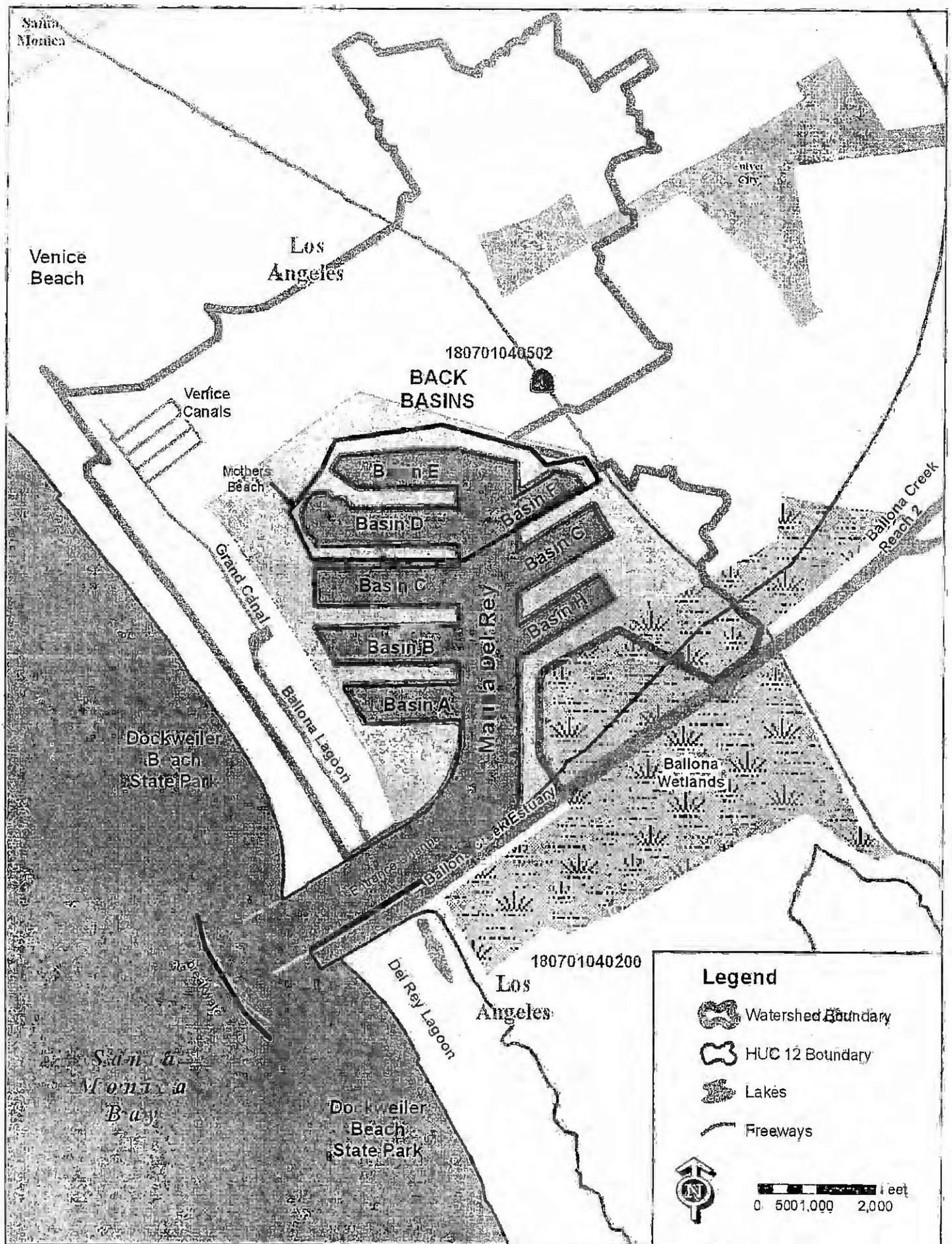


Figure B-2c: Marina Del Rey Watershed Hydrologic Units (Santa Monica Bay WMA).

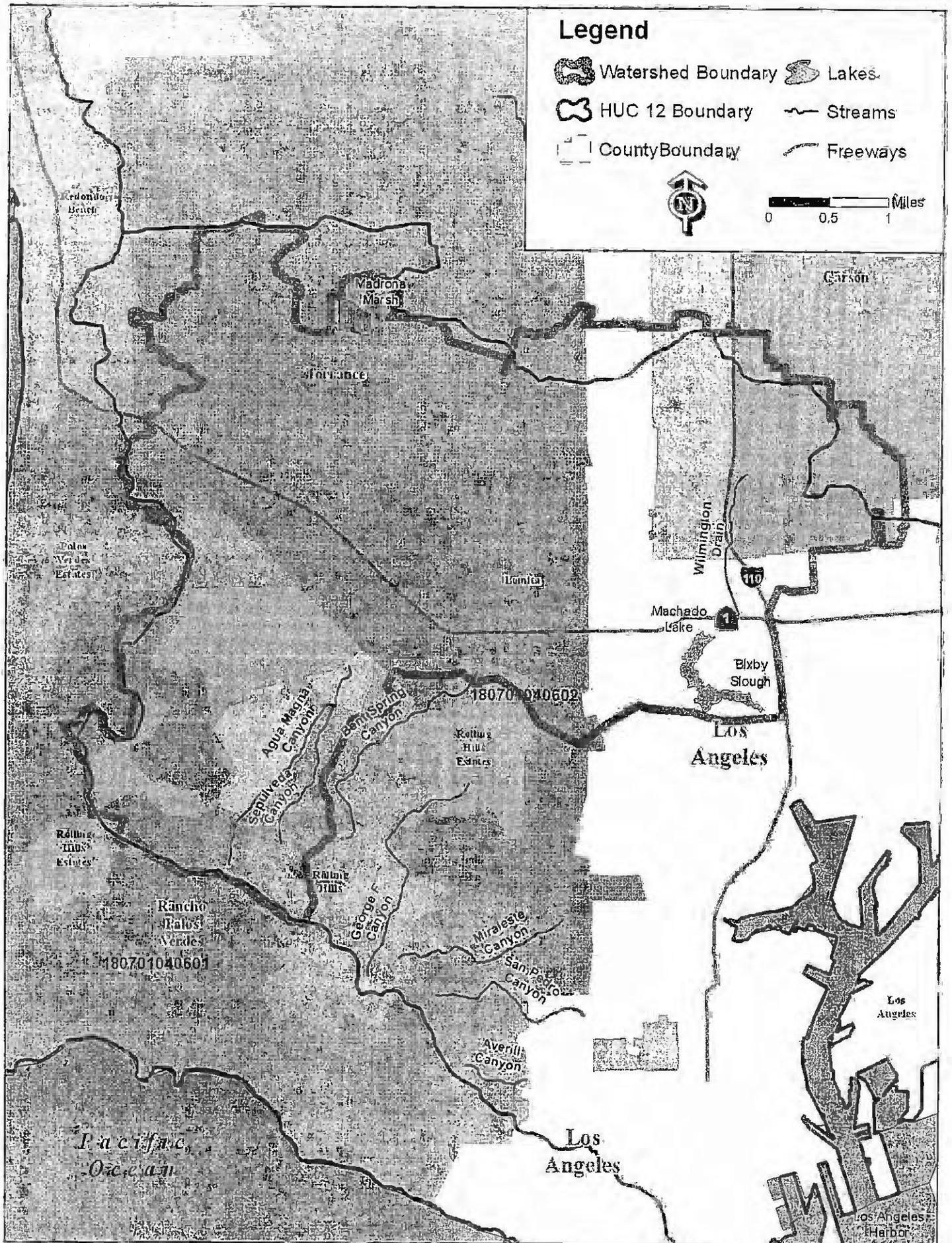


Figure B-3a: Machado Lake Watershed Hydrologic Units (Dominguez Channel & LA/LB Harbors WMA).



Figure B-4: Los Angeles River Watershed Management Area Hydrologic Units.

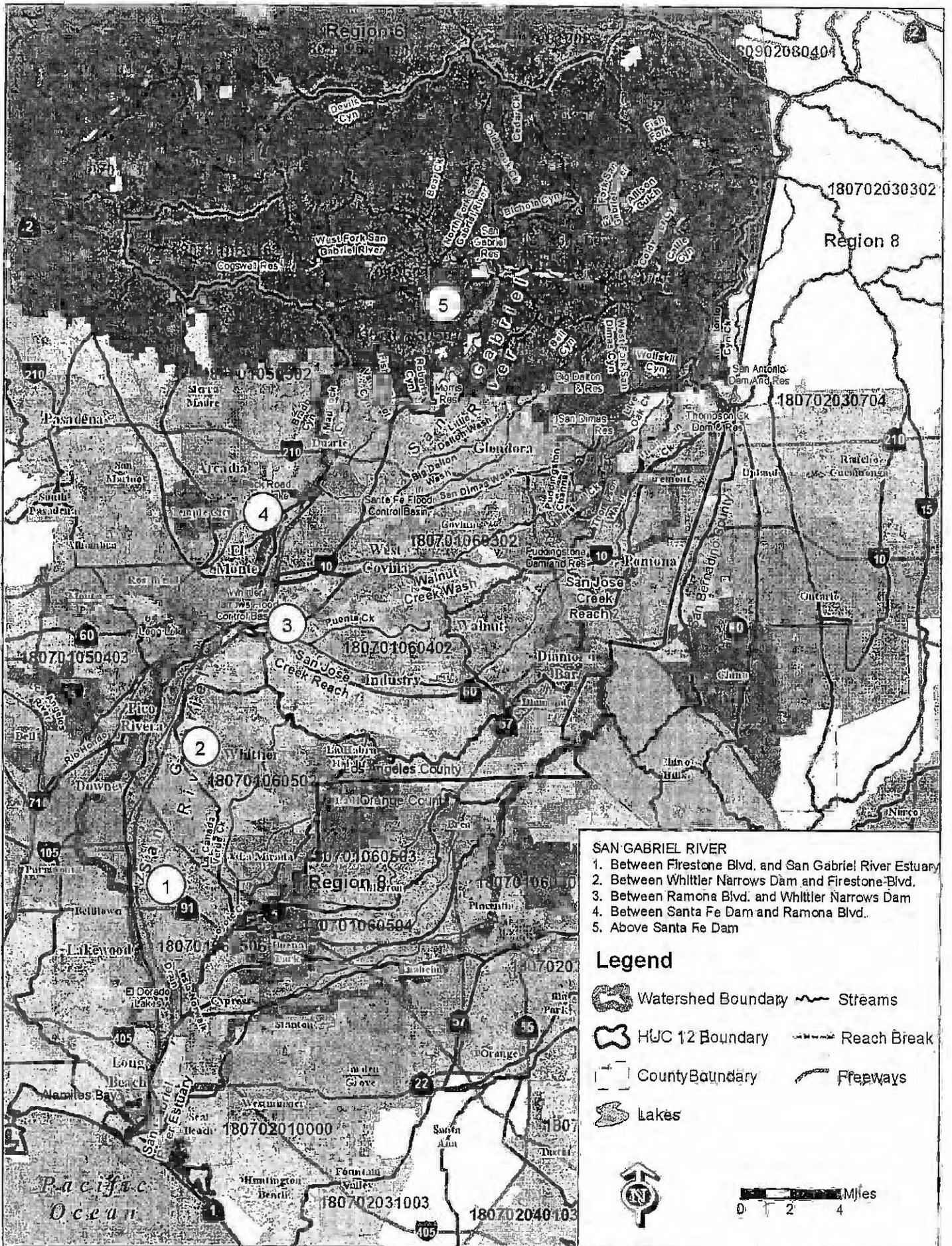


Figure B-5: San Gabriel River Watershed Management Area Hydrologic Units.

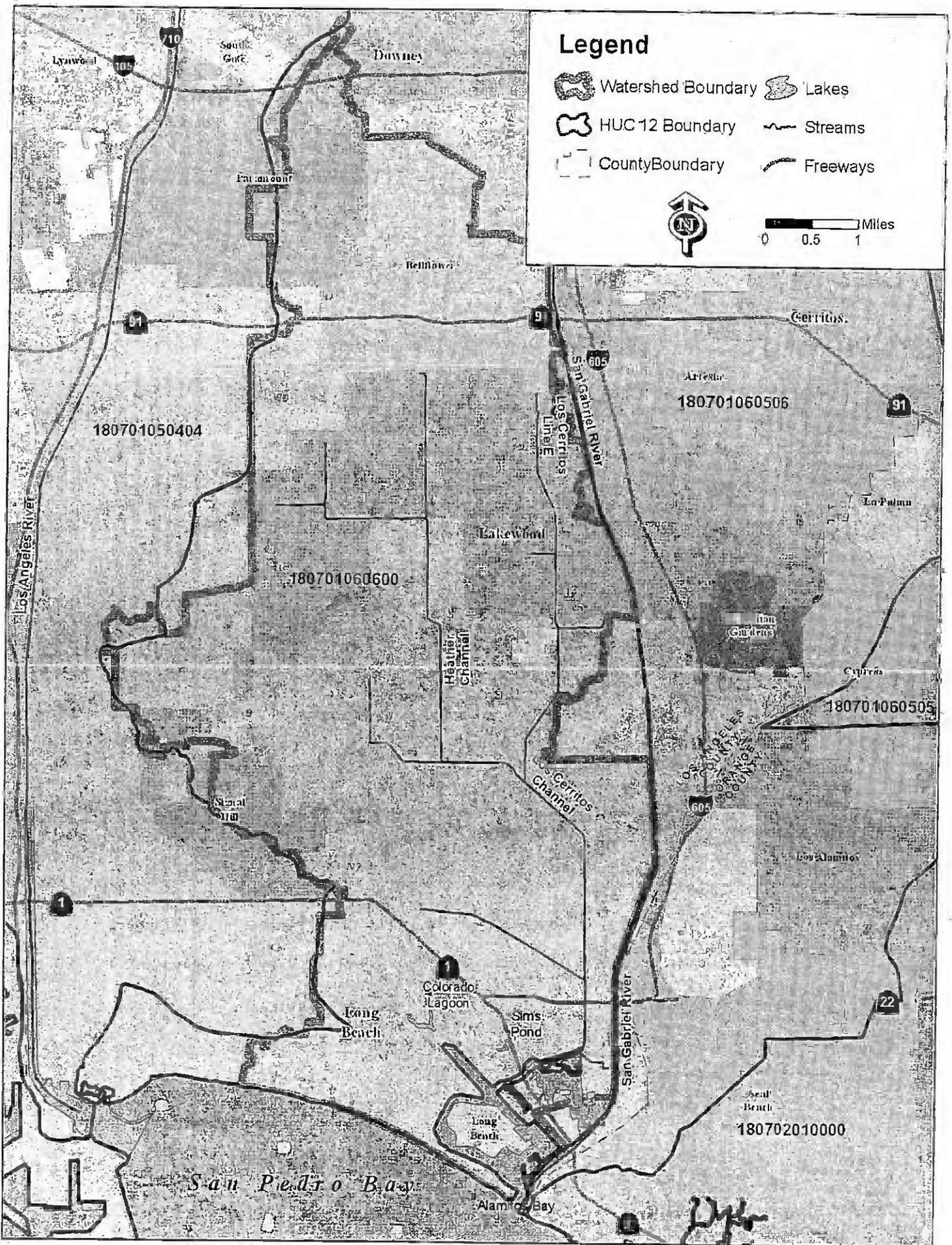


Figure B-6: Los Cerritos Channel and Alamitos Bay Watershed Management Area Hydrologic Units.

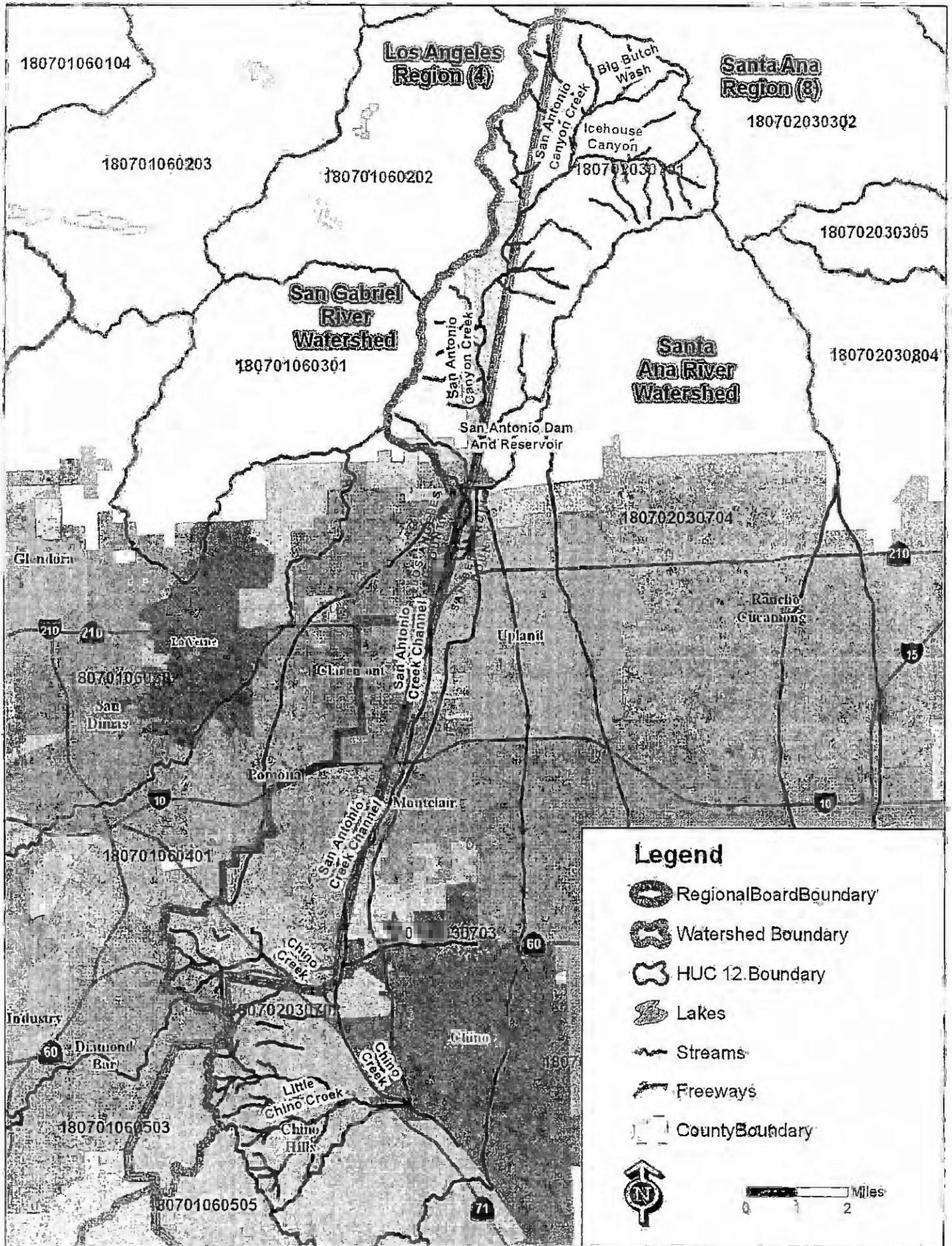


Figure B-7: Middle San Antonio Creek Subwatershed Hydrologic Units.

ATTACHMENT C – MS4 MAPS BY WATERSHED MANAGEMENT AREA

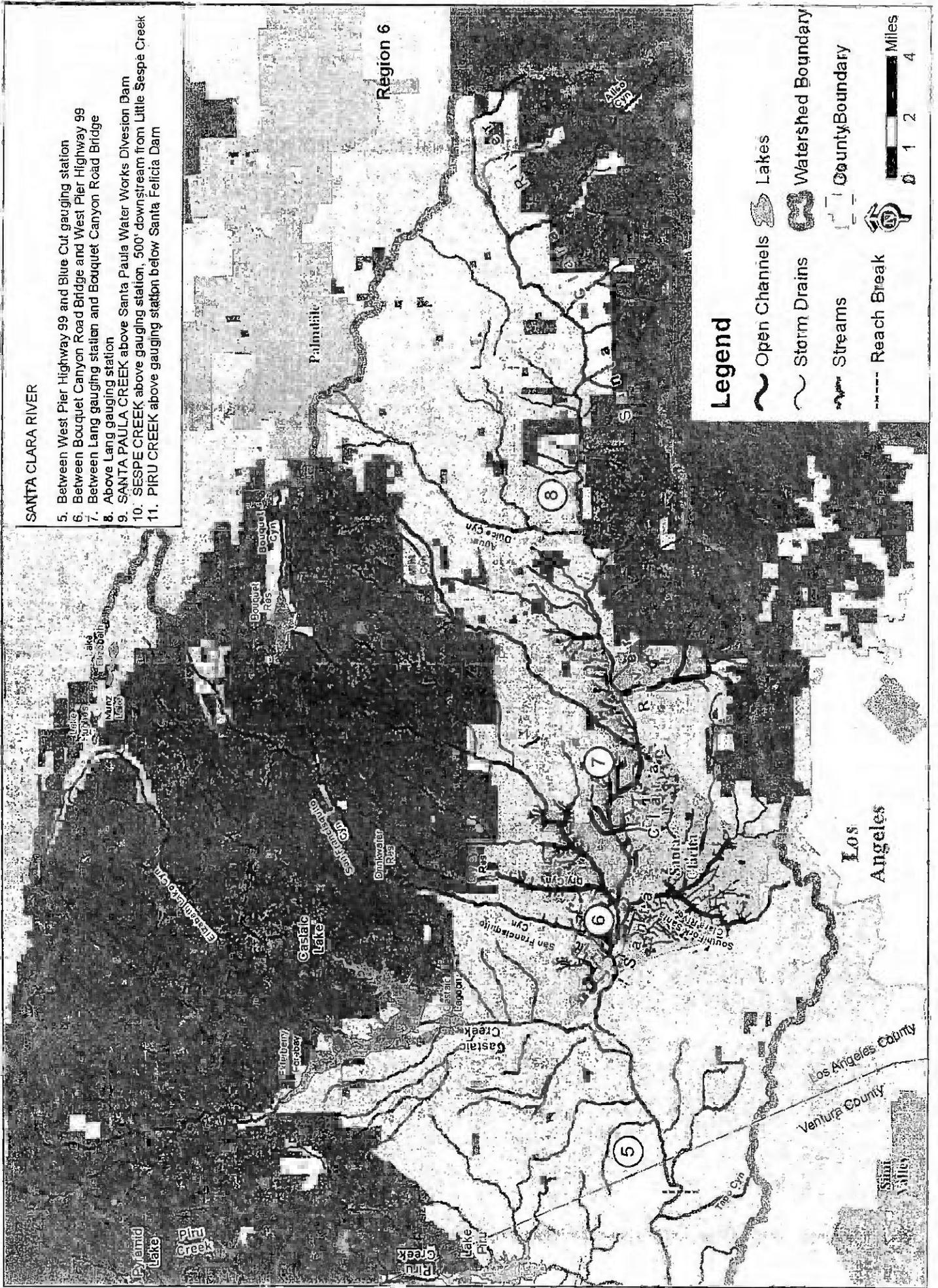


Figure C-1: Upper Santa Clara River Watershed Management Area Flow Schematic.

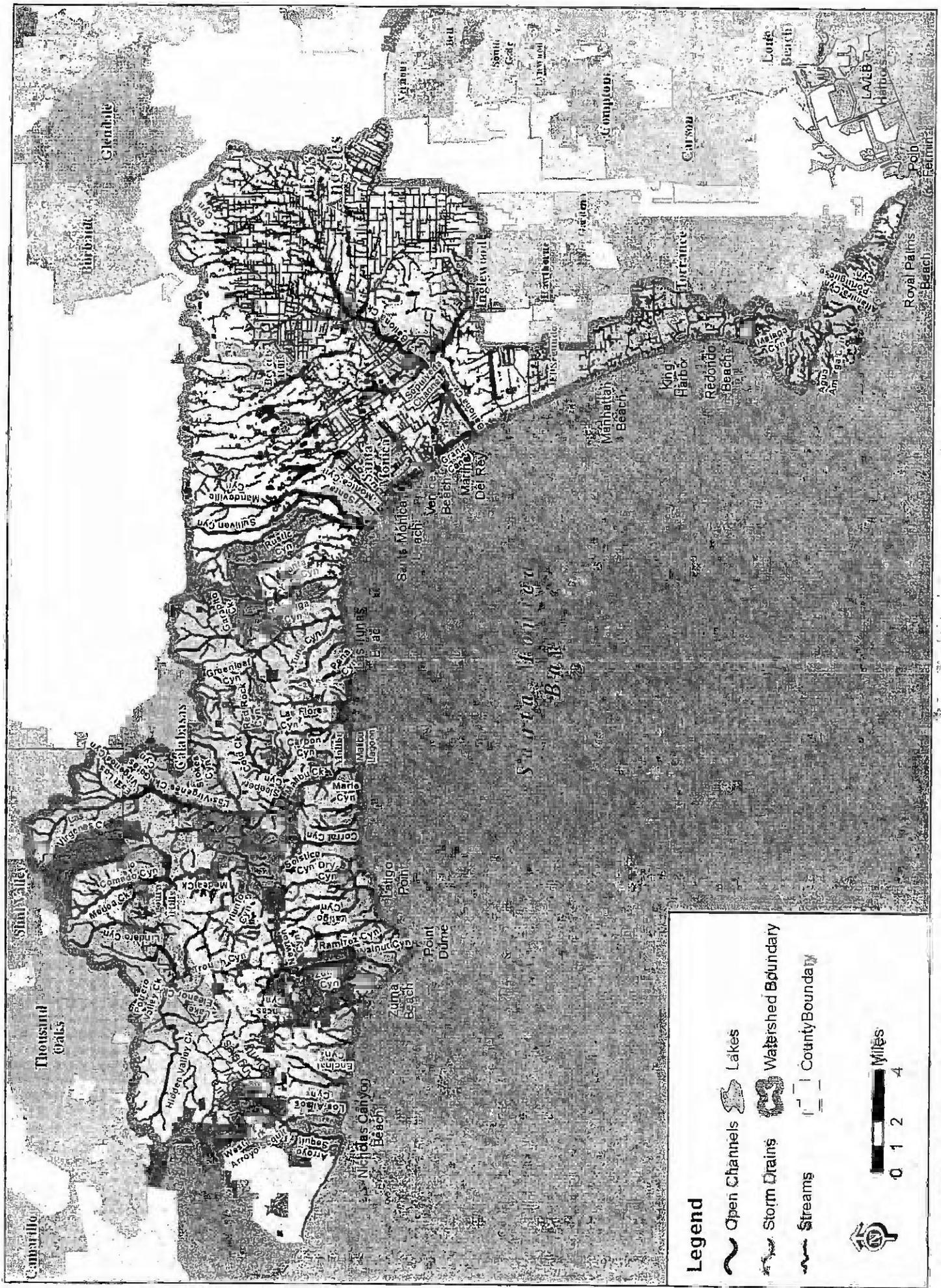


Figure C-2: Santa Monica Bay Watershed Management Area Flow Schematic.

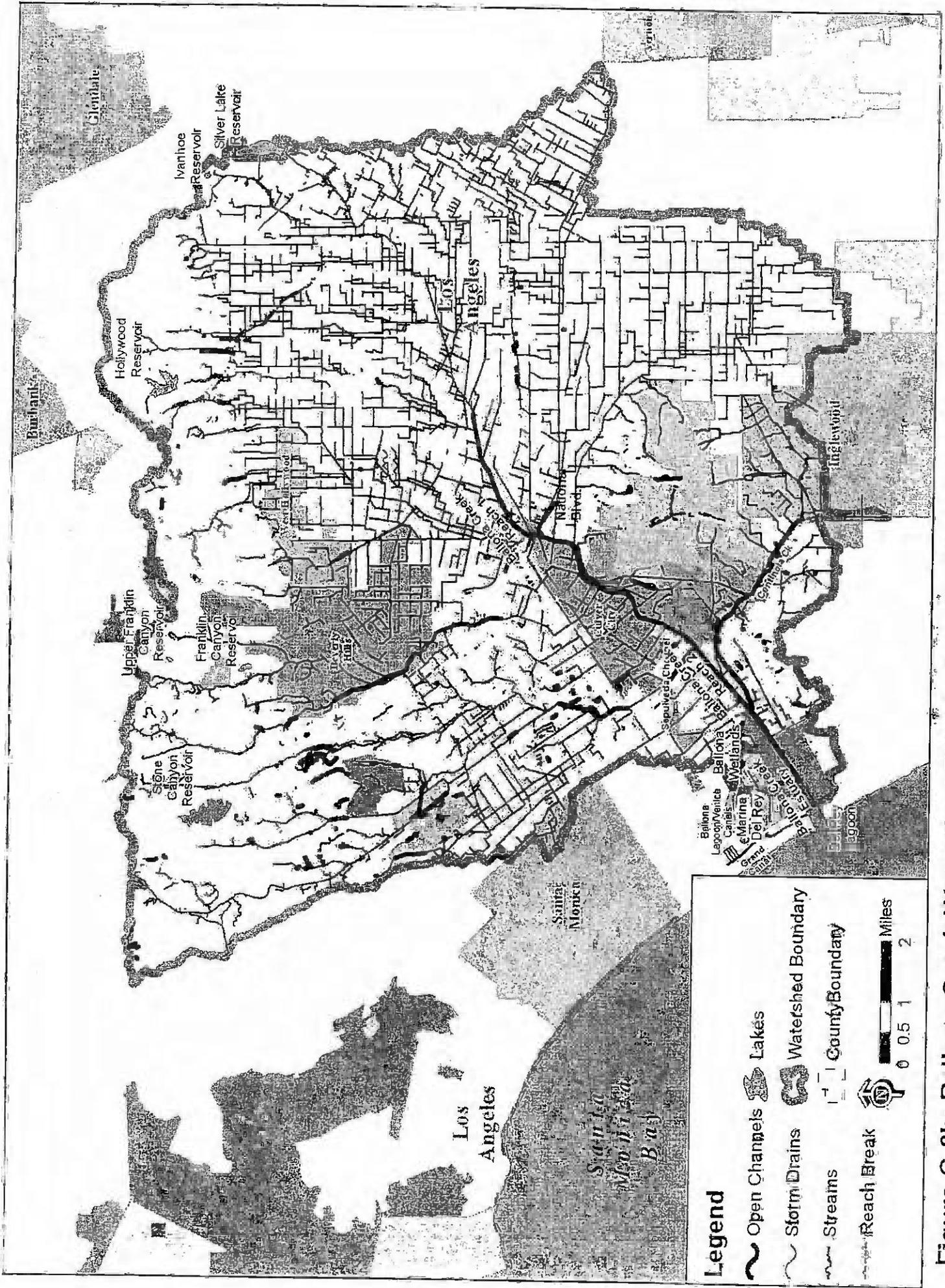


Figure C-2b: Ballona Creek Watershed Flow Schematic (Santa Monica Bay WMA).

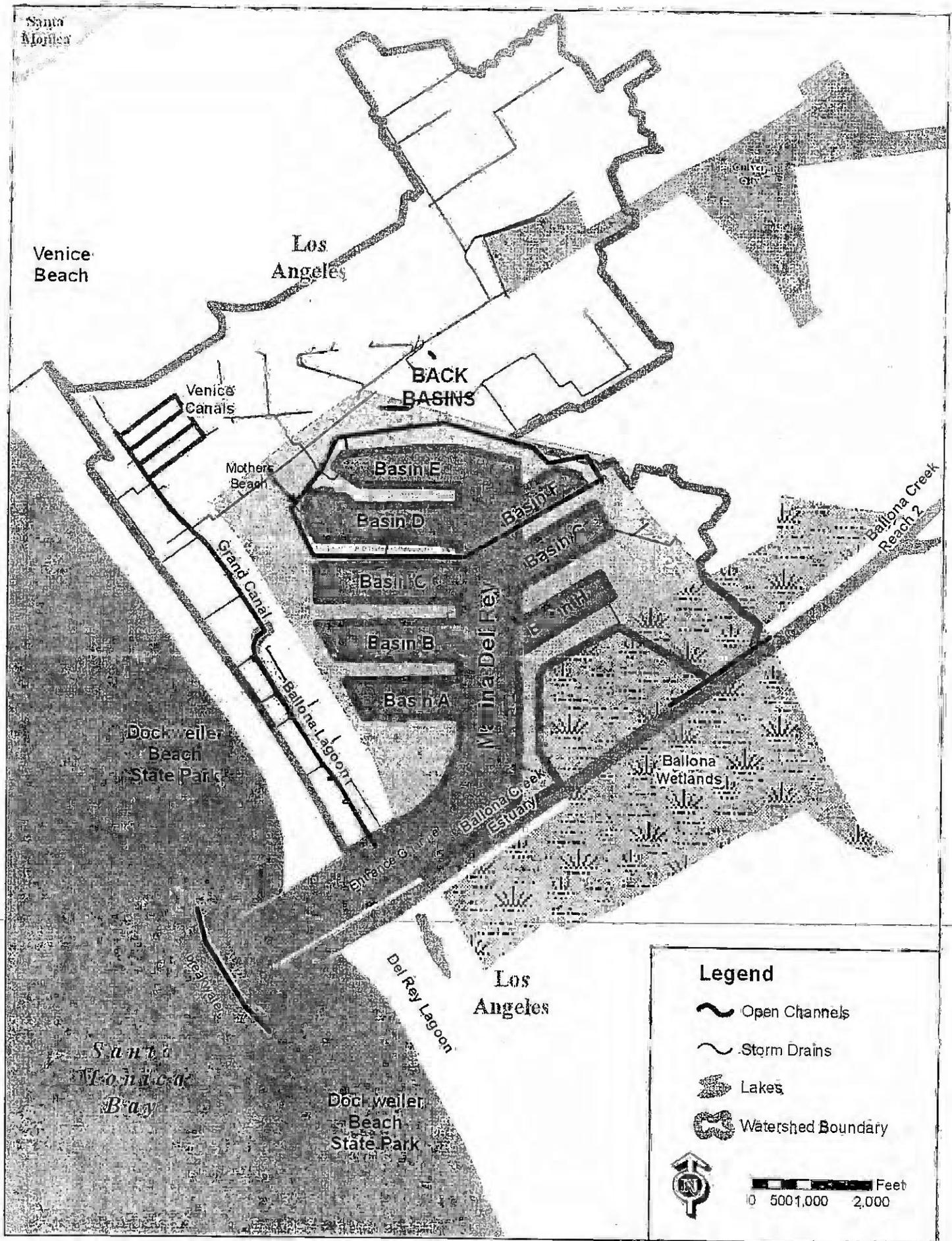


Figure C-2c: Marina Del Rey Watershed Flow Schematic (Santa Monica Bay WMA).

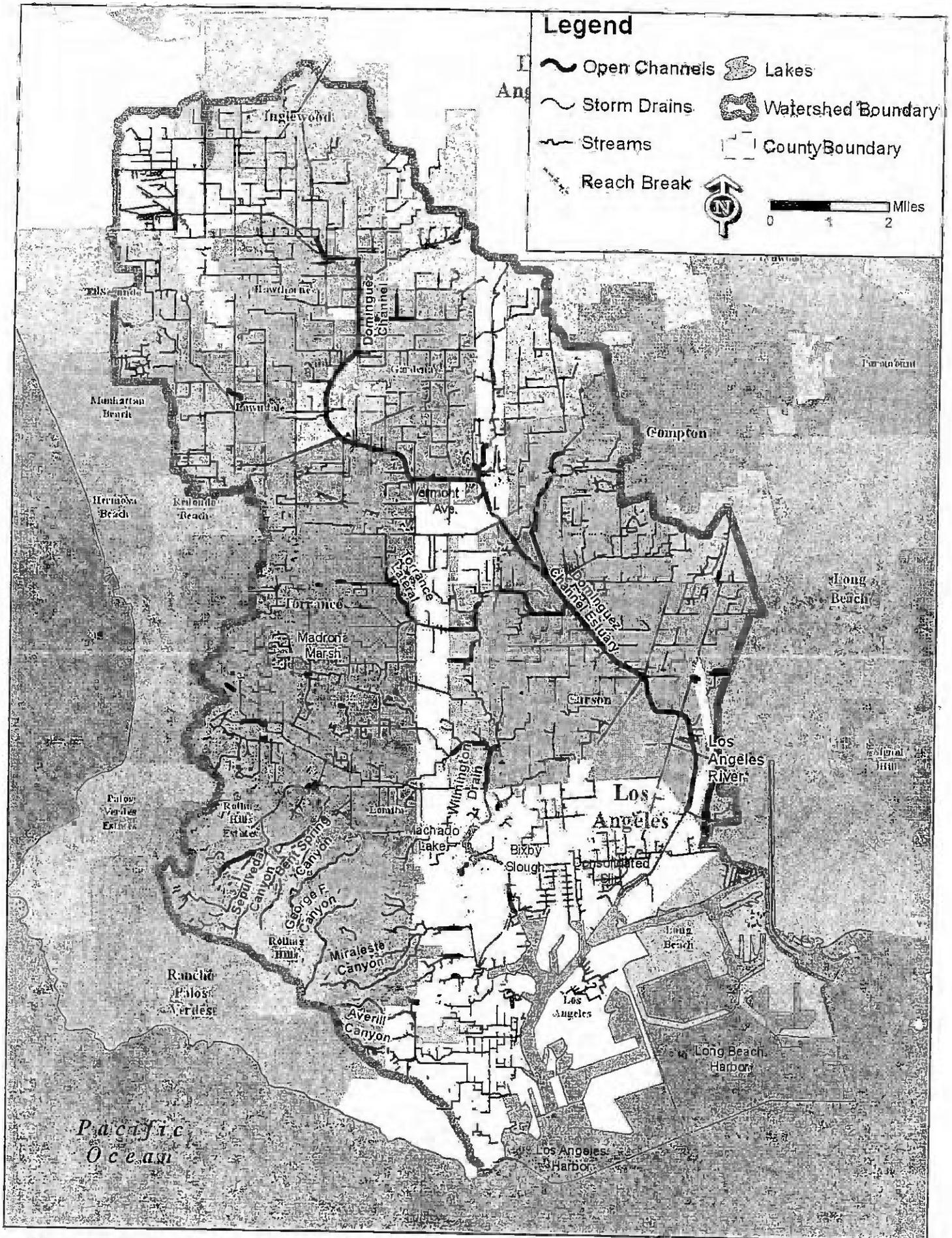


Figure C-3: Dominguez Channel and Los Angeles/Long Beach Harbors Watershed Management Area Flow Schematic.

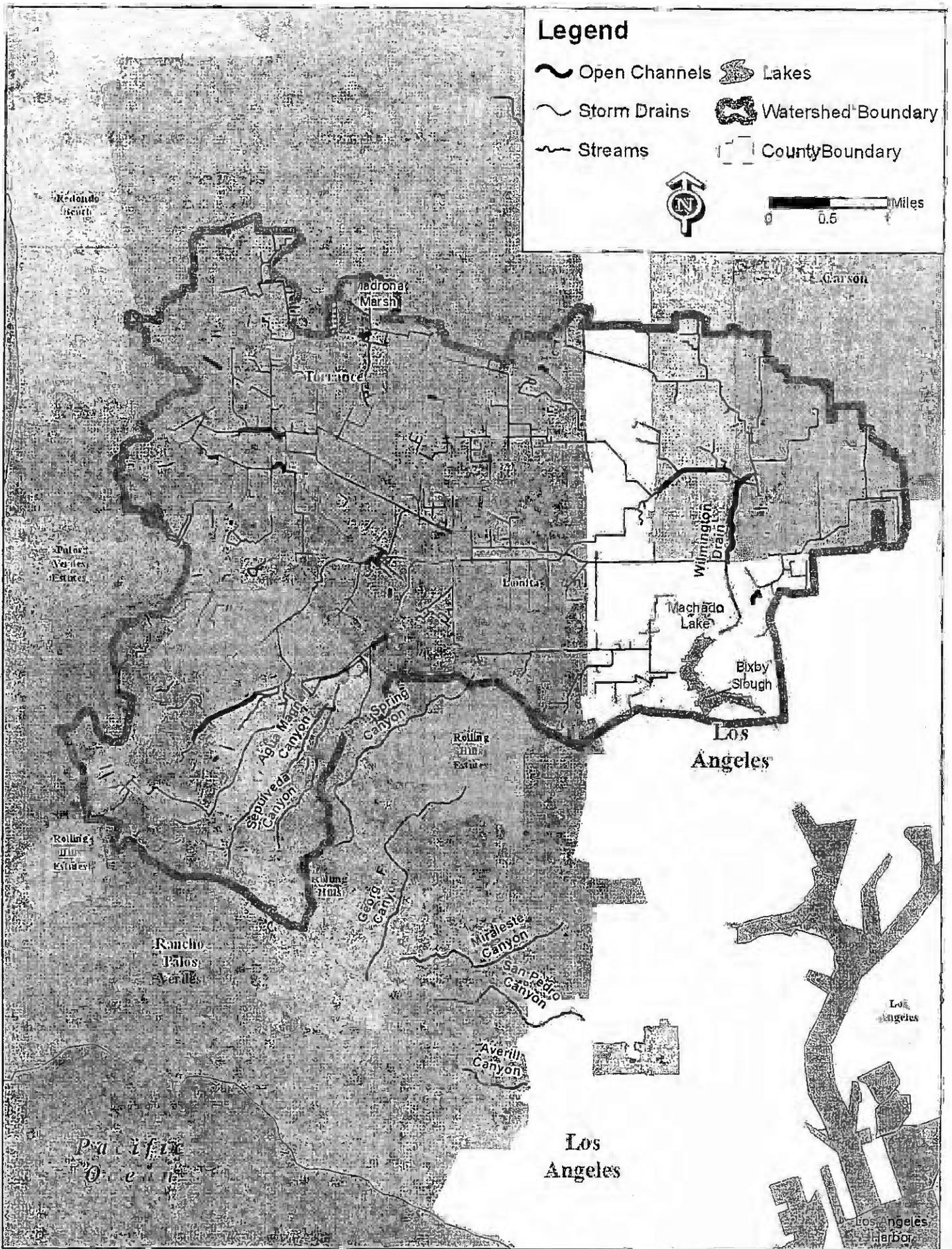
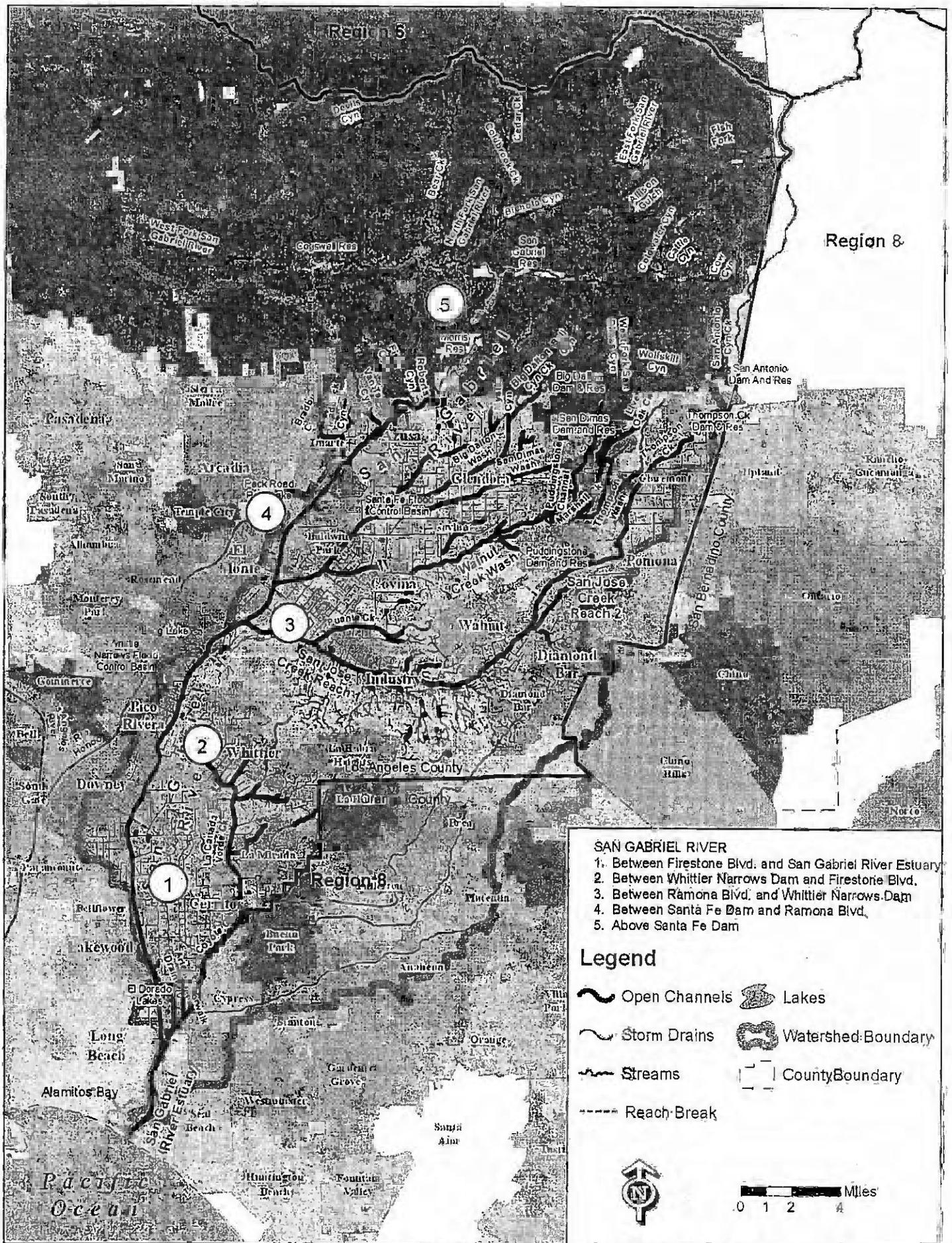


Figure C-3a: Machado Lake Watershed Flow Schematic (Dominguez Channel & LA/LB Harbors WMA).



SAN GABRIEL RIVER

1. Between Firestone Blvd. and San Gabriel River Estuary
2. Between Whittier Narrows Dam and Firestone Blvd.
3. Between Ramona Blvd. and Whittier Narrows Dam
4. Between Santa Fe Dam and Ramona Blvd.
5. Above Santa Fe Dam

Legend

- Open Channels
- Lakes
- Storm Drains
- Watershed Boundary
- Streams
- County Boundary
- Reach Break



0 1 2 4 Miles

Figure C-5: San Gabriel River Watershed Management Area Flow Schematic,

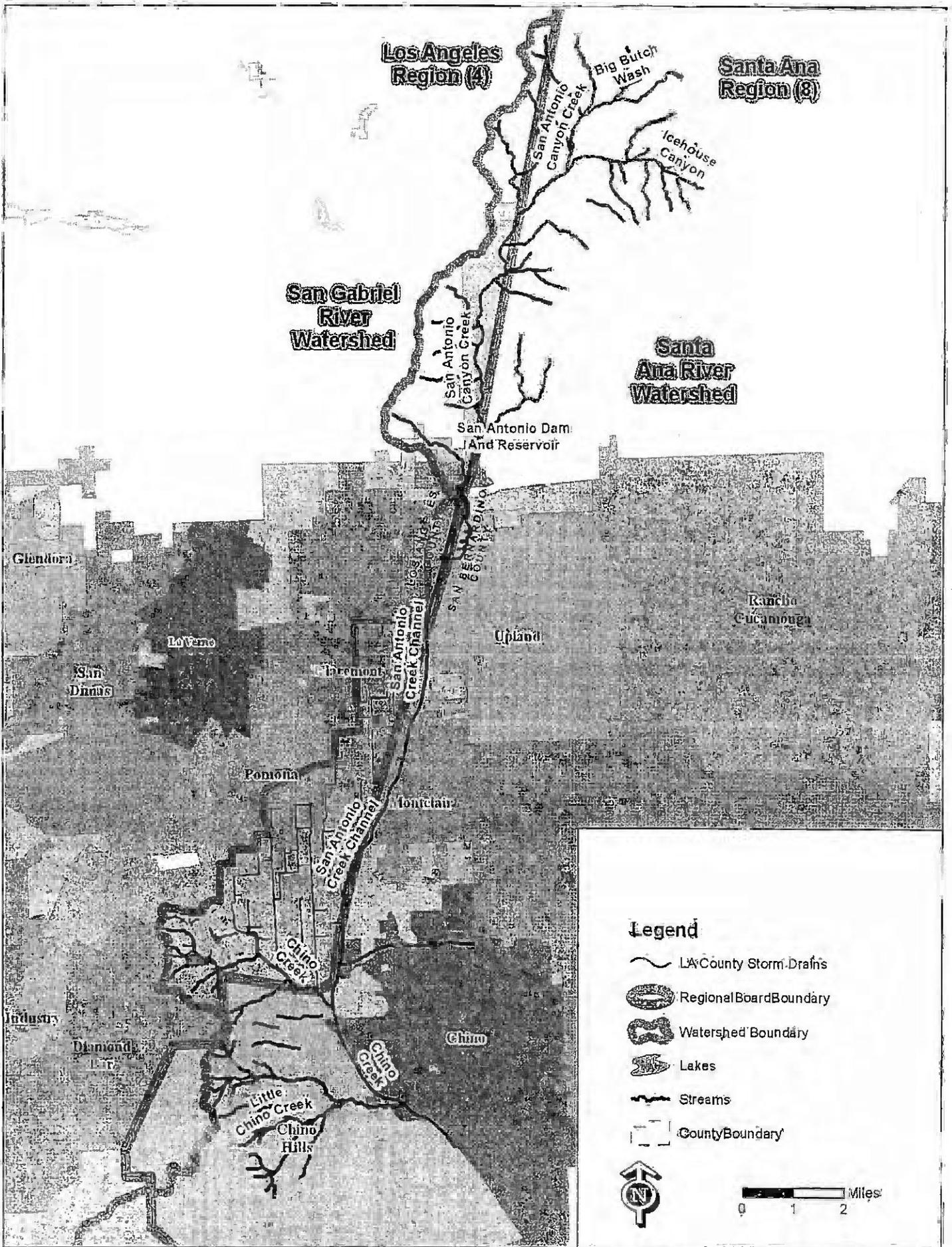


Figure C-7: Middle San Antonio Creek Subwatershed Flow Schematic.

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. Dischargers must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act, its regulations, and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof [40 CFR section 122.41(a); California Water Code sections 13261, 13263, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350, 13385].
2. Dischargers must comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement [40 CFR section 122.41(a)(1)].

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order [40 CFR section 122.41(c)].

C. Duty to Mitigate

Dischargers shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [40 CFR section 122.41(d)].

D. Proper Operation and Maintenance

Dischargers shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Permittee only when necessary to achieve compliance with the conditions of this Order [40 CFR section 122.41(e)].

E. Property Rights

1. This Order does not convey any property rights of any sort, or any exclusive privileges [40 CFR section 122.41(g)].

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations [40 CFR section 122.5(c)].

F. Inspection and Entry

Dischargers shall allow the Regional Water Board, State Water Board, USEPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [33 U.S.C. section 1318(a)(4)(B); 40 CFR section 122.41(i); California Water Code sections 13267 and 13383]:

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [33 U.S.C. section 1318(a)(4)(B)(i); 40 CFR section 122.41(i)(1); California Water Code sections 13267 and 13383];
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [33 U.S.C. section 1318(a)(4)(B)(ii); 40 CFR section 122.41(i)(2); California Water Code sections 13267 and 13383];
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [33 U.S.C. section 1318(a)(4)(B)(ii); 40 CFR section 122.41(i)(3)]; California Water Code sections 13267 and 13383; and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the California Water Code, any substances or parameters at any location [33 U.S.C. section 1318(a)(4)(B)(ii); 40 CFR section 122.41(i)(4); California Water Code sections 13267 and 13383].

G. Bypass

1. Definitions

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [40 CFR section 122.41(m)(1)(i)].
- b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production [40 CFR section 122.41(m)(1)(ii)].

2. *Bypass not exceeding limitations.* Dischargers may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is also for essential maintenance to assure efficient operation. These bypasses are not subject to the

provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below [40 CFR section 122.41(m)(2)].

3. *Prohibition of bypass.* Bypass is prohibited, and the Regional Water Board may take enforcement action against a Permittee for bypass, unless [40 CFR section 122.41(m)(4)(i)]:
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [40 CFR section 122.41(m)(4)(i)(A)];
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [40 CFR section 122.41(m)(4)(i)(B)]; and
 - c. The Permittee submitted notices to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below [40 CFR section 122.41(m)(4)(i)(C)].
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [40 CFR section 122.41(m)(4)(ii)].
5. Notice
 - a. *Anticipated bypass.* If a Permittee knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [40 CFR section 122.41(m)(3)(i)].
 - b. *Unanticipated bypass.* Dischargers shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice) [40 CFR section 122.41(m)(3)(ii)].

H. Upset

“Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [40 CFR section 122.41(n)(1)].

1. *Effect of an upset.* An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the

requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [40 CFR section 122.41(n)(2)].

2. *Conditions necessary for a demonstration of upset.* A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [40 CFR section 122.41(n)(3)]:
 - a. An upset occurred and that the Permittee can identify the cause(s) of the upset. [40 CFR section 122.41(n)(3)(i)];
 - b. The permitted facility was, at the time, being properly operated [40 CFR section 122.41(n)(3)(ii)];
 - c. The Permittee submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) [40 CFR section 122.41(n)(3)(iii)]; and
 - d. The Permittee complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [40 CFR section 122.41(n)(3)(iv)].
3. *Burden of proof.* In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof [40 CFR section 122.41(n)(4)].

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by a Permittee for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition [40 CFR section 122.41(f)].

B. Duty to Reapply

If a Permittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Permittee must apply for and obtain a new permit [40 CFR section 122.41(b)].

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Permittee and incorporate such other requirements as may be necessary under the CWA and the California Water Code [40 CFR sections 122.41(l)(3) and 122.61].

III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 CFR section 122.41(j)(1)].
- B. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136 for the analysis of pollutants unless another test procedure is required under 40 CFR subchapters N or O or is otherwise specified in this Order for such pollutants [40 CFR sections 122.41(j)(4) and 122.44(i)(1)(iv)].

IV. STANDARD PROVISIONS – RECORDS

- A. Except for records of monitoring information required by this Order related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [40 CFR section 122.41(j)(2)].
- B. Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements [40 CFR section 122.41(j)(3)(i)];
 - 2. The individual(s) who performed the sampling or measurements [40 CFR section 122.41(j)(3)(ii)];
 - 3. The date(s) analyses were performed [40 CFR section 122.41(j)(3)(iii)];
 - 4. The individual(s) who performed the analyses [40 CFR section 122.41(j)(3)(iv)];
 - 5. The analytical techniques or methods used [40 CFR section 122.41(j)(3)(v)]; and
 - 6. The results of such analyses [40 CFR section 122.41(j)(3)(vi)].
- C. Claims of confidentiality for the following information will be denied [40 CFR section 122.7(b)];
 - 1. The name and address of any permit applicant or Permittee [40 CFR section 122.7(b)(1)]; and
 - 2. Permit applications and attachments, permits, and effluent data [40 CFR section 122.7(b)(2)].

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

Dischargers shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, Dischargers shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order [40 CFR section 122.41(h); California Water Code section 13383].

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below [40 CFR section 122.41(k)(1)].
2. All applications submitted to the Regional Water Board shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer includes: (i) the chief executive officer of the agency (e.g., Mayor), or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., City Manager, Director of Public Works, City Engineer, etc.).[40 CFR section 122.22(a)(3)].
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above [40 CFR section 122.22(b)(1)];
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) [40 CFR section 122.22(b)(2)]; and
 - c. The written authorization is submitted to the Regional Water Board [40 CFR section 122.22(b)(3)].
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard

Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR section 122.22(c)].

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure 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, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." [40 CFR section 122.22(d)].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order [40 CFR section 122.41(l)(4)].
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices [40 CFR section 122.41(l)(4)(i)].
3. If a Permittee monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [40 CFR section 122.41(l)(4)(ii)].
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified by the Regional Water Board in this Order [40 CFR section 122.41(l)(4)(iii)].

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date [40 CFR section 122.41(l)(5)].

E. Twenty-Four Hour Reporting

1. Dischargers shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [40 CFR section 122.41(l)(6)(i)].
2. The following shall be included as information that must be reported within 24 hours under this paragraph [40 CFR section 122.41(l)(6)(ii)]:
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order [40 CFR sections 122.41(l)(6)(ii)(A) and 122.41(g)].
 - b. Any upset that exceeds any effluent limitation in this Order [40 CFR section 122.41(l)(6)(ii)(B)].
 - c. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Regional Water Board in this Order to be reported within 24 hours [40 CFR section (l)(6)(ii)(C) and 122.44(g)].
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [40 CFR section 122.41(l)(6)(iii)].

F. Planned Changes

Dischargers shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [40 CFR section 122.41(l)(1)];

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR section 122.29(b) [40 CFR section 122.41(l)(1)(i)]; or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order [40 CFR section 122.41(l)(1)(ii)].

The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application

process or not reported pursuant to an approved land application plan [40 CFR section 122.41(l)(1)(iii)].

G. Anticipated Noncompliance

Dischargers shall give advance notice to the Regional Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements [40 CFR section 122.41(l)(2)].

H. Other Noncompliance

Dischargers shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above [40 CFR section 122.41(l)(7)].

I. Other Information

When a Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Permittee shall promptly submit such facts or information [40 CFR section 122.41(l)(8)].

VI. STANDARD PROVISIONS – ENFORCEMENT

- A.** The Regional Water Board and State Water Board is authorized to enforce the terms of this Order under several provisions of the California Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.
- B.** The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the CWA is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the CWA, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318

or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions [40 CFR section 122.41(a)(2)] [California Water Code sections 13385 and 13387].

- C. Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000 [40 CFR section 122.41(a)(3)].
- D. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both [40 CFR section 122.41(j)(5)].
- E. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both [40 CFR section 122.41(k)(2)].

VI. ADDITIONAL STANDARD CONDITIONS APPLICABLE TO SPECIFIC CATEGORIES OF NPDES PERMITS [40 CFR SECTION 122.42]

- A. *Municipal separate storm sewer systems.* The operator of a large or medium MS4 or a municipal separate storm sewer that has been designated by the Regional Water Board or USEPA under 40 CFR section 122.26(a)(1)(v) must submit an annual report by the anniversary of the date of the issuance of the permit for such MS4. The report shall include [40 CFR section 122.42(c)]:

- 1. The status of implementing the components of the storm water management program that are established as permit conditions [40 CFR section 122.42(c)(1)];

2. Proposed changes to the storm water management programs that are established as permit condition. Such proposed changes shall be consistent with 40 CFR section 122.26(d)(2)(iii) [40 CFR section 122.42(c)(2)]; and
 3. Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR section 122.26(d)(2)(iv) and (d)(2)(v) [40 CFR section 122.42(c)(3)];
 4. A summary of data, including monitoring data, that is accumulated throughout the reporting year [40 CFR section 122.42(c)(4)];
 5. Annual expenditures and budget for year following each annual report [40 CFR section 122.42(c)(5)];
 6. A summary describing the number and nature of enforcement actions, inspections, and public education programs [40 CFR section 122.42(c)(6)];
 7. Identification of water quality improvements or degradation [40 CFR section 122.42(c)(7)];
- B. *Storm water discharges.* The initial permits for discharges composed entirely of storm water issued pursuant to 40 CFR section 122.26(e)(7) shall require compliance with the conditions of the permit as expeditiously as practicable, but in no event later than three years after the date of issuance of the permit. [40 CFR section 122.42(d)].

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

320 W. 4th Street, Suite 200, Los Angeles, California 90013
Phone (213) 576 - 6600 • Fax (213) 576 - 6640
<http://www.waterboards.ca.gov/losangeles>

MONITORING AND REPORTING PROGRAM - No. CI-6948

FOR

**ORDER 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, 2012

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I. MONITORING AND REPORTING PROGRAM (MRP)

Section 308(a) of the federal Clean Water Act and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of Title 40 of the Code of Federal Regulations require that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. Federal regulations applicable to large and medium MS4s also specify additional monitoring and reporting requirements. (40 C.F.R. §§ 122.26(d)(2)(i)(F) & (d)(2)(iii)(D), 122.42(c).) California Water Code section 13383 further authorizes the California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

II. PURPOSE AND SCOPE

A. Primary Objectives

The primary objectives of the Monitoring Program are to:

1. Assess the chemical, physical, and biological impacts of discharges from the municipal storm water sewer system (MS4) on receiving waters.
2. 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 wasteload allocations (WLAs).
3. Characterize pollutant loads in MS4 discharges.
4. Identify sources of pollutants in MS4 discharges.
5. Measure and improve the effectiveness of pollutant controls implemented under this Order.

B. Purpose

The results of the monitoring requirements outlined below shall be used to refine control measures for the reduction of pollutant loading and the protection and enhancement of the beneficial uses of the receiving waters in Los Angeles County.

C. Provision for Integrated Approach

The Monitoring Program provides flexibility to allow Permittees to develop an integrated monitoring program to address all of the monitoring requirements of this Order and other monitoring obligations or requirements in a cost efficient and effective manner.

D. Provision for a Coordinated Integrated Approach

The Monitoring Program provides flexibility to allow Permittees to coordinate monitoring efforts on a watershed or subwatershed basis to leverage monitoring resources in an effort to increase cost-efficiency and effectiveness and to closely

align monitoring with TMDL monitoring requirements and Watershed Management Programs.

E. Monitoring Program Elements

The Monitoring Program shall include the following elements:

1. **Receiving water monitoring** shall be performed at previously designated mass emission stations, TMDL receiving water compliance points, as designated in Regional Water Board Executive Officer approved TMDL Monitoring Plans (see Table E-1 for a list of approved TMDL Monitoring Plans), and additional receiving water locations representative of the impacts from MS4 discharges. The objectives of the receiving water monitoring include the following:
 - a. Determine whether the receiving water limitations are being achieved,
 - b. Assess trends in pollutant concentrations over time, or during specified conditions,
 - c. Determine whether the designated beneficial uses are fully supported as determined by water chemistry, as well as aquatic toxicity and bioassessment monitoring.
2. **Storm water outfall based monitoring**; including TMDL monitoring requirements specified in approved TMDL Monitoring Plans (see Table E-1). Outfall monitoring locations shall be representative of the land uses within the Permittee's jurisdiction. The objectives of the storm water outfall based monitoring program include the following:
 - a. Determine the quality of a Permittee's discharge relative to municipal action levels, as described in Attachment G of this Order,
 - b. Determine whether a Permittee's discharge is in compliance with applicable storm water WQBELs derived from TMDL WLAs,
 - c. Determine whether a Permittee's discharge causes or contributes to an exceedance of receiving water limitations.
3. **Non-storm water outfall based monitoring**; including TMDL monitoring requirements specified in approved TMDL Monitoring Plans (see Table E-1). Outfalls with significant non-storm water discharges that remain unaddressed after source identification shall be monitored. The objectives of the non-storm water outfall based monitoring program include the following:
 - a. Determine whether a Permittee's discharge is in compliance with applicable non-storm water WQBELs derived from TMDL WLAs,
 - b. Determine whether a Permittee's discharge exceeds non-storm water action levels, as described in Attachment G of this Order,
 - c. Determine whether a Permittee's discharge contributes to or causes an exceedance of receiving water limitations.

- d. Assist a Permittee in identifying illicit discharges as described in Part VI.D.10 of this Order.
4. **New Development/Re-development effectiveness tracking.** The objectives of best management practices (BMP) effectiveness tracking is to track whether the conditions in the building permit issued by the Permittee are implemented to ensure the volume of storm water associated with the design storm is retained on-site as required by Part VI.D.7.c.i. of this Order.
5. **Regional studies** are required to further characterize the impact of the MS4 discharges on the beneficial uses of the receiving waters. Regional studies shall include the Southern California Stormwater Monitoring Coalition (SMC) Regional Watershed Monitoring Program (bioassessment) and special studies as specified in approved TMDLs (see Section XIX TMDL Reporting, below).

III. GENERAL MONITORING AND REPORTING REQUIREMENTS

- A. Monitoring shall be conducted in accordance with the requirements specified in Attachment D to this Order (Part III, Standard Provisions - Monitoring).
- B. Records of monitoring information shall include information required under Attachment D to this Order (Part IV, Standard Provisions - Records).
- C. All applications, reports, plans, or other information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Attachment D to this Order (Part V.B, Standard Provisions - Reporting, Signatory and Certification Requirements).
- D. Monitoring results shall be reported in accordance with the requirements specified in Attachment D to this Order (Part V.C, Standard Provisions - Reporting, Monitoring Reports).
- E. All monitoring and reporting shall be conducted in accordance with the Standard Monitoring Provisions specified in Part XIV of this MRP.
- F. **Sampling Methods**
 1. Sampling methods shall be fully described in each Permittee's Integrated Monitoring Program (IMP) or Coordinated Integrated Monitoring Program (CIMP) and according to the provisions of the Standard Provisions for Monitoring described in Attachment D to this Order and Part XIV of this MRP.
 2. Grab samples shall be taken for constituents that are required to be collected as such (e.g., pathogen indicator bacteria, oil and grease, cyanides, and volatile organics); in instances where grab samples are generally expected to be sufficient to characterize water quality conditions (primarily dry weather); and where the sample location limits Permittees' ability to install an automated sampler, as provided for in an approved IMP or CIMP.

3. At a minimum, a sufficient volume of sample must be collected to perform all of the required biological and chemical tests, including TIEs where aquatic toxicity is observed during the sample event.
4. Sampling and monitoring methods for trash shall be conducted in accordance with the applicable requirements specified in Part VI.E.5 of this Order.
5. Flow may be estimated using USEPA methods at receiving water monitoring stations where flow measuring equipment is not in place.
6. Flow may be estimated for storm water outfall monitoring based on drainage area, impervious cover, and precipitation data as approved in an IMP or CIMP.

G. Analytical Procedures

1. Suspended-Sediment Concentration (SSC) shall be analyzed per American Society for Testing and Materials (ASTM) Standard Test Method D-3977-97.
2. Monitoring methods for trash shall be conducted in accordance with the applicable requirements specified in Part VI.E.5 of this Order.
3. Aquatic toxicity shall be monitored in accordance with Part XI of this MRP.
4. All other parameters shall be analyzed according to the provisions of the Standard Provisions for Monitoring described in Attachment D to this Order and Part XIV of this MRP.

H. Reporting

1. Reporting requirements related to the monitoring of trash shall be conducted in accordance with Part VI.E.5:c of this Order.
2. Monitoring results submitted to the Regional Water Board shall be consistent with the requirements identified in Part XVIII.A.5 and Part XVIII.A.7 of this MRP.

IV. INTEGRATED MONITORING PROGRAMS

A. Integrated Monitoring Program (IMP)

1. Each Permittee may develop an Integrated Monitoring Program designed to satisfy the monitoring requirements of this Order.
2. The monitoring requirements contained in TMDL Monitoring Plans approved by the Executive Officer of the Regional Water Board are incorporated by reference into this MRP (See Table E-1 for a list of approved TMDL Monitoring Plans).

3. The Integrated Monitoring Program may leverage monitoring resources by selecting monitoring locations, parameters, or monitoring techniques that will satisfy multiple monitoring requirements.
4. Where appropriate, the Integrated Monitoring Program may develop and utilize alternative approaches to meet the Primary Objectives (Part II.A). Sufficient justification shall be provided in the IMP for the alternative approach(es). Such alternative approaches shall be subject to public review and final approval by the Regional Water Board Executive Officer.
5. The requirements of an approved TMDL Monitoring Plan may be modified by an IMP that is subsequently approved by the Executive Officer of the Regional Water Board.
6. At a minimum, the IMP must address all TMDL and Non-TMDL monitoring requirements of this Order, including receiving water monitoring, storm water outfall based monitoring, non-storm water outfall based monitoring, and regional water monitoring studies, except as provided in Parts IV.B.2 and 3 of this MRP.

B. Coordinated Integrated Monitoring Program (CIMP)

1. Benefits of the CIMP Approach

- a. The CIMP provides Permittees opportunities to increase the cost efficiency and effectiveness of the monitoring program. The greatest efficiency may be achieved when a CIMP is designed and implemented on a watershed basis.
 - b. A CIMP may be employed to implement regional studies, where a single Permittee takes the lead in directing the study, and the other Permittees provide funding or in lieu services.
2. Permittees are encouraged to coordinate their monitoring programs with other Permittees to develop and implement a CIMP. A CIMP may be developed to address one or more of the required monitoring elements (i.e., receiving water monitoring, outfall based monitoring, regional monitoring or special studies) and may be county-wide or limited to a single watershed, sub-watershed or defined jurisdictional boundary.
 3. The requirements of an approved TMDL Monitoring Plan may be modified by an IMP or CIMP that is subsequently approved by the Executive Officer of the Regional Water Board.
 4. A Permittee shall not be required to submit an IMP if all of the applicable monitoring requirements in this Order are addressed in a CIMP, to which the Permittee is a participant.
 5. If the CIMP addresses some but not all of the applicable monitoring requirements required under this Order, then each Permittee shall submit an IMP that references the CIMP. The Permittees must describe how together, the IMP and CIMP, fulfill all of the applicable monitoring requirements contained in this Order.

6. Where appropriate, the CIMP may develop and utilize alternative approaches to meet the Primary Objectives (Part II.A). Sufficient justification shall be provided in the CIMP for the alternative approach(es). Such alternative approaches shall be subject to public review and final approval by the Regional Water Board Executive Officer.

C. Schedule for Submitting the Monitoring Plan to the Regional Water Board and Conducting Outfall Screening

1. Within six (6) months after the effective date of this Order, each Permittee shall submit a letter of intent to the Executive Officer of the Regional Water Board describing whether it intends to follow an IMP or CIMP approach for each of the required monitoring plan elements.
2. Each Permittee not electing to develop a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) shall submit an IMP plan addressing monitoring requirements that the Permittee intends to implement individually to the Executive Officer of the Regional Water Board within twelve (12) months after the effective date of this Order.
3. Permittees electing to develop a WMP or EWMP shall submit an IMP or CIMP plan, to the Executive Officer of the Regional Water Board concurrently with their draft WMP.
4. Permittees electing to develop an enhanced WMP shall submit an IMP or CIMP plan to the Executive Officer of the Regional Water Board within 18 months after the effective date of this Order.
5. If upon finalization of the CIMP plan, a Permittee that has developed an IMP determines that its IMP plan must be revised to include monitoring requirements not covered under the final CIMP, the revised IMP plan shall be submitted to the Executive Officer of the Regional Water Board within 60 days after approval of the CIMP plan by the Executive Officer of the Regional Water Board.
6. Monitoring shall commence within 30 days after approval of the IMP, or within 90 days after approval of the CIMP, by the Executive Officer of the Regional Water Board.
7. If a Permittee elects not to develop or participate in an IMP or CIMP, monitoring shall be conducted on a jurisdictional basis per the requirements of this MRP, beginning six (6) months after the effective date of this Order.
8. Monitoring requirements pursuant to Order No. 01-182 and Monitoring and Reporting Program CI 6948, and pursuant to approval TMDL monitoring plans identified in Table E-1, shall remain in effect until the Executive Officer of the Regional Water Board approves a Permittee(s) IMP and/or CIMP plan(s).

V. TMDL MONITORING PLANS

Table E-1. Approved TMDL Monitoring Plans by Watershed Management Area

TMDL	Comment	Date of Final Plan	Regional Water Board Approval Date
Santa Clara River Watershed Management Area			
Santa Clara River Nitrogen Compounds TMDL	Monitoring Plan was due March 23, 2005.	March 2006	Has not been approved.
Upper Santa Clara River Chloride TMDL	Monitoring Plan was not required.	N/A	N/A
Lake Elizabeth, Munz Lake, and Lake Hughes Trash TMDL (Lake Elizabeth only)	The County of Los Angeles Trash TMDL Monitoring and Reporting Plan for Lake Elizabeth, Munz Lake, and Lake Hughes	June 25, 2009	March 25, 2009
Santa Clara River Estuary and Reaches 3, 5, 6, and 7 Indicator Bacteria TMDL	Monitoring Plan is due on March 21, 2013.		
Santa Monica Bay Watershed Management Area			
Santa Monica Bay Beaches Bacteria TMDL (Wet and Dry)	Santa Monica Bay Beaches Bacterial TMDLs Coordinated Shoreline Monitoring Plan	April 7, 2004	January 8, 2004
Santa Monica Bay Nearshore and Offshore Debris TMDL	Monitoring Plan is due on September 20, 2012.		
Santa Monica Bay TMDL for DDTs and PCBs	USEPA Established TMDL	N/A	N/A
Malibu Creek Subwatershed			
Malibu Creek and Lagoon Bacteria TMDL	Malibu Creek and Lagoon Bacteria TMDL Compliance Monitoring Plan	February 25, 2008	April 8, 2008
Malibu Creek Watershed Trash TMDL	Malibu Creek Watershed Trash Monitoring and Reporting Plan (TMRP)	April 28, 2010	Has not been approved.

TMDL	Comment	Date of Final Plan	Regional Water Board Approval Date
Malibu Creek Watershed Nutrients TMDL	USEPA Established TMDL	N/A	N/A
Ballona Creek Subwatershed			
Ballona Creek Trash TMDL	Monitoring Plan was not required.	N/A	N/A
Ballona Creek Estuary Toxic Pollutants TMDL	Ballona Creek Metals TMDL and Ballona Creek Estuary Toxic Pollutants TMDL Coordinated Monitoring Plan	May 4, 2009	June 25, 2009
Ballona Creek, Ballona Estuary and Sepulveda Channel Bacteria TMDL	Ballona Creek, Ballona Estuary, & Sepulveda Channel Bacteria TMDL Coordinated Monitoring Plan	January 29, 2009	December 16, 2008
Ballona Creek Metals TMDL	Ballona Creek Metals TMDL and Ballona Creek Estuary Toxic Pollutants TMDL Coordinated Monitoring Plan	May 4, 2009	June 25, 2009
Ballona Creek Wetlands TMDL for Sediment and Invasive Exotic Vegetation	USEPA Established TMDL	N/A	N/A
Marina del Rey Subwatershed			
Marina del Rey Harbor Mothers' Beach and Back Basins Bacteria TMDL	Marina Del Rey Harbor Mothers' Beach and Back Basins Bacterial TMDL Coordinated Monitoring Plan	June 25, 2007	February 1, 2007
Marina del Rey Harbor Toxic Pollutants TMDL	Marina Del Rey Harbor Toxic Pollutants Total Maximum Daily Load Coordinated Monitoring Plan	March 31, 2008	March 3, 2009
Dominguez Channel and Greater Harbors Waters Watershed Management Area			

TMDL	Comment	Date of Final Plan	Regional Water Board Approval Date
Los Angeles Harbor Bacteria TMDL (Inner Cabrillo Beach and Main Ship Channel)	Monitoring Plan was not required.	N/A	N/A
Machado Lake Trash TMDL	Trash Monitoring & Reporting Plan: Machado Lake Trash TMDL	September 5, 2008	December 9, 2008
	City of Rolling Hills Trash Monitoring and Reporting Plan Machado Lake Trash TMDL	September 5, 2008	December 9, 2008
Machado Lake Nutrient TMDL	Palos Verdes Peninsula Coordinated Monitoring Plan In Compliance with the Machado Lake Nutrient Total Maximum Daily Load	February 1, 2011	December 14, 2010
	Machado Lake Nutrients TMDL Lake Water Quality Management Plan for City of Los Angeles	August 18, 2010	February 14, 2011
	Machado Lake Nutrient TMDL Monitoring and Reporting Program Plan for the City of Carson	March 27, 2012	March 7, 2012
	Machado Lake Multipollutant TMDL Monitoring and Reporting Program for the Unincorporated Areas of Los Angeles County within the Machado Lake Watershed	September 12, 2011	April 25, 2012

TMDL	Comment	Date of Final Plan	Regional Water Board Approval Date
	Monitoring Plans were due from the City of Lomita on April 25, 2011, City of Redondo Beach on March 11, 2010, and City of Torrance on May 16, 2012.		
Machado Lake Pesticides and PCBs TMDL	Monitoring Plan is due on September 20, 2012 ¹ .		
Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL	Monitoring Plan is due on November 23, 2013.		
Los Angeles River Watershed Management Area			
Los Angeles River Watershed Trash TMDL	Monitoring Plan was not required.	N/A	N/A
Los Angeles River Nitrogen Compounds and Related Effects TMDL	Monitoring Plan was due on March 23, 2005.	March 23, 2005	Has not been approved.
Los Angeles River and Tributaries Metals TMDL	Los Angeles River Metals TMDL Coordinated Monitoring Plan.	March 25, 2008	April 11, 2008
Los Angeles River Watershed Bacteria TMDL	Monitoring Plan is due on March 23, 2013.		
Legg Lake Trash TMDL	Legg Lake Trash Monitoring & Reporting Plan: Legg Lake Trash TMDL	September 5, 2008	March 25, 2009.
Long Beach City Beaches and Los Angeles River Estuary Bacteria TMDL	USEPA Established TMDL	N/A	N/A

¹ The deadline for Permittees assigned both WLAs and LAs to submit one document to address both WLA and LA monitoring requirements and implementation activities shall be September 20, 2013.

TMDL	Comment	Date of Final Plan	Regional Water Board Approval Date
Los Angeles Area Lakes TMDLs (Lake Calabazas, Echo Park Lake, Legg Lake and Peck Road Park Lake)	USEPA Established TMDL	N/A	N/A
San Gabriel River Watershed Management Area			
San Gabriel River and Impaired Tributaries Metals and Selenium TMDL	USEPA Established TMDL	N/A	N/A
Los Angeles Area Lakes TMDLs (Puddingstone Reservoir)	USEPA Established TMDL	N/A	N/A
Los Cerritos Channel and Alamitos Bay Watershed Management Area			
Los Cerritos Channel Metals TMDL	USEPA Established TMDL	N/A	N/A
Colorado Lagoon OC Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals TMDL	Colorado Lagoon TMDL Monitoring Plan (CLTMP)	June 15, 2012	August 23, 2012
Middle Santa Ana River Watershed Management Area			
Middle Santa Ana River Watershed Bacteria Indicator TMDL	Monitoring Plan was due on November 16, 2007.		

VI. RECEIVING WATER MONITORING

A. IMP Receiving Water Monitoring Requirements

1. All IMP plans must contain the following information for receiving water monitoring:
 - a. Declaration of whether receiving water monitoring is conducted under an IMP, CIMP or both.
 - b. If receiving water monitoring is performed under the IMP, the plan must contain the following information:

- i. A map (preferably GIS) identifying the proposed receiving water monitoring stations for both dry weather and wet weather monitoring.
- ii. An explanation of how and why monitoring at the proposed locations will provide representative measurement of the effects of the Permittee's MS4 discharges on the receiving water.
- iii. Identification of applicable TMDLs and TMDL compliance points, based on approved TMDL Monitoring Plans and/or as identified in the Basin Plan for the applicable TMDLs.
- iv. A description of how the Permittee is fulfilling its obligations for TMDL receiving water monitoring under this IMP, CIMP or other monitoring plans.
- v. A description of how the Permittee is contributing to the monitoring of mass emission stations or a discussion of why monitoring at mass emission stations is not being supported.

B. CIMP Receiving Water Monitoring Requirements

1. The CIMP plan must contain the following information for receiving water monitoring:
 - a. A list of the participating Permittees.
 - b. A map (preferably GIS) delineating the geographic boundaries of the monitoring plan including the receiving waters, the MS4 catchment drainages and outfalls, subwatershed boundaries (i.e., HUC 12), political boundaries, land use, and the proposed receiving water monitoring stations for both dry weather and wet weather receiving water monitoring.
 - c. An explanation of how and why monitoring at the proposed locations will provide representative measurement of the effects of the MS4 discharges on the receiving water.
2. TMDLs
 - a. A list of applicable TMDLs and TMDL compliance points, based on approved TMDL Monitoring Plans and/or as identified in the Basin Plan for the applicable TMDLs.
 - b. Identification of the proposed receiving water monitoring stations that fulfill the TMDL Monitoring Plan(s) requirements.
 - c. Shoreline Monitoring Stations monitored pursuant to a bacteria TMDL. Sampling for bacterial indicators (total coliform, fecal coliform (or *E. coli*), and enterococcus) at shoreline monitoring locations addressed by a TMDL shall be conducted 5 times per week at sites subject to the reference system criterion for allowable exceedance days, and weekly at sites subject to the antidegradation criterion for allowable exceedance days.
3. Mass Emission Stations
 - a. Location of mass emission stations.

- b. Description of monitoring at mass emission stations or justification of why monitoring at the mass emission stations will be discontinued.

C. Minimum Wet Weather Receiving Water Monitoring Requirements:

1. The IMP or CIMP shall incorporate the following minimum requirements for monitoring the receiving water during wet weather conditions:
 - a. The receiving water shall be monitored a minimum of three times per year for all parameters except aquatic toxicity, which must be monitored at least twice per year, or more frequently if required by applicable TMDL Monitoring Plans.
 - b. Monitoring shall be performed in the receiving water during wet weather conditions, defined for the purposes of this monitoring program as follows:
 - i. When the receiving water is the Santa Monica Bay or other ocean or estuarine water body, wet weather occurs during a storm event of greater than or equal to 0.1 inch of precipitation, as measured from at least 50 percent of the Los Angeles County controlled rain gauges within the watershed, or based on an alternative precipitation threshold as provided for in an approved IMP or CIMP.
 - ii. When the receiving water body is a river, stream or creek, wet weather shall be defined as when the flow within the receiving water is at least 20 percent greater than the base flow or an alternative threshold as provided for in an approved IMP or CIMP, or as defined by effective TMDLs within the watershed.
 - iii. Monitoring shall occur during wet weather conditions, including targeting the first significant rain event of the storm year following the criteria below, and at least two additional wet weather events within the same wet weather season. Permittees shall target the first storm event of the storm year with a predicted rainfall of at least 0.25 inch at a seventy percent probability of rainfall at least 24 hours prior to the event start time. Permittees shall target subsequent storm events that forecast sufficient rainfall and runoff to meet program objectives and site specific study needs. Sampling events shall be separated by a minimum of three days of dry conditions (less than 0.1 inch of rain each day).
 - c. Receiving water monitoring shall begin as soon as possible after storm water outfall-based monitoring, in order to be reflective of potential impacts from MS4 discharges.
 - d. At a minimum, the following parameters shall be monitored unless a surrogate pollutant has been approved by the Executive Officer of the Regional Water Board.
 - i. Flow

- ii. Pollutants assigned a receiving water limitation derived from TMDL WLAs (See Attachments L-R of this Order),
 - iii. Other pollutants identified on the CWA section 303(d) List for the receiving water or downstream receiving waters,
 - iv. Total Suspended Solids (TSS) and Suspended-Sediment Concentration (SSC) if the receiving water is listed on the CWA section 303(d) list for sedimentation, siltation or turbidity,²
 - v. Field measurements applicable to inland freshwater bodies only: hardness, pH, dissolved oxygen, temperature, and specific conductivity,
 - vi. Aquatic Toxicity (twice per year, once during first storm event of the storm year as specified above).
- e. Additionally, the screening parameters in Table E-2 shall be monitored in the first year of monitoring during the first significant rain event of the storm year. If a parameter is not detected at the Method Detection Limit (MDL) for its respective test method or the result is below the lowest applicable water quality objective, and is not otherwise identified in subparts d.i.-d.vi. above, it need not be further analyzed. If a parameter is detected exceeding the lowest applicable water quality objective then the parameter shall be analyzed for the remainder of the Order during wet weather at the receiving water monitoring station where it was detected.

D. Minimum Dry Weather Receiving Water Monitoring

1. The IMP and/or CIMP plan shall incorporate the following minimum requirements for monitoring the receiving water during dry weather conditions:
 - a. The receiving water shall be monitored a minimum of two times per year for all parameters, or more frequently if required by applicable TMDL Monitoring Plans. One of the monitoring events shall be during the month with the historically lowest instream flows, or where instream flow data are not available, during the historically driest month.
 - b. Monitoring shall be performed in the receiving water during dry weather conditions, defined as follows:
 1. When the receiving water is the Santa Monica Bay or other ocean or estuary water body, dry weather occurs on days with less than 0.1 inch of rain and those days not less than three days after a rain event of 0.1 inch or greater within the watershed, as measured from at least 50 percent of Los Angeles County controlled rain gauges within the watershed, or an alternative criterion as provided for in an approved IMP or CIMP.

² Gray, John, R., G. Douglas Glysson, Lisa M. Turcios, and Gregory E. Schwarz. 2000. *Comparability of Suspended-Sediment Concentration and Total Suspended Solids Data*. United States Geological Survey. Water Resources Investigations Report 00-4191. August 2000.

- ii. When the receiving water body is a river, stream or creek, dry weather shall be defined as when the flow is less than 20 percent greater than the base flow or as defined by effective TMDLs within the watershed, or an alternative criterion as provided for in an approved IMP or CIMP.
- c. At a minimum the following parameters shall be monitored during dry weather conditions, unless a surrogate pollutant has been approved by the Executive Officer of the Regional Water Board:
 - i. Flow
 - ii. Pollutants assigned receiving water limitations derived from TMDL dry weather WLAs,
 - iii. Other pollutants identified on the CWA section 303(d) List for the receiving water or downstream receiving waters,
 - iv. TSS and hardness, when metals are monitored,
 - v. Field measurements for monitoring of inland freshwater bodies: dissolved oxygen, pH, temperature, and specific conductivity,
 - vi. Aquatic Toxicity (once per year, during the month with the historically lowest flows).
- d. Additionally, the parameters in Table E-2 shall be monitored in the first year of monitoring during the critical dry weather event. If a parameter is not detected at the Method Detection Limit (MDL) for its respective test method or the result is below the lowest applicable water quality objective, and is not otherwise identified in subparts c.i.-c.iii. or c.v.-c.vii. above, it need not be further analyzed. If a parameter is detected exceeding the lowest applicable water quality objective then the parameter shall be analyzed for the remainder of the Order during dry weather at the receiving water monitoring station where it was detected.

Table E-2. Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)³

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 coliform (marine waters)	10,000

³ For priority pollutants, MLs published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (SiP) shall be used for all analyses, unless otherwise specified. Method Detection Levels (MDLs) must be lower than or equal to the ML value, unless otherwise approved by the Regional Board.

CONSTITUENTS	MLs/
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	1 umho/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

CONSTITUENTS	M/Ls
Pentachlorophenol	2
Phenol	1
2,4,6-Trichlorophenol	10
BASE/NEUTRAL	µg/L
Acenaphthene	1
Acenaphthylene	2
Anthracene	2
Benzidine	5
1,2 Benzanthracene	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-Chloroisopropyl) ether	2
Bis(2-Chloroethyl) ether	1
Bis(2-Ethylhexyl) 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)anthracene	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-Dinitrotoluene	5
2,6-Dinitrotoluene	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/NEUTRAL	µg/L
Pyrene	0.05

CONSTITUENTS	MLs
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'-DDE	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	0.5
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-1254	0.5
Aroclor-1260	0.5
ORGANOPHOSPHATE PESTICIDES	µg/L
Atrazine	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

VII. OUTFALL BASED MONITORING

A. Storm Drains, Channels and Outfalls Map(s) and/or Database. The IMP and/or CIMP plan(s) shall include a map(s) and/or database of the MS4 to include the following information:

1. Surface water bodies within the Permittee(s) jurisdiction
2. Sub-watershed (HUC 12) boundaries

3. Land use overlay
4. Effective Impervious Area (EIA) overlay (if available)
5. Jurisdictional boundaries
6. The location and length of all open channel and underground pipes 18 inches in diameter or greater (with the exception of catch basin connector pipes)
7. The location of all dry weather diversions
8. The location of all major MS4 outfalls within the Permittee's jurisdictional boundary. Each major outfall shall be assigned an alphanumeric identifier, which must be noted on the map
9. Notation of outfalls with significant non-storm water discharges (to be updated annually)
10. Storm drain outfall catchment areas for each major outfall within the Permittee(s) jurisdiction.
11. Each mapped MS4 outfall shall be linked to a database containing descriptive and monitoring data associated with the outfall. The data shall include:
 - a. Ownership
 - b. Coordinates
 - c. Physical description
 - d. Photographs of the outfall, where possible, to provide baseline information to track operation and maintenance needs over time
 - e. Determination of whether the outfall conveys significant non-storm water discharges
 - f. Storm water and non-storm water monitoring data

VIII. STORM WATER OUTFALL BASED MONITORING

A. Storm Water Outfall Based Monitoring

1. Storm water discharges from the MS4 shall be monitored at outfalls and/or alternative access points such as manholes or in channels at the Permittee's jurisdictional boundary.
2. The Permittee shall consider the following criteria when selecting outfalls for storm water discharge monitoring:
 - a. The storm water outfall based monitoring program should ensure representative data by monitoring at least one major outfall per subwatershed (HUC 12) drainage area, within the Permittee's jurisdiction, or alternate approaches as approved in an IMP or CIMP.
 - b. The drainage(s) to the selected outfall(s) shall be representative of the land uses within the Permittee's jurisdiction.

- c. If a Permittee is implementing an IMP, to the extent possible, the selected outfalls shall not receive drainage from another jurisdiction. If this is not possible, and a Permittee is pursuing an individual outfall based IMP program, the Permittee shall conduct "upstream" and "downstream" monitoring as the system enters and exits the Permittee's jurisdiction.
- d. The Permittee shall select outfalls with configurations that facilitate accurate flow measurement and in consideration of safety of monitoring personnel.
- e. The 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.

B. Minimum Storm Water Outfall Based Monitoring Requirements

1. The IMP and/or CIMP shall incorporate the following minimum requirements for monitoring storm water:
 - a. Storm water discharges shall be monitored a minimum of three times per year for all parameters except aquatic toxicity.
 - b. Monitoring shall be performed at the selected outfalls during wet weather conditions, defined for the purposes of this monitoring program as follows:
 - i. When the receiving water is the Santa Monica Bay or other ocean or estuary water body, wet weather occurs during a storm event equal to or greater than 0.1 inch of precipitation, as determined by the closest Los Angeles County rain gauge to the catchment area draining to the outfall, or based on an alternative precipitation threshold as provided for in an approved IMP or CIMP.
 - ii. When the receiving water body is a river, stream or creek, wet weather shall be defined as when the flow within the receiving water is at least 20 percent greater than the base flow or an alternative threshold as provided for in an approved IMP or CIMP, or as defined by effective TMDLs within the watershed.
 - iii. Monitoring of storm water discharges shall occur during wet weather conditions resulting from the first rain event of the year, and at least two additional wet weather events within the same wet weather season. Permittees shall target the first storm event of the storm year with a predicted rainfall of at least 0.25 inch at a seventy percent probability of rainfall at least 24 hours prior to the event start time. Permittees shall target subsequent storm events that forecast sufficient rainfall and runoff to meet program objectives and site specific study needs. Sampling events shall be separated by a minimum of three days of dry conditions (less than 0.1 inch of rain each day).
 - c. At a minimum, the following parameters shall be monitored unless a surrogate pollutant has been approved by the Executive Officer of the Regional Water Board:

- i. Flow
 - ii. Pollutants assigned a WQBEL derived from TMDL WLAs (See Attachments L-R of this Order),
 - iii. Other pollutants identified on the CWA section 303(d) List for the receiving water or downstream receiving waters,
 - iv. Total Suspended Solids (TSS) and Suspended-Sediment Concentration (SSC) if the receiving water is listed on the CWA Section 303(d) list for sedimentation, siltation or turbidity,
 - v. Field measurements applicable to inland freshwater bodies only: hardness, pH, dissolved oxygen, temperature, and specific conductivity,
 - vi. Pollutants identified in a TIE conducted at the downstream receiving water monitoring station during the most recent 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.
- d. 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.C.1.e.

C. Sampling Methods

1. Samples shall be collected during the first 24 hours of the storm water discharge or for the entire storm water discharge if it is less than 24 hours.
2. If a Permittee is not participating in a IMP or CIMP, the flow-weighted composite sample for a storm water discharge shall be taken with a continuous sampler, or it shall be taken as a combination of a minimum of 3 sample aliquots, taken in each hour of discharge for the first 24 hours of the discharge or for the entire discharge if the storm event is less than 24 hours, with each aliquot being separated by a minimum of 15 minutes within each hour of discharge, unless the Regional Water Board Executive Officer approves an alternate protocol.

IX. NON-STORM WATER OUTFALL BASED SCREENING AND MONITORING

A. Objectives of the Non-Storm Water Outfall Screening and Monitoring Program

The outfall screening and monitoring process is intended to meet the following objectives.

1. Develop criteria or other means to ensure that all outfalls with significant non-storm water discharges are identified and assessed during the term of this Order.
2. For outfalls determined to have significant non-storm water flow, determine whether flows are the result of illicit connections/illicit discharges (IC/IDs).

authorized or conditionally exempt non-storm water flows, natural flows, or from unknown sources.

3. Refer information related to identified IC/IDs to the IC/ID Elimination Program (Part VI.D.10 of this Order) for appropriate action.
4. Based on existing screening or monitoring data or other institutional knowledge, assess the impact of non-storm water discharges (other than identified IC/IDs) on the receiving water.
5. Prioritize monitoring of outfalls considering the potential threat to the receiving water and applicable TMDL compliance schedules.
6. Conduct monitoring or assess existing monitoring data to determine the impact of non-storm water discharges on the receiving water.
7. Conduct monitoring or other investigations to identify the source of pollutants in non-storm water discharges.
8. Use results of the screening process to evaluate the conditionally exempt non-storm water discharges identified in Parts III.A.2 and III.A.3 of this Order and take appropriate actions pursuant to Part III.A.4.d of this Order for those discharges that have been found to be a source of pollutants. Any future reclassification shall occur per the conditions in Parts III.A.2 or III.A.6 of this Order.
9. Maximize the use of Permittee resources by integrating the screening and monitoring process into existing or planned IMP and/or CIMP efforts.

B. Outfall Screening and Monitoring Plan

1. Concurrent with the development of an IMP or CIMP, or within one (1) year of the effective date of this Order, each Permittee shall submit a non-storm water outfall-based screening and monitoring program plan that documents with written procedures an explanation of how the program is to be implemented. The procedures must be updated as needed to reflect the Permittee's program. The plan may be a separate stand-alone document or may be part of an IMP or CIMP.
2. Each Permittee shall conduct at least one re-assessment of its non-storm water outfall-based screening and monitoring program during the term of this Order to determine whether changes or updates are needed. Where changes are needed, the Permittee shall make the changes in its written program documents, implement these changes in practice, and describe the changes within the next annual report.

C. Identification of Outfalls with Significant with Non-Storm Water Discharge

1. Based on the inventory of MS4 outfalls required under Part VII of this MRP, each Permittee shall identify MS4 outfalls with significant non-storm water discharges. Significant non-storm water discharges may be determined by one or more of the following characteristics:

- a. Discharges from major outfalls subject to dry weather TMDLs.
- b. Discharges for which existing monitoring data exceeds non-storm water Action Levels identified in Attachment G of this Order.
- c. Non-storm water discharges that have caused or have the potential to cause overtopping of downstream diversions.
- d. Discharges exceeding a proposed threshold discharge rate as determined by the Permittee.
- e. Other characteristics as determined by the Permittee and incorporated within their screening program plan.

D. Inventory of MS4 Outfalls with Non-Storm Water Discharges

1. Each Permittee shall develop and maintain an inventory of MS4 outfalls and identify those with known significant non-storm water discharges and those requiring no further assessment. If the MS4 outfall requires no further assessment, the inventory must include the rationale for the determination of no further action required. This inventory shall be recorded in a database with outfall locations linked to the Storm Drains, Channels and Outfalls map required in Part VII.A of this MRP. GIS is preferred.
2. As a component of the inventory, each Permittee shall record existing data from past outfall screening and monitoring and initiate data collection efforts as warranted. The data shall include the physical attributes of those MS4 outfalls or alternative monitoring locations determined to have significant non-storm water discharges. Attributes to be obtained shall, at a minimum, include:
 - a. Date and time of last visual observation or inspection
 - b. Outfall alpha-numeric identifier
 - c. Description of outfall structure including size (e.g., diameter and shape)
 - d. Description of receiving water at the point of discharge (e.g., natural, soft-bottom with armored sides, trapezoidal, concrete channel)
 - e. Latitude/longitude coordinates
 - f. Nearest street address
 - g. Parking, access, and safety considerations
 - h. Photographs of outfall condition
 - i. Photographs of significant non-storm water discharge (or indicators of discharge) unless safety considerations preclude obtaining photographs
 - j. Estimation of discharge rate
 - k. All diversions either upstream or downstream of the outfall

- k. Observations regarding discharge characteristics such as turbidity, odor, color, presence of debris, floatables, or characteristics that could aid in pollutant source identification.
4. Each year, the Storm Drains, Channels and Outfalls map and associated outfall database required in Part VII.A of the MRP shall be updated to incorporate the most recent characterization data for outfalls with significant non-storm water discharge.

E. Prioritized Source Identification

1. Outfalls within the inventory shall be prioritized in the following order (a= highest priority, etc.) for source identification activities:
 - a. Outfalls discharging directly to receiving waters with WQBELs or receiving water limitations in the TMDL provisions for which final compliance deadlines have passed.
 - b. All major outfalls and other outfalls that discharge to a receiving water subject to a TMDL shall be prioritized according to TMDL compliance schedules.
 - c. Outfalls for which monitoring data exist and indicate recurring exceedances of one or more of the Action Levels identified in Attachment G of this Order.
 - d. All other major outfalls identified to have significant non-storm water discharges.
2. Each Permittee shall develop a source identification schedule based on the prioritized list of outfalls exhibiting significant non-storm water discharges. The schedule shall ensure that source investigations are conducted for no less than 25% of the outfalls in the inventory within three years of the effective date of this Order and 100% of the outfalls in the inventory within 5 years of the effective date of this Order.
3. Alternatively, a Permittee may request an alternative prioritization and schedule from the Regional Water Board if it can demonstrate an equivalent level of source investigation and abatement through an approved IMP or CIMP.

F. Identify Source(s) of Significant Non-Storm Water Discharge

1. If the source is determined to be an illicit discharge, each Permittee shall implement procedures to eliminate the discharge consistent with IC/ID requirements and document the actions in the next annual report.
2. If the source is determined to be an NPDES permitted discharge, a discharge subject to a Record of Decision approved by USEPA pursuant to section 121 of CERCLA, a conditionally exempt essential non-storm water discharge, or entirely comprised of natural flows as defined at Part III.A.d of this Order, document the source and report to the Regional Water Board in the next annual report.

3. If the source is either unknown or a conditionally exempt, but non-essential, non-storm water discharge, each Permittee shall conduct monitoring required in Part IX.G of this MRP.
4. If the discharge is comprised of more than one source, the Permittee shall attempt to quantify the relative contribution from the individual or group of similar sources (e.g., irrigation overspray) and classify the contributions as authorized, conditionally exempt essential, natural, illicit discharge, conditionally exempt non-essential, or unknown.
5. If the source of non-storm water discharge is unknown, the Permittee shall describe the efforts undertaken to identify the source. Methods for identifying the source of non-storm water discharge may include inspection and/or surveillance, discharge monitoring and data loggers, video or physical inspection, monitoring for indicator parameters (e.g., surfactants, chlorine, Pyrethroids), or other means.
6. If a source originates within an upstream jurisdiction, the Permittee shall inform in writing both the upstream 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.
7. MS4 outfalls requiring no further action shall be maintained in the Storm Drains, Channels and Outfalls map and associated database (see Part VII.A, of this MRP).

G. Monitor Non-Storm Water Discharges Exceeding Criteria

1. Within 90 days after completing the source identification or after the Executive Officer of the Regional Water Board approves the IMP or CIMP, whichever is later, each Permittee shall monitor outfalls that have been determined to convey significant discharges comprised of either unknown or conditionally exempt non-storm water discharges, or continuing discharges attributed to illicit discharges. The following parameters shall be monitored:
 - a. Flow,
 - b. Pollutants assigned a WQBEL or receiving water limitation to implement TMDL Provisions for the respective receiving water, as identified in Attachments L - R of this Order,
 - c. Other pollutants identified on the CWA section 303(d) List for the receiving water or downstream receiving waters,
 - d. 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.

- e. 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.
2. For outfalls subject to a dry weather TMDL, monitoring frequency shall be per the approved TMDL Monitoring Plan or as otherwise specified in the TMDL, or as specified in an IMP or CIMP approved by the Executive Officer of the Regional Water Board.
3. For outfalls not subject to dry weather TMDLs, monitoring frequency shall be four times during the first year following source identification, distributed approximately quarterly, during dry weather conditions or as specified in an IMP or CIMP approved by the Executive Officer of the Regional Water Board.
4. Except as required by an applicable TMDL Monitoring Plan, IMP, or CIMP approved by the Executive Officer of the Regional Water Board, monitoring frequency may be reduced to twice per year, beginning in the second year of monitoring, if pollutant concentrations measured during the first year do not exceed WQBELs, non-storm water Action Levels or water quality standards for other pollutants identified on the CWA section 303(d) List for the receiving water or downstream receiving waters.
5. Following one year of monitoring, the Permittee may submit a written request to the Executive Officer of the Regional Water Board to reduce or eliminate monitoring of specified pollutants, based on an evaluation of the monitoring data.

H. Sampling Methods

1. For the purposes of this monitoring program, non-storm water discharges shall be monitored during days when precipitation is < 0.1 inch and those days not less than 3 days after a rain day unless an alternative criterion is provided for in an approved IMP or CIMP. A rain day is defined as those with ≥ 0.1 inch of rain.
2. Flow-weighted composite samples shall be taken for a non-storm water discharge using a continuous sampler, or it shall be taken as a combination of a minimum of 3 sample aliquots, taken in each hour during a 24-hour period, unless the Regional Water Board Executive Officer approves an alternate protocol.

X. NEW DEVELOPMENT/RE-DEVELOPMENT EFFECTIVENESS TRACKING

- A. Each Permittee shall maintain a database providing the following information for each new development/re-development subject to the requirements of Part VI.D.6 of this Order that is approved by the Permittee on or after the effective date of this Order:
 1. Name of the Project and Developer,
 2. Project location and map (preferably linked to the GIS storm drain map),
 3. Date of Certificate of Occupancy,

4. 85th percentile storm event for the project design (inches per 24 hours),
5. 95th percentile storm event for projects draining to natural water bodies (inches per 24 hours),
6. Other design criteria required to meet hydromodification requirements for drainages to natural water bodies,
7. Project design storm (inches per 24-hours),
8. Project design storm volume (gallons or MGD),
9. Percent of design storm volume to be retained on site,
10. Design volume for water quality mitigation treatment BMPs, if any:
11. If flow through, water quality treatment BMPs are approved, provide the one-year, one-hour storm intensity as depicted on the most recently issued isohyetal map published by the Los Angeles County Hydrologist,
12. Percent of design storm volume to be infiltrated at an off-site mitigation or groundwater replenishment project site,
13. Percent of design storm volume to be retained or treated with biofiltration at an off-site retrofit project,
14. Location and maps (preferably linked to the GIS storm drain map required in Part VII.A of this MRP) of off-site mitigation, groundwater replenishment, or retrofit sites,
15. Documentation of issuance of requirements to the developer.

XI. REGIONAL STUDIES

A. Southern California Stormwater Monitoring Coalition Watershed Monitoring Program

1. The Southern California Stormwater Monitoring Coalition (SMC) Regional Watershed Monitoring Program was initiated in 2008. This program is conducted in collaboration with the Southern California Coastal Water Research Project (SCCWRP), State Water Board's Surface Water Ambient Monitoring Program, three Southern California Regional Water Quality Control Boards (Los Angeles, Santa Ana, and San Diego) and several county storm water agencies (Los Angeles, Ventura, Orange, Riverside, San Bernardino and San Diego). SCCWRP acts as the facilitator to organize the program and completes data analysis and report preparation.
2. The SMC monitoring program seeks to coordinate and leverage existing monitoring efforts to produce regional estimates of condition, improve data comparability and quality assurance, and maximize data availability, while conserving monitoring expenditures. The primary goal of this program is to implement an ongoing, large-scale regional monitoring program for southern California's coastal streams and rivers. The monitoring program addresses three main questions:

- a. What is the condition of streams in southern California?
 - b. What are the stressors that affect stream condition?; and
 - c. Are conditions getting better or worse?
3. A comprehensive program was designed by the SMC, in which each participating group assesses its local watersheds and then contributes their portion to the overall regional assessment. The program utilizes the following indicators: benthic macroinvertebrate community bioassessment, benthic algal community bioassessment (soft algae and diatoms), riparian wetland evaluation (using California Rapid Assessment Methodology), water chemistry (nutrients and certain pesticides), water toxicity (using *Ceriodaphnia*), and physical habitat. Sampling occurs in 15 coastal southern California watersheds from Ventura to the US-Mexico border, and sites are sampled randomly across three land use types (open space, urban and agriculture). Six sites are sampled per year per watershed, resulting in monitoring of 90 sites per year and 450 sites overall over a five-year period (reaching the statistically desirable target of 30 data points per watershed).
 4. To continue to implement the SMC design, each Permittee shall be responsible for supporting the monitoring described at the sites within the watershed management area(s) that overlap with the Permittee's jurisdictional area. These include six random sites annually in the Santa Monica Bay Watershed Management area and at three random sites annually in the Santa Clara River Watershed (the other three sites are funded by the Ventura County MS4 Permittees). Permittees shall continue to contribute monitoring resources to the San Gabriel River and Los Angeles River Regional Watershed Monitoring Programs (overall, both of these programs fund six sites per year to contribute to the SMC Program).

XII. AQUATIC TOXICITY MONITORING METHODS

- 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 Permittee(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.