

# City of Turlock

## Water Resources Division

### NPDES Phase II Storm Water Management Plan



2003

NPDES Phase II Storm Water Management Plan  
 City of Turlock

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 1.0 INTRODUCTION

This document has been prepared by the City of Turlock in compliance with the National Pollution Discharge Elimination System’s, *Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s)*, better known as Phase II Storm Water Requirements.

The Storm Water Phase II Rule is applicable to all operators of small MS4s located within an Urbanized Area<sup>1</sup> (UA) in the United States that serve a population of less than 100,000 people. The National Pollution Discharge Elimination System (NPDES) has designated the California State Water Resources Control Board (SWRCB) as the permitting authority for Small MS4s in the state of California.

Included in this Storm Water Management Plan is, storm water management for the City of Turlock, Best Management Practices (BMPs) for the six minimum control measures as outlined by the NPDES, USEPAs requirements and guidelines for the minimum measures, the efforts the City of Turlock currently takes to comply and the action the City will take to further comply with all the requirements of a particular measure.

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<sup>1</sup> UAs are defined by the US Bureau of Census

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## 2.0 REGULATORY BACKGROUND

In 1948, the Federal Water Pollution Control Act (WPCA) was enacted. The act broadened the Federal government's authority in water pollution control, however it did so in a somewhat ineffective method. The WPCA utilized ambient water quality standards to specify acceptable levels of pollution in a given body of water in lieu of restricting effluent discharges from point sources. The act was further hindered by vague federal and state responsibilities for promulgating the water standards and cumbersome enforcement methods.

In 1972, amendments made to the WPCA, referred to as the Clean Water Act (CWA), changed the focus from restricting the amount of pollutants in a given body of water to regulating effluent limitations and the amount of pollutants allowably discharged from particular point sources.

Additional measures employed by the CWA include:

- The requirement of states and tribes to survey their waters and determine their appropriate uses
- Increased accountability and repercussions for point-source discharges of pollution and
- Provision for different funding options for communities in achieving the clean-water goals

Also, in 1972, the National Pollution Discharge Elimination System (NPDES) was introduced by the CWA as the fundamental agency in charge of regulating discharges of pollutants into waters of the United States. And for the first time all direct dischargers were required to obtain a NPDES permit.

In 1987, the CWA was amended once again, this time establishing requirements for storm water discharges under the NPDES program. As a result, in 1990, the United States Environmental Protection Agency (USEPA) promulgated regulations for permitting storm water discharges from municipal separate storm sewer systems (MS4s) serving a population of 100,000 or more people as well as storm discharges created from industrial activity.

In 1999, the NPDES Phase II rule was announced. The Phase II rule addressed small MS4s, which are defined as communities serving less than 100,000 people in urbanized areas. In the state of California, the EPA has designated the State Water Resources Control Board (SWRCB) as the permitting authority. The City of Turlock must apply for permit coverage from the

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California SWRCB by March 10, 2003. The major goals of the municipal storm water permit are as follow:

- To attain and protect the beneficial uses of water bodies in the state and ultimately the U.S.
- To reduce pollutants in storm water to the maximum extent practicable and
- To evaluate compliance with the objectives and requirements contained in the permit

## 2.1 STORM WATER MANAGEMENT IN TURLOCK

The storm water system in Turlock is owned and operated solely by the City of Turlock. The storm water system is comprised of 28 active storm lift stations, 66 storm ponds (which total 140 acres), 1,300 storm water catch basins and a total of 102 miles of storm drain pipe.

As soon as storm water hits the ground in Turlock, our storm system is busy managing it in one of many ways. The water that lands on pervious ground most commonly filters through the earth until completely saturated. Once the ground is completely saturated, excess storm water enters the storm system in the form of runoff.

Water that lands on impervious surface immediately flows to a storm drain via a residential gutter or a valley gutter, it is then transferred through plastic, clay, or concrete storm pipe to a storm basin. From there, the water either percolates down to recharge the groundwater or is pumped to a larger storm basin, or a canal. If the excess water is pumped to a larger storm pond, the water then percolates down recharging the groundwater. If, however, excess storm water is pumped to a canal, the water flows through that canal and ultimately to the San Joaquin River. Occasionally, during agricultural irrigation seasons it is possible that some storm water is used from the canal to irrigate farmland.

The streets in Turlock are also designed as part of the City's storm system. During larger storm events, the streets in Turlock serve to retain excess water for a number of hours to allow our storm drains to catch up with the higher water demand being placed on them.

## 2.2 STORM SYSTEM FUNDING MECHANISM

The City's storm system is maintained financially through the Water Quality Control fund, which is a fund set up for the purpose of the maintenance and operations of the WQC Treatment

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Facility/Sanitary Sewer and Storm Systems. Regular user fees, metered fees, monitoring station fees, reserve capacity fees, connection charges and engineering charges are all deposited into the WQC Fund. Expenses are then charged to the appropriate department.

The City also has a Master Storm Drainage Construction fund that was adopted in the late 1980's. This fund is separate from the WQC fund, because rather than go toward maintenance or capital improvement projects this fund is solely for storm system expansion. Since most of the City's new storm lines are built in the new developing areas, development fees support this fund.

### 3.0 COMPONENTS OF THE NPDES PHASE II PROGRAM

The City of Turlock as owner/operator of Turlock's MS4 will be required by permit to reduce the discharge of pollutants to waters of the state and the United States to the maximum extent practicable (MEP) to protect water quality. At a minimum, the permit will require a Storm Water Management Plan (SWMP) that addresses the following issues:

- Specify Best Management Practices (BMPs) for six minimum control measures and implement them to the maximum extent practicable
- Identify measurable goals for these control measures
- Develop an implementation schedule for these control measures and
- Define the responsible entity to implement these control measures

The six minimum control measures are as follows:

- Public Education and Outreach (Section 5)
- Public Involvement and Participation (Section 6)
- Illicit Discharge Detection and Elimination (Section 7)
- Construction Site Storm Water Runoff Control (Section 8)
- Post-construction Storm Water Management and (Section 9)
- Pollution Prevention and Good Housekeeping (Section 10)

The following sections will include a description of the six minimum control measures, USEPA guidance for complying with each control measure, the management practices the City of Turlock currently undertakes to meet these measures and an action plan to fully comply with the above six minimum control measures.

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## 4.0 PUBLIC EDUCATION AND OUTREACH (MINIMUM MEASURE #1)

The key to implementing a successful storm water management plan is to get the community aware and involved. The more informed and knowledgeable the community is, the greater support and compliance our program will realize. In order to do this, efforts need to be made to address not only interest and shareholder groups, but also the community as a whole.

### 4.1 USEPA REQUIREMENTS FOR THIS MINIMUM MEASURE

To satisfy this minimum control measure, the City of Turlock must implement a public education program regarding the importance of proper storm water management. At a minimum, the City must achieve the following:

- Implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities to communicate the impacts of storm water discharges to receiving water bodies. Additionally, this program must address steps that can be taken to reduce storm water pollution and
- Determine appropriate BMPs and measurable goals toward developing a public education and outreach program

### 4.2 USEPA GUIDELINES

The USEPA has determined that there are three main areas of considerable importance for successful implementation of a public education and outreach program. They are:

#### 1. Forming Partnerships

The City of Turlock is encouraged to form alliances with other governmental agencies to fulfill this minimum measure. Not only can it be more cost-effective to the independent agency, but perhaps one effective larger campaign could create greater effect than several independent smaller ones. Also, other agencies may have educational storm water resources that could assist the City in their efforts to reach the community effectively and efficiently.

#### 2. Using Educational Materials and Strategies

There is a wide range of storm water material available from many different sources for the small MS4, and the operator should take advantage of brochures, fact sheets, pamphlets, flyers, and other materials designed by their state, tribe, EPA region and other interest groups whenever possible in lieu of designing their own.

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### 3. Reaching Diverse Audiences

The public education program should be age appropriate as well as ethnically and socially targeted to all who reside in our community. Materials will take into consideration socio-economic differences in the community. Efforts will be made to provide materials that everyone will be able to identify with.

## 4.3 CURRENT EFFORTS

### T.V. Commercials

The City of Turlock has developed and aired nine different public service commercials in our community. One of these ads deals specifically with storm water. The ad reminds the public that once water or pollution enters the storm system there is no filter before it then enters the San Joaquin River. It urges the community to refrain from illegal storm-drain dumping, and provides a phone number to report any illegal dumping they may witness. Four of the City's T.V. ads are specific to water conservation and remind the public of these valuable tips:

- Use automatic shut-off nozzle on all hoses
- Don't water sidewalks and driveways
- Don't let gutters fill and flood and
- The more water you conserve, the more energy you conserve at the same time

Additionally, the City of Turlock has three commercials that promote recycling through a program named "For Pet's Sake", which promotes recycling and community involvement in one message.

### "No Dumping" Stamps On City Storm Drains

The City of Turlock has installed "No Dumping, Leads to Waterways" stamps on 100% of its storm drains / catch basins to help identify storm drains to the public. This effort, when combined with other advertising efforts, reminds the public it is detrimental to dump pollutants into our storm drains.

From time to time these "No Dumping" Stamps are vandalized and removed. City crews will be on the lookout for these drains and every effort will be made to ensure that 100% of our storm drains remain stamped.

### City Newsletters



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The City of Turlock advertises in the fall/winter months the leaf pick up schedule in the City's newsletter, and includes the importance of keeping the storm drains free from leaves and yard debris.

### 4.4 ACTION PLAN

#### Storm Water Educational Material

The City of Turlock will either create or purchase (or both) storm water specific material in the form of brochures, pamphlets and flyers to distribute and inform the community not only about our City's storm water system, but also of our endeavors to keep it clean. This will be done throughout the community and will include some information in Spanish.

Large commercial compounds with extensive impervious parking lots will be targeted and receive educational material. Other businesses whose clientele are considered to be good candidates to receive storm water educational materials will also be targeted, specifically gas stations and auto-part stores.

Materials will be created or purchased during year one. Businesses fitting the above descriptions will also be identified during the first year of coverage. Distribution will occur in year 2 of the permit term.

#### Storm Water Presentations

The City of Turlock will either create or purchase PowerPoint presentations relating to storm water and the important role the community plays in keeping it clean. These will be presented to both service clubs and neighborhood associations throughout the City. Three to Four groups will be targeted per year.

#### World Wide Web

The City of Turlock will create a link from its web site specific to water conservation. This link will also contain information regarding the City's storm system. This new link will make it easy for the public to access information regarding our storm water pollution prevention efforts, as well as provide water saving and pollution prevention tips.

#### Field Trips

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The City of Turlock currently conducts tours of the waste treatment facility for schools and other interested groups in the community. The goal for the City of Turlock is to conduct 12 of these tours per year. In the future, these tours will include information about how our City’s storm system operates. Additionally, each person who tours our facility will receive handouts on both water conservation and pollution prevention tips.

TABLE 1 PUBLIC EDUCATION AND OUTREACH

	COMPLIANCE TASKS	SCHEDULE	TARGET/GOAL	RESPONSIBLE POSITION / DEPARTMENT
1.	T.V. commercials	Ongoing	1,860 Spots/Year	Water Resource Manager
2.	"No Dumping" catch basin stamps	Ongoing	100% Target	Water Resource Manager
3.	City Newsletters	Ongoing	Two Annually	Water Resource Manager
4.	Storm water educational material	Year 1 / Distributed Year 2	Five Annually	Water Resource Manager
5.	Storm water presentations	Year 2	Three to Four Groups per Year	Water Resource Manager
6.	World Wide Web	Year 1	Year 1	Water Resource Manager
7.	Field trips/storm system handouts	Year 1	10 – 12 per Year	Water Resource Manager

5.0 PUBLIC INVOLVEMENT AND PARTICIPATION (MINIMUM MEASURE #2)

The public can play a crucial role in the success of our City’s storm water management plan by becoming personally involved in it. The more the community is allowed to give their input and assistance to the City’s storm program, the more public support and less criticism our storm program will take. The public can also be an invaluable means by which to help cut costs and create ideas, since volunteers are free and often innovative.

5.1 USEPA REQUIREMENTS FOR THIS MINIMUM MEASURE

At a minimum, permittees will be required to comply with applicable public notice requirements and determine appropriate BMPs and measurable goals toward encouraging public participation and involvement.

5.2 USEPA GUIDELINES

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Operators of regulated small MS4s should include the public in developing, implementing and reviewing their storm water management programs. The public participation process should make every effort to reach out and engage all economic and ethnic groups within the community.

### 5.3 CURRENT EFFORTS

#### Take Pride In Turlock

The Take Pride In Turlock program is a citywide free disposal program. Take Pride In Turlock occurs twice a year and encourages citizens to clean up their property and their community. Cleaning up refuse that would possibly end up in a storm system or other city water body is a main goal of this program. Take Pride In Turlock occurs every spring and fall and is grant-funded.

#### Hazardous Household Waste Disposal

Six days a year Stanislaus County has a mobile Hazardous Household Waste Disposal unit in Turlock which accepts all hazardous household waste. In addition to these six days, Stanislaus County has a facility open every weekend accepting hazardous disposal from all residents in Stanislaus County and its nine cities. This collection is not only free of charge, but also provides an alternative to illegal dumping of hazardous waste.

#### For Pet's Sake

For Pet's Sake is a citywide program that encourages recycling. Anytime a Turlock resident takes anything to be recycled at the local recycle center and requests the money go to "For Pet's Sake," the recycle center gives all the money from that transaction to Turlock Animal Services. This program is effective in helping to prevent those items that may be recycled from ending up in our storm system and local waterways. Turlock Animal Shelter has benefited \$4,258.00 since the programs inception.

#### Turlock Arbor Day Tree Planting Event

Every year, the City of Turlock holds an Arbor Day tree-planting event that combines City crews and City school children in a day of planting trees. Not only do the children learn hands-on of the important roles trees play in our community, but also new trees help anchor soil thus minimizing soil erosion. Other benefits are: New trees help minimize runoff volume by capturing rain in the tree canopy; and the new trees help keep runoff temperatures cool. In 2002,

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City crews along with dozens of school children planted 101 new trees in a variety of species in our community.

5.4 ACTION PLAN

Citizen/Community Watch Groups

The City of Turlock will encourage citizens to be on the lookout for individuals dumping anything into the storm drains in their neighborhoods. Turlock will target local residents and especially neighborhood associations to become diligent in reporting any illegal dumping in any storm drain. The City will provide a list of unacceptable or illegal storm drain material and, of course, provide phone numbers to report offenders.

At the present time, Turlock has two active Neighborhood Associations. Both will be contacted in year one. All new associations will be targeted as they are developed within the City of Turlock.

TABLE 2 PUBLIC INVOLVEMENT AND PARTICIPATION

	COMPLIANCE TASKS	SCHEDULE	TARGET/GOAL	RESPONSIBLE POSITION / DEPARTMENT
1.	Take Pride In Turlock	Twice Annually	Spring & Fall	Water Resource Manager
2.	Hazardous Household Waste	Ongoing	Six Days Annually	Stanislaus County Program
3.	For Pet's Sake	Ongoing	Monthly Bill	Turlock Animal Resources and Control
4.	Arbor Day Tree Planting Event	Annually	Last Fri. Every April	Public Facilities Maintenance Manager
5.	Community Watch Groups	Year 1	Two Year One	Water Resource Manager

6.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION (MINIMUM MEASURE #3)

To comply with EPA’s requirements for the Storm Water Management Plan (SWMP) the City of Turlock must have a program that both detects and prohibits illicit discharges to the MS4. Federal regulations define an illicit discharge as “...any discharge to an MS4 that is not composed entirely of storm water...” with some exceptions. Exceptions include discharges from NPDES–permitted industrial sources and discharges from fire–fighting activities. Illicit

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discharges are defined as “illicit” because MS4s are not designed to accept, process or discharge such non-storm water wastes.

### 6.1 USEPA REQUIREMENTS FOR THIS MINIMUM MEASURE

The Storm Water Phase II rule requires the following to comply with this minimum measure:

1. Develop a storm sewer map illustrating the location of all storm sewer outfalls along with the names and locations of all water bodies that receive these outfalls.
2. Prohibit the discharge of non-storm water discharges into the public storm sewer system through the implementation of an ordinance or other regulatory mechanism and appropriate enforcement procedures and actions.
3. Develop a plan to detect and address non-storm water discharges, including illegal dumping.
4. Educate public employees, businesses, and the general public regarding the impacts associated with illegal discharges and the improper disposal of waste.
5. Determine appropriate BMPs and measurable goals for this minimum control measure.

### 6.2 USEPA GUIDELINES

The EPA objective of the illicit discharge detection and elimination minimum control measure is to have small MS4 operators gain a thorough awareness of their systems. This awareness allows them to determine the types and sources of illicit discharges entering their system. It will also help the operator establish the legal, technical and educational means necessary to eliminate these discharges.

### 6.3 CURRENT EFFORTS

#### Storm System Map

The City of Turlock has a detailed storm system map that includes all catch basins, storm drain manholes, operational and abandoned lift stations, as well as all storm ponds throughout the City. The map also includes location of major storm outfalls leading to the San Joaquin River.

#### Storm System Inspections

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Currently the City of Turlock annually inspects all of its industrial customers to check for such things as:

- Compliance with City treatment standards,
- Housekeeping, and
- Other matters relating to City discharge requirements.

Beginning in the first year of permit coverage City staff will also inspect for illegal / illicit discharges into the storm system. These annual inspections will be logged and results will be documented. Should an illegal / illicit connection be found, it too would be documented as well as the actions taken to correct the illegal / illicit connection.

In addition to these annual inspections, the City also inspects, on average, 5 – 10 minor industrial / commercial businesses per year at random. Additional inspections are done if a complaint is made for a particular business in town.

Front office staff will keep a log of any illegal / illicit discharge complaint calls received.

### Hazardous Household Waste Disposal

The Stanislaus County Hazardous Household Waste program is effective in minimizing illicit discharges by means of providing a no charge alternative to dumping hazardous waste into the City's storm system.

## 6.4 ACTION PLAN

### TMC

The Turlock Municipal Code will prohibit the discharge of non-storm water discharges into the public storm system and will include penalties for violators. The Director of Turlock Municipal Services will be responsible for enforcement.

### Local Business Education

The City of Turlock will develop brochures targeting local residents and business owners, educating them on the detrimental effects of illicit discharges. The brochure will include how to detect and eliminate illicit discharges, and will be directed to local auto repair shops. City staff will be available for help and guidance during all regular business hours.

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Illicit Discharge Hotline

Turlock will publicize through brochures and the City Newsletter a phone number to call and report any illicit discharges witnessed. Qualified Turlock Water Resources staff will receive the calls in a

professional and confidential manner. All calls will be logged and reports will be inspected within a 24-hour period during regular business hours.

TABLE 3 ILLICIT DISCHARGE DETECTION AND ELIMINATION

	COMPLIANCE TASKS	SCHEDULE	TARGET/GOAL	RESPONSIBLE POSITON/ DEPARTMENT
1.	Turlock Municipal Code	Year 4	Year 4	Water Resource Manager
2.	Storm System Map	Completed	To Be Kept Current	Engineering
3.	Storm System Inspections	Ongoing	All Industrial / 5-10 Light Ind./Commercial	Environmental Compliance Inspector
4.	Hazardous Household Waste	Ongoing	6 Days/Annually	Stanislaus County Program
5.	Local Business Education	Brochure Developed Year 1/ Distributed Year 2	5 – 10 Businesses per Year	Water Resource Manager
7.	Illicit Discharge Hotline	Year 1	Year 1	Water Resource Manager

7.0 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Construction site runoff has proven to be a major contributor of storm water pollution throughout the country. Harmful pollutants potentially dispensed from construction sites include sediment, solid and sanitary wastes, phosphorous fertilizer, nitrogen fertilizer, pesticides, oil and grease, concrete truck washout, construction chemicals and construction debris. Of these pollutants, sediment typically causes the most damage. The EPA has found that sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands, and 1,000 times greater than those of forestlands. Large amounts of sediment deposited into our nations waters can rapidly fill rivers and lakes, requiring dredging and destroying aquatic habitats.

Because of the amounts and types of pollutants found in construction site runoff, the EPA has declared Construction Site Storm Water Runoff Control as minimum measure #4. The EPA is

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requiring small MS4s to develop and implement BMPs to reduce this harmful runoff for all construction projects disrupting between one to five acres of land.

### 7.1 USEPA REQUIREMENTS FOR THIS MINIMUM MEASURE

The Phase II final rule for this minimum measure requires five components and must be enforced for all land disturbance of greater than or equal to one acre of land. The five requirements are:

1. Establish an ordinance or other regulatory mechanism requiring the proper implementation of sediment and erosion controls, and implement controls for other wastes on all construction sites with a land disturbance greater than or equal to one acre.
2. Develop procedures for site plan review of construction plans that consider potential water quality impacts.
3. Develop procedures for site inspection and enforcement control measures.
4. Establish sanctions to ensure compliance with local regulatory requirements (provided for in ordinance or other regulatory mechanism.)
5. Develop procedures for the receipt and consideration of information submitted by the public.

### 7.2 CURRENT EFFORTS

#### Plan Review and Inspection

Existing procedures require site grading and erosion control plan review and approval as well as verification of NOI application prior to the initiation of construction activities which disturb 50 cubic yards of dirt or more. The City also has staff who regularly inspect construction sites and enforce the site grading and erosion control plan requirements.

At this time, 100% of residential construction, which disturbs at least 50 cubic yards of dirt, is inspected bi-weekly from the beginning of construction until the end. The City inspectors utilize a checklist system whereby any violations are noted and appropriate action taken. The checklists also help the City track on-going jobs and are kept on file for one year.

Within the first permit year City inspectors will also be inspecting, bi-weekly, 100% of all new commercial developments within the City.

#### Turlock City Ordinance



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Turlock City ordinance NO. 981-CS, is the legal mechanism which gives directives for sediment and erosion controls for construction sites disturbing one or more acres of land. The ordinance includes various sanctions to ensure compliancy. Sanctions include fines for every day in non-compliance, forfeit of security deposit and in extreme cases could include arrest and prosecution.

### 7.3 CURRENT SEDIMENT AND EROSION BMPs

#### Curb Inlet Sediment Barrier

Gravel filled bags are required to be arranged around the catch basin to filter sediment, debris and pollution runoff from all construction sites that disturb more than one acre of land.

#### Drop Inlet Sediment Barrier

Drop inlet sediment barriers are to be used for small, nearly level drainage areas. Bags of gravel must be embedded 4” into the soil and either must have their corners offsetting or placed with their ends tightly abutting. Gravel backfill will be used to prevent erosion or flow around the bags. It is necessary that the top of the structure (ponding height) must be well below the ground elevation downslope to prevent runoff from bypassing the inlet.

#### Silt Fence

Silt fencing shall be placed on slope contours to maximize ponding efficiency. Silt fences shall be inspected and repaired after each storm event and sediment must be removed when necessary. All sediment removed must be deposited in an area that will not contribute sediment off-site.

#### Straw Waddling

Straw waddling is required on construction sites disturbing one or more acres of land. The installation requires the placement and secure staking of straw roll in a trench that is 3”-5” (75 – 125mm) deep. Runoff must not be allowed to travel under or around the straw roll.

#### Stabilized Construction Entrance/Equipment Wash down Area

Both stabilized construction entrances and equipment wash down areas are required on construction sites disturbing an acre or more. The stabilized entrance/wash down areas must be located near the entrance of a construction site and consist of a raised gravel pad. Runoff from

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the raised pad must be channelized (using sandbags or hay bales,) and a localized depression at least 1' deep must be provided for use as a temporary drainage basin.

When necessary, equipment wheels shall be cleaned prior to entering a public right-of-way and shall be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.

### Dust Control

When a grading permit is granted in the City of Turlock, a \$300.00/per acre security deposit is collected for the purpose of construction-site dust control. When the construction is completed, the money is returned assuming there was not a dust problem. If, on the other hand, the City witnesses or receives complaints from the community that dust from a specific construction site is excessive, the security money is forfeited and the city hires a third party to control the dust.

### BMP Handouts

Packets of all the Erosion and Sediment BMPs (including graphic examples) are currently handed out to every person who applies for a grading permit that disturbs 50 cubic yards of dirt or more.

## 7.4 ACTION PLAN

### Staff Training

Because some of the above BMPs are newly adopted, 100% of Turlock's inspector staff will be trained to ensure they are familiar with all the construction site storm water runoff management practices. Additional training will take place when a new BMP is adopted by the City, when additional inspectors are hired, and/or as a yearly review.

### Outreach to Construction Professionals

Once every other year the City of Turlock will invite a representative from the California Regional Water Quality Control Board to come to Turlock and conduct an Outreach to Construction Professionals. In this outreach, all developers, inspectors, building inspectors and any other interested parties will be invited to learn what specifically the State of California requires of their storm water discharge.

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The City of Turlock will also use this opportunity to inform the interested parties of our specific construction storm water BMPs, as well as answer any questions relating to those BMPs.

TABLE 4 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

	COMPLIANCE TASKS	SCHEDULE	TARGET/GOAL	RESPONSIBLE DEPARTMENT
1.	Plan Review and Inspection	Ongoing	100% of Residential Construction	Engineering
2.	Turlock City Ordinance	Ongoing	Ongoing	Engineering
3.	Curb Inlet Sediment Barrier	Ongoing	Upon Inspection	Engineering
4.	Drop Inlet Sediment Barrier	Ongoing	Upon Inspection	Engineering
5.	Silt Fencing	Ongoing	Upon Inspection	Engineering
6.	Straw Waddling	Ongoing	Upon Inspection	Engineering
7.	Stabilized Ent. /Wash Down Area	Ongoing	Upon Inspection	Engineering
8.	Dust Control	Ongoing	Upon Inspection/ Complaint	Engineering
9.	Staff Training	Year 1	100% of Staff	Engineering
10.	BMP Handouts	Ongoing	100% of Those Who Pull a Permit	Engineering
11.	Outreach to Construction Community	Every other year/ beginning year 1	Local builders/developers/ City staff	Engineering

8.0 POST-CONSTRUCTION STORM WATER MANAGEMENT

Post-Construction Storm Water Management is a minimum measure for two main reasons. First, EPA studies indicate storm water runoff from new development generally increases the type and amount of pollution introduced into the small MS4. Second, wherever new development is established, impervious area increases thus generating a higher volume of storm water the MS4 has to manage.

8.1 USEPA REQUIREMENTS

USEPA requirements for this minimum measure are as follows:

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- Develop and implement strategies which include a combination of structural and/or non-structural BMPs
- Establish an ordinance or other regulatory mechanism requiring the implementation of post-construction runoff controls to the extent allowable under State, Tribal or local law
- Insure adequate long-term operation and maintenance of controls and
- Determine the appropriate BMPs and measurable goals for this minimum control measure

### 8.2 USEPA GUIDELINES

The EPA has determined that both structural and/or non-structural BMPs may be used to satisfy the requirements of the post-construction runoff control minimum measure. Because the requirements of this measure are closely tied to the requirements of the construction site runoff control minimum measure, EPA recommends that small MS4 operators develop and implement these two measures in tandem.

### 8.3 CURRENT EFFORTS

#### Drainage Ponds

Contractors in the City of Turlock have one of two options as to how to manage storm water once their development is complete. The first option, if possible, is to tie into the existing storm line where storm water would be delivered to one of the City's storm ponds. Otherwise the developer has the option to develop a storm pond within the newly developed site to manage the excess storm water created by the additional impervious pavement. If the developer is unable to tie into the City's existing storm system and needs to construct a storm pond, the City provides design standards for the construction. Should the developer wish to deviate from the design standards prepared by the City Engineer's office, they must submit their plans for approval when depth to ground water is less than eight feet and/ or other factors limit the implementation of the standard design.

#### Large Master Storm Drain Basin Detention

In addition to the small and medium size storm basins located throughout the City; a large master storm detention basin manages much of the City's storm water. Roughly 70% of Turlock's

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storm water enters the City's storm system, of that a large majority is pumped to the master storm detention basin. The master storm detention basin allows sediment and other pollution to settle out before the water is pumped to the San Joaquin River.

### Street Sweeping

Once construction is complete, the newly developed area is added to the City's street sweeping schedule. This effort helps to minimize the pollutants that runoff impervious pavement before storm water enters the City's storm system.

### Storm Pond Irrigation

Currently the City of Turlock irrigates one of its storm basins with recycled nuisance water. This practice not only conserves our City's water, but also reduces the amount of water that is discharged from the storm system to the San Joaquin River.

### Golf Course Construction

A study is currently being done by a developer to determine the feasibility of developing a municipal golf course on our master storm drain property. If the developer decides to do this, the entire course and all its landscape could be irrigated with storm and nuisance water. In addition, more water would be allowed to fully percolate in low areas for aesthetic purposes thus less water would be discharged to the San Joaquin River.

## 8.4 ACTION PLAN

### Storm Pond Irrigation

As stated above, the City of Turlock currently irrigates one storm pond with recycled nuisance water. Because of the success of this endeavor, future basins will be irrigated in a similar fashion. Although it is not currently known how many additional facilities will be converted for recycled irrigation in the first permitting period, it is expected that at least one will be completed during that time.

### Storm Pond Landscaping

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 City of Turlock

When new storm basins are developed, the City adds the appropriate landscape such as grass, trees and shrubs. Not only does this create a more park-like atmosphere throughout the City, but also it combats erosion and allows more water to percolate the ground. Currently, five of the City’s larger storm basins contain playground equipment, which brings additional benefits to the City’s neighborhoods. The City plans on developing an additional basin in the next year with playground equipment.

Turlock City Post-Construction Ordinance

Within the first permit term the City will adopt an ordinance for post construction BMPs. The ordinance will contain sanctions or enforcements to ensure compliance of the post-construction BMPs.

TABLE 5 POST-CONSTRUCTION STORM WATER MANAGEMENT

	COMPLIANCE TASKS	SCHEDULE	TARGET/GOAL	RESPONSIBLE DEPARTMENT
1.	Drainage Ponds	Ongoing	One of Two Options for Developers	Engineering
2.	Lg. Master Storm Drain	Ongoing	Remove Sediment/Pollution Before Discharge	Engineering
3.	Street Sweeping	Ongoing	701 Linear Curb Miles / Month	Engineering
4.	Golf Course construction	Study ongoing	Study ongoing	Engineering
5.	Storm Pond Irrigation	Year 5	One pond	Engineering
6.	Storm Pond Landscaping	Average 4 acres per year	4 acres per year	Engineering
7.	Post-Construction Ordinance	Year 4	Year 4	Engineering

9.0 POLLUTION PREVENTION/GOOD HOUSEKEEPING MINIMUM MEASURE #6

The Pollution Prevention/Good Housekeeping Minimum Control Measure is intended to be a managing tool for municipal operations that will contribute to the reduction of storm water

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pollution in the community. Upon examination the small MS4 should make alterations (if necessary) to ensure a reduction in the amount and type of pollution that:

1. Collects on streets, parking lots, open spaces, storage and vehicle maintenance areas and is discharged into local waterways and
2. Results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems.

### 9.1 USEPA REQUIREMENTS

In an effort to reduce pollution, the EPA requires operators of small MS4s to incorporate the following practices into their Storm Water Management Plans:

- Develop and implement an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations into the storm sewer system
- Include employee training on how to incorporate pollution prevention/good housekeeping techniques into their everyday jobs such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances and storm water system maintenance
- Determine the appropriate BMPs and measurable goals for this minimum control measure

### 9.2 USEPA GUIDELINES

The intent of this measure is to ensure that current and future municipal operations are performed in ways that will minimize contamination of storm water discharges. The operator of a small MS4 is encouraged to implement the following into their municipal program for this measure:

- Maintenance activities, maintenance schedules, and long-term inspection procedures for both structural and non-structural controls intended to reduce floatables and other pollution from MS4 discharge
- Develop and implement controls for reducing or eliminating the discharge of pollutants from areas such as roads and parking lots and maintenance and storage yards
- Develop procedures for the proper disposal of waste removed from the MS4 and
- Methods to ensure that new flood management projects assess the impacts on water quality

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## City of Turlock

### 9.3 CURRENT EFFORTS

#### Street Sweeping

The City of Turlock contracts City street sweeping from Turlock Scavenger, Turlock's solid waste management company. The entire City is on a sweep-schedule (except areas with no sidewalks) and 701 linear curb miles of street gets swept on a regular basis. Heavily trafficked areas are swept as much as once a week, while slower residential areas are swept once every three weeks. Turlock Scavenger bills the City of Turlock on a monthly basis for this service.

#### Hazardous Household Waste Disposal

The previously mentioned Hazardous Household Waste Disposal program provides a no-cost alternative to dumping pollution in our storm water system that ultimately leads to our waterways. This program is advertised throughout the City in various ways such as Turlock's newspaper, the City newsletter and Stanislaus County television advertisements.

#### City Leaf Pick-Up

In the fall and winter months, City municipal employees routinely pick up leaves throughout the various neighborhoods within the City. This effort by the municipal staff precedes the street cleaning performed by Turlock Scavenger, and prevents the majority of the leaves from entering the storm system.

### 9.4 ACTION PLAN

#### Municipal Staff Education Program

The City of Turlock will develop an education program for all applicable City employees on storm water pollution prevention as it relates to municipal fleet operation, City parks and open space and new construction. Education programs will be tailored to contain specific information that pertains to the various groups of municipal employees. For instance, fleet maintenance staff will not necessarily need to be educated on storm water BMPs pertaining to City parks. Once developed, all applicable employees will receive the information and possibly be tested on it. In addition, new employees will receive the applicable storm water education material during orientation for their new job. Once received, the storm water education material will be reviewed periodically to refresh or update the employee and emphasize the importance of the applicable BMPs.



# NPDES Phase II Storm Water Management Plan

## City of Turlock

### Department Survey

The City will survey all its municipal facilities in order to determine possible pollutants generated on the facilities.

### Facility Pollution and Prevention Plan

Once the department surveying is complete, staff will create a Municipal Facility Pollution and Prevention Plan for all of our facilities. Once the plan is completed and implemented annual inspections of all facilities will take place to ensure the plan is being followed and to determine its effectiveness.

TABLE 6 POLLUTION PREVENTION / GOOD HOUSEKEEPING

	COMPLIANCE TASKS	SCHEDULE	TARGET/GOAL	RESPONSIBLE POSITION / DEPARTMENT
1.	Street Sweeping	Ongoing	701 linear curb miles per month	Water Resource Manager
2.	Hazardous Household Waste	Ongoing	6 days annually	Stanislaus County Program
3.	City Leaf Pick-Up	Ongoing	All City residences every 3 weeks Nov. – Feb.	Water Resource Manager
4.	Municipal Education Program	Year 2	All applicable staff	Water Resource Manager
5.	Municipal Department Survey	Year 1	Year 1	Water Resource Manager
6.	Facility Pollution and Prevention Program	Year 1	Year 1	Water Resource Manager

### 10.0 REGULATORY REQUIREMENTS

The due date for the City of Turlock’s Storm Water Management application packet is March 10, 2003. Three components make up our General Permit, they are:

1. Notice of Intent (NOI) application
2. Storm Water Management Plan (SWMP)
3. Applicable Fee

The permit is subject to review, and possibly revision by the Regional Water Quality Control Board (RWQCB). Turlock’s General Permit will expire five years from the date of adoption and continues in force and effect until either a new general permit is issued or the RWQCB rescinds this general permit.

# NPDES Phase II Storm Water Management Plan

## City of Turlock

### 11.0 REPORTING PROCESS

The City of Turlock is required to submit an annual report to the appropriate RWQCB by September 15, every year. The first annual report will be due September 15, 2004 and shall summarize the activities performed throughout the reporting period (July 1 through June 30).

The annual reports shall include the following requirements:

1. The status of compliance with permit conditions
2. An assessment of the appropriateness and effectiveness of the chosen BMPs
3. Status of the measurable goals
4. Results of any information and/or data collected (if any) during the reporting period
5. A summary of all storm water activities planned for the next reporting period
6. Any proposed changes to the City's SWMP including justification of why the changes are necessary and
7. Notification of change in the person/persons (if any) implementing and coordinating the SWMP

In order to submit a thorough annual report, the City must continually evaluate program compliance, the effectiveness of the selected BMPs, what progress has been made in achieving the measurable goals and keep thorough and up-to-date records. The annual report will be evaluated by the following criteria:

1. Overall SWMP effectiveness
2. Measurable goal improvements
3. Permittee's coordination and implementation of watershed-based management
4. Partnership opportunities with other storm water programs and
5. Consistency in meeting MEP measures identified in the SWMP and with other regional, statewide and national municipal storm water management programs.

### 12.0 RECORD RETENTION

The City of Turlock must keep all required records of this permit for a minimum of five years: longer if specified by the RWQCB. The City must make all records, including the SWMP available to the public during all regular City business hours. Additionally, the City of Turlock has a duty to provide any requested information or documentation that determines compliance

## NPDES Phase II Storm Water Management Plan City of Turlock

with our general permit to the RWQCB, SWRCB, or the USEPA during all regular business hours.

### 13.0 DUTY TO COMPLY

The City of Turlock assumes all responsibility to comply fully with all components of this SWMP and more specifically, all the minimum measures and appropriate BMPs outlined within this SWMP. The authorized agents of this SWMP for the City of Turlock understand that any permit noncompliance constitutes violation of both the CWA and the Porter-Cologne Water Quality Control Act and could result in appropriate enforcement action and /or removal from General Permit coverage. If removal from the General Permit coverage should be the outcome of any necessary discipline action, the City of Turlock realizes its responsibility to seek coverage under an individual or alternative general permit.

### 14.0 AUTHORIZED AGENTS

The Turlock City Manager will assume ultimate responsibility for the implementation and success of all contents of this SWMP. The City of Turlock Director of Municipal Services will be responsible for the management of this SWMP. And, the City of Turlock Water Resource Manager will be responsible for management of day-to-day operation and maintenance of this SWMP, as well as assume responsibility for the reporting requirements of the Phase II General Permit.

It is the understanding of the City of Turlock that all NOIs, SWMPs, certifications, reports or any information prepared in accordance with this General Permit must be signed by either a principal executive officer, ranking elected official, or duly authorized representative. The three gentlemen listed above shall alone have the authority to sign any documentation relating to the Phase II General Permit.

15.0 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 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Printed Name

NPDES Phase II Storm Water Management Plan  
City of Turlock

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Title

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Signature

Date

16.0 REFERENCES

1. United States Environmental Protection Agency, Office of Water, *Storm Water Phase II Final Rule Fact Sheet Series, Fact Sheets 1.0 through 2.*
2. State Water Resources Control Board (SWRCB) Water Quality Order, National Pollutant Discharge Elimination System (NPDES); Waste Discharge Requirements (WDRS) For Storm Water Discharges From Small Municipal Separate Storm Sewer Systems (General Permit)

# NPDES Phase II Storm Water Management Plan City of Turlock

## **17.0 DEFINITIONS**

BMPs - Best Management Practices

City - City of Turlock

CWA - Clean Water Act

EPA - Environmental Protection Agency

MEP - Maximum Extent Practicable

MS4 - Municipal Separate Storm Sewer System

NOI - Notice of Intent

NPDES - National Pollution Discharge Elimination System

Phase II - Waste Discharge Requirements for Storm Water Discharges From Small Municipal Separate Storm Sewer Systems

RWQCB - Regional Water Quality Control Board

SWMP - Storm Water Management Plan

SWRCB - State Water Resources Control Board

UA - Urbanized Area

USEPA - United States Environmental Protection Agency

WPCA - Water Pollution Control Act

WQC - Water Quality Control