CITY OF COPPERAS COVE
STORMWATER MANAGEMENT PROGRAM

Prepared for:

City of Copperas Cove

Copperas Cove

Prepared by:

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EXECUTIVE SUMMARY

On August 13, 2007, the Texas Commission on Environmental Quality (TCEQ) issued Texas Pollutant Discharge Elimination System (TPDES) General Permit No. TXR040000 for stormwater discharges from Phase II cities in Texas. The City of Copperas Cove obtained permit coverage within 180 days of the permit issuance, developed a five year Stormwater Management Program (SWMP), and summarized all activities in permit required annual report submittals to the TCEQ. The permit expired on August 13, 2012.

On December 13, 2013, the TCEQ reissued TPDES General Permit No. TXR040000 with new requirements and measures for issuing permits based on the 2010 U.S. Census Urbanized Areas (UA). As a previous permit holder, the City is required to obtain permit coverage and will be required to reduce the discharge of pollutants to Waters of the United States to the "maximum extent practicable" in order to protect water quality. At a minimum, the permit will require a SWMP that addresses the following issues:

- Identify and implement Best Management Practices (BMPs) required for all appropriate minimum control measures (MCMs) as deemed by the City's population within the Census defined UA;
- Identify measureable goals for the control measures;
- Develop an implementation schedule for the control measures; and
- Define the responsible entity to implement the control measures.

To obtain permit coverage, the City must develop and submit a SWMP, Notice of Intent, and fee an application fee within 180 days of the issuance of the Small Municipal Separate Storm Sewer System (MS4) General Permit.

This SWMP describes in detail the BMPs the City of Copperas Cove has developed to address each of the required MCMs. An implementation schedule has been included for each measureable goal and will show SWMP implementation over the course of the five-year permitting term. The City has a dedicated stormwater coordinator that is leading this effort and has support from the Public Works Director in coordination with all City departments. The selected BMPs were based on an evaluation of the previous SWMP and permitting term, advancements in communications and new requirements for impaired water bodies and total maximum daily loads (TMDLs). The new techniques are expected to provide improvements and expansions of goals from the prior permit term.

1. OVERVIEW

1.1 CITY BACKGROUND

1.1.1 City Organization

The City of Copperas Cove (City), located on the southern corner of Coryell County and extending into Lampasas and Bell Counties in central Texas. Copperas Cove is the largest city in Coryell County with a population of 32,032 residents according to the 2010 Census Bureau.

Copperas Cove was founded in 1878 as a ranching and farming community. The City was incorporated in 1913 and officially adopted the name of Copperas Cove. With the incorporation of the City, a home rule form of government was adopted. A home rule charter allows the City to make a variety of decisions ranging from the establishment of the type of government, the ability to specify the number of members, the allowance of annexation, the ability to set property tax rates, and the authority to authorize any other function, responsibility, or provision provided they are not specifically prohibited by the state constitution or laws. This gives municipalities like Copperas Cove broad powers of enforcement and the ability to establish ordinances to regulate the various stormwater program elements.

The home rule charter, as amended, provides for a council-manager government, which includes a mayor and seven council members as part of the City Council. Both the mayor and council members can serve for a term of three (3) years and can serve no more than two (2) consecutive terms. Under this system, City Council appoints the City Manager, who acts as chief administrative and executive officer of the City. The Mayor and council members are elected at-large. The Mayor and City Council establish goals and priorities each fiscal year, while the City Manager implements those objectives established by the governing body. The City Manager carries out policies and administers City programs.

1.1.2 Watersheds

The City of Copperas Cove lies within two major watersheds: Lampasas Watershed on the south, and Cowhouse Watershed on the north. The Lampasas Watershed encompasses an area of 1511.98 square miles, while the Cowhouse Watershed has an area of 727.32 square miles. The Lampasas River is the main drainage feature in the Lampasas Watershed and has a total length of 120.68 miles. Cowhouse Creek is the main drainage channel in the Cowhouse Watershed and is 101.53 miles long (see Figure 1-1 for a map of the area watersheds).

FIGURE 1-1: WATERSHED MAP

1.1.3 Key Personnel

In order to fulfill permit requirements, several City departments will play a vital role in the implementation of the SWMP, including Water Utilities, Community and Environmental Services, Engineering, Permits & Inspections, Planning, Parks & Recreation, Finance & Administration, Municipal Courts, the City Manager's Office, and Public Communications. These City departments have the ability to perform many of the elements comprising a comprehensive stormwater program; however, full program implementation will require additional departmental personnel and funding resources throughout the course of the permit period.

1.2 STORMWATER REGULATON

1.2.1 History of Stormwater Regulation

In 1972, Congress amended the Clean Water Act (CWA) to prohibit the discharge of pollutants into the waters of the United States from a point source unless the discharge is authorized by a NPDES permit. The NPDES program initially targeted easily detectable sources of water pollution such as municipal sewage and industrial process wastewater and was successful in improving water quality. However, the NPDES program was not addressing other significant sources of water quality impairment – nonpoint sources such as runoff from agricultural and forestry operations, and stormwater runoff.

In 1987, Congress, once again, amended the CWA in order to address the additional sources of water quality impairment throughout the United States. In response to the 1987 amendments to the CWA, the U.S. Environmental Protection Agency (EPA) initiated a comprehensive, two-phase approach to stormwater quality. On November 15, 1990, the EPA published Phase I of the National Pollutant Discharge Elimination System (NPDES) program requiring permit coverage for stormwater discharges from medium and large municipal separate storm sewer systems (MS4s) with populations of 100,000 or more and several categories of industrial activities, including construction sites that disturb five or more acres of land. Phase I of the NPDES program addresses sources of stormwater runoff with the greatest potential to impact water quality. On December 8, 1999, the EPA published Phase II of the NPDES program requiring that small MS4s with populations less than 100,000 and construction activities disturbing between one and five acres of land obtain permit coverage.

In response to the NPDES permit requirements, the EPA delegated regulatory authority in Texas to the State of Texas, and with the authority of the Texas Water Code and the CWA, the Texas Commission on Environmental Quality (TCEQ) assumed the authority to issue MS4 stormwater permits. As a regulatory entity, the TCEQ developed the Texas Pollutant Discharge Elimination System (TPDES) program, a program patterned after the federal NPDES stormwater program, which now has federal regulatory authority over discharges to waters of the United States.

On August 13, 2007, the TCEQ issued TPDES General Permit No. TXR040000 for stormwater discharges from Phase II cities in Texas. The City of Copperas cove obtained permit coverage within 180 days of the permit issuance and developed a five year Stormwater Management Program (SWMP) and summarized all stormwater activities in permit required annual report submittals to the TCEQ. The permit expired on August 13, 2012.

After a several delays, the TCEQ reissued TPDES General Permit No. TXR040000 on December 11, 2013. The new permit was based off the 2010 U.S. Census updates to the UA maps. The new permit requires permittees to seek coverage on a tiered basis according to the population of residents served under the UA. The four levels, based on population in the UA, are as follows:

- Level 1: Up to 10,000;
- Level 2: 10,000 to 40,000 (including non-traditional MS4s);
- Level 3: 40,000 to 100,000; and
- Level 4: More than 100,000.

Under the new permit, the City of Copperas Cove is considered a Level 2 entity. In accordance with the permit requirements, Phase II cities are required to obtain permit coverage within 180 days of the permit issuance date and will be given five years to fully implement a Stormwater Management Program (SWMP). The City will also be required to submit annual reports to the TCEQ during the permit period.

1.2.2 TPDES Phase II Minimum Control Measures

The TPDES permit requires the permittee to select *appropriate* BMPs as a Level 2 entity for each of the required MCMs. In other words, the TCEQ expects Phase II permittees to tailor their stormwater management plans and their BMPs to fit the particular characteristics and needs of the permittee and the area served by its MS4.

To qualify for permit coverage, the MS4 operator must develop a SWMP that describes the BMPs the City will develop and implement to minimize the discharge of pollutants from the MS4 to the maximum extent practicable. The six MCMs defined by the TCEQ that are applicable to the City of Copperas Cove as Level 2 permit holder are as follows:

- *Public Education, Outreach, and Involvement* - The MS4 is required to develop, implement, and maintain a public education and outreach program to distribute information to the community about impacts of stormwater discharges on water quality, the hazards associated with illegal discharges and the improper disposal of waste, and steps the public can take to reduce pollutants in stormwater runoff. In addition, the MS4 operator must implement a public involvement/participation program to include opportunities for constituents within the MS4 area to participate in the SWMP development and implementation.

- *Illicit Discharge Detection and Elimination (IDDE)* – The MS4 must develop, implement, and enforce a program to detect and eliminate illicit discharges. As part of this program, the MS4 must develop a storm sewer system map with locations of all outfalls, establish an ordinance (or other regulatory mechanism) prohibiting illicit discharges, establish enforcement procedures and actions, detect and address illicit discharges (including illegal dumping), and inform employees, businesses, and the general public of the program.

- *Construction Site Stormwater Runoff Control* – The MS4 is required to develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the small MS4 from construction activities disturbing greater than or equal to one acre of land (including smaller sites that are part of a larger common plan of development), through the development of an ordinance (or other regulatory mechanism) to require erosion and sediment controls, as well as sanctions to ensure compliance, and procedures for site plan and public comment review. The MS4 must also require construction site operators to implement erosion and sediment control BMPs and to control waste.

- *Post-construction Stormwater Management in New Development and Redevelopment* The MS4 is required to develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre of land (including smaller sites that are part of a larger common plan of development), through the development of an ordinance (or other regulatory mechanism) to address post-construction runoff, the development and implementation of structural and non-structural BMPs appropriate to the community, and procedures to ensure adequate long-term operation and maintenance.

- *Pollution Prevention and Good Housekeeping for Municipal Operations* – The MS4 is required to develop and implement an operation and maintenance program that has the goal of preventing or reducing pollutant runoff from municipal operations.

- *Authorization for Municipal Construction Activities* – As an optional MCM, the MS4 may develop a MCM for municipal construction activities as an alternative to the MS4 operator seeking coverage under TPDES general permit TXR150000 for each municipal construction activity performed. The City has opted not to participate in this MCM.

In the SWMP, the permittee must identify BMPs that will be implemented during the five-year permit term, an implementation schedule for the implementation of the selected BMPs, the responsible persons accountable for the BMP implementation, and the measurable goals by which the permittee will self-report progress in an Annual Report to the TCEQ. Existing programs or BMPs may also be used to fulfill the requirements of the general permit.

In order to achieve permit requirements, the City has evaluated their previous SWMP and success to develop a new SWMP detailing a series of selected BMPs for each of the five required minimum control measures for a Level 2 community. City staff selected these BMPs and associated measurable goals after reviewing EPA and TCEQ guidance documentation, attending a series of training courses, consulting with other MS4s, and assessing the developmental needs

and resources of the City. As outlined throughout the SWMP, each of the BMPs utilizes a series of measurable goals and evaluation techniques to ensure appropriate program implementation, and an implementation schedule details program development throughout the five-year permit period.

1.2.3 Capacity & Authority of MS4s to Implement and Enforce MCMs and BMPs

As detailed in Part III.A.3 under the general permit's Legal Authority, the MS4 permit will require, at a minimum, that the MS4 develop, implement, and enforce a SWMP designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable, to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act by the end of the second year. The MCMs that have specific enforcement requirements are:

- *Illicit Discharge Detection and Elimination* – The illicit discharge MCM states that the MS4 must establish a program to detect and eliminate illicit discharges to the small MS4, and to the extent allowable under state and local law, the permittee must utilize an ordinance or other regulatory mechanism to prohibit and eliminate illicit discharges.

- *Construction Site Stormwater Runoff Control* – This MCM requires the MS4 to develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre or less than one acre if it is part of a larger common plan of development. The program must include the development and implementation of an ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance.

- *Post-Construction Stormwater Management in New Development and Redevelopment* – The post-construction MCM requires the MS4 to develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre of land, including projects less than one acre that are part of a larger common plan of development. The program must ensure that controls are in place that would prevent or minimize water quality impacts. The strategy must include a combination of structural and nonstructural controls, including the development of an ordinance to address post-construction runoff.

While the permit states that a small MS4 must develop an enforcement program to the extent allowable under state and local law, the MS4 must develop a program that will reduce the discharge of pollutants from the MS4 to the maximum extent practicable, protect water quality, and satisfy the appropriate water quality requirements of the CWA. This permit specification will require effective enforcement mechanisms.

1.2.4 Municipal Facilities Subject to TPDES Permits

The City of Copperas Cove owns and operates a variety of facilities that are subject to TPDES stormwater regulations.

City of Copperas Cove Municipal Facilities Subject to TCEQ Permits		
Facility Name	**Facility Address**	**TCEQ Permits**
Northwest Plant	1601 N. 1st Street Copperas Cove, Texas 76522	TXR05BM06
Northeast Plant	2711 Big Valley Road Copperas Cove, Texas 76522	TXR05BM05
South Plant	1203 Golf Course Road Copperas Cove, Texas 76522	TXR05BM07

2. WATER BODIES

2.1 LAMPASAS RIVER AND COWHOUSE CREEK

The new TPDES TXR040000 general permit states that permit holders shall control the discharges of pollutant(s) of concern to impaired waters and waters with approved TMDLs shall assess the progress in controlling those pollutants. For discharges to water quality impaired water bodies with an approved TMDL, the permittee's SWMP and annual reports must include the following information:

(a) Targeted controls;
(b) Measureable goals;
(c) Identification of benchmarks;
(d) Annual reporting of selected BMPs; and
(e) Monitoring/assessment of progress.

For MS4s that discharge directly to water quality impaired water bodies without an approved TMDL, the permittee shall perform the following activities:

(a) Discharging a pollutant of concern

(1) Determine within the first year of the following permit effective date, if the small MS4 is the source of the pollutant;

(2) If the permittee determines that the small MS4 may discharge the pollutant(s) of concern to an impaired water body without an approved TMDL, the permit shall, no later than two years following the permit effective date, ensure that the SWMP includes focused BMPs, along with corresponding measurable goals, that the permittee will implement, to reduce the discharge of pollutant(s) of concern that contribute to the impairment of the water body.

(3) No later than three years following the permit effective date, the permittee shall submit a notice of change (NOC) to amend the SWMP to include any additional BMPs to address the pollutant(s) of concern.

(b) Impairment of bacteria. If bacteria is the impairment/pollutant of concern, the permittee shall identify significant sources and develop and implement focused BMPs for those sources. The permittee may implement the BMPs listed in Part II.D.4.a.5 of the permit.

(c) Annual reports must include compliance with this section along with any sampling conducted.

The City of Copperas Cove discharges into both watersheds as previously mentioned (see Figure 1-1 in Section 1.1.2). To the south, the City drains to the Lampasas River, Segment 1217. The segment is from a point immediately upstream of the confluence of Rock Creek in Bell County to FM 2005 in Hamilton County. The section that the City drains to is not impaired. To north, the City discharges to Cowhouse Creek Segment 1220A. According to the 303(d), Segment 1220A is listed for bacteria impairments. Specifically, the segment referred to as "1220A_03 Upstream portion of the water body" is listed for bacteria impairments. The City is discharging to the southern, downstream portion of the creek and does not believe that it is adding to the impairments. Although the City does not directly discharge to impaired water bodies, it will continue to focus on bacteria related BMPs through their Illicit Discharge Detection and Elimination and Public Education, Outreach and Involvement programs.

3. MCM1: PUBLIC EDUCATION, OUTREACH AND INVOLVEMENT

3.1 OVERVIEW

Public education and outreach is a key component to the success of a SWMP. Through public education, residents gain an understanding of how their actions affect stormwater quality, and they become more informed about water quality issues in their community. When citizens understand that poor water quality can result from common everyday activities, a major source of stormwater pollutants can be voluntarily eliminated. Perhaps more importantly, an educated public can be a broad base of support for a SWMP. The objective of a public education program is to promote a clear identification and understanding of the issues associated with stormwater pollution and to promote community ownership of the problems and solutions.

The City is dedicated to educating the Copperas Cove community on the impacts stormwater can have on water quality, the hazards associated with illegal discharges, and the steps that can be taken to reduce pollutants in stormwater runoff.

3.2 FEDERAL REGULATORY REQUIREMENTS

40 CFR 122.34 (b)(1) states that the MS4 operator must implement a public education program to distribute educational material to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.

3.3 TPDES PHASE II PERMIT REQUIREMENTS

Public Education and Outreach on Stormwater Impacts

(a) A public education program must be developed and implemented to distribute educational materials to the community or conduct equivalent outreach activities that will be used to inform the public. The MS4 operator may determine the most appropriate sections of the population at which to direct the program. The MS4 operator must consider the following groups and the SWMP shall provide justification for any listed group that is not included in the program:

(1) residents;
(2) visitors;
(3) public service employees;
(4) businesses;
(5) commercial and industrial facilities; and
(6) construction site personnel.

The outreach must inform the public about the impacts that stormwater run-off can have on water quality, hazards associated with illegal discharges and improper disposal of waste, and steps that they can take to reduce pollutants in stormwater runoff.

(b) The MS4 operator must document activities conducted and materials used to fulfill this control measure. Documentation shall be detailed enough to demonstrate the amount of resources used to address each group. This documentation shall be retained in the annual reports required in Part IV.B.2 of this general permit.

3.4 DISCUSSION OF STORMWATER PROGRAMS

The following are the identified Public Outreach, Education and Involvement programs the City plans to employ.

3.4.1 BMP No. 1 - Utility Bill Insert and Social Media Outreach

The Public Works department will provide information and other educational materials to inform the community of the effects polluted stormwater runoff can have on water quality and how individuals can minimize the impact they have on the environment. This information will be distributed as a water utility bill insert to be sent to city residents and area businesses. The City will also develop a social media outreach program tailored specifically for residents, businesses, and other community participants. The social media outreach program will help to educate the public about illegal discharges and improper disposal of waste and their associated impacts on local waterways with the use of newer social media technologies.

Measurable Goals:

- Send information about stormwater issues in the water utility insert annually.
- Identify the most appropriate social media platform for the City to use and send out updates regarding stormwater quality.
- Post stormwater quality information, bacteria related items, environmental activities promoting recycling and good stewardship, etc.
- Evaluate if social media is a better option to bill inserts and discontinue inserts if necessary.

Evaluation:

- Record the quantity of inserts distributed and report within annual SWMP reports to the TCEQ.
- Document evaluation and decision to reduce or phase out utility bill inserts in favor of social media
- Track and report the number of public updates and other educational information provided through social media.
- Track and report the number of individuals reached by social media.

3.4.2 BMP No. 2 - Stormwater Web Page on City's Website

The City of Copperas Cove will utilize the City's website to inform the public of the issues associated with stormwater pollution and the issues of concern detailed in the SWMP. In an attempt to highlight the SWMP and issues associated with NPS pollution, a section of the City's website will be dedicated to stormwater education and outreach. The web page will include general water quality information, residential and commercial resources, and information on public involvement and regulatory updates.

This stormwater web page will also serve as a key distribution point to disseminate newly developed brochures and other educational materials regarding stormwater quality.

Measurable Goals:

- Add a stormwater page on the City website, update as needed.
- Provide newly developed brochures and other educational material on the stormwater page.
- Provide copies of annual report to residents, businesses, etc. documenting City's progress regarding stormwater issues on the web page.

Evaluation:

- Track and report the number of individuals who the website.
- Track and report the number of individuals who view the annual reports.
- Report the number of stormwater educational resources placed on the website annually.

3.4.3 BMP No. 3 - Stormwater Marking Program

In order to prevent pollution within our waterways and educate residents on the effects their actions may have on the environment, the Streets and Drainage Superintendent and relevant staff, will develop a program to continue marking new stormwater drainage infrastructure and inlets.

Measurable Goals:

- Continue stormwater inlet marking program on all new construction.

Evaluation:

- Record and report the number of storm inlets marked and the volunteers utilized through the stenciling program.
- Compare the actual number of marked storm drains to total number of new construction sites.

3.4.4 BMP No. 4 - Stormwater Information at Public Library

The City of Copperas Cove currently employs a variety of avenues to educate students within the community. As part of the ongoing efforts in water quality education for students, the City will sponsor water quality educational material to the City's Public Library. Students and teachers in grades K-5, as well as the general public, will be able to utilize this environmental educational resource to increase awareness and help develop habits that will improve and protect our environment.

Measurable Goals:

- Provide copies of stormwater educational materials at Public Library.

Evaluation:

- Record the quantity of educational materials distributed and report within the annual SWMP reports to the TCEQ.

3.4.5 BMP No. 5 - Stormwater City Proclamations

In order to better educate the general public, the City will issue stormwater city proclamations. Copies of the annual City Council proclamations will be provided at City Hall and on the stormwater website from the City.

Measurable Goals:

- Provide copies of annual City Council proclamations at City Hall.

Evaluation:

- Record quantity of City Council proclamations distributed and report within the annual SWMP reports to the TCEQ.

3.4.6 BMP No. 6 - Designate Stormwater Coordinator

Copperas Cove will designate a Stormwater Coordinator. The Stormwater Coordinator will play an instrumental part in leading the stormwater management programs are being executed as per the City SWMP. The Coordinator will also review current programs to confirm that the goals are being met, on schedule, provide input to the City on needed changes/updates to the various stormwater programs, and coordinate MS4 training for relevant staff.

Measurable Goals:

- Designate a Stormwater Coordinator
- Provide support to Stormwater Coordinator by City staff.

Evaluation:

- Report the selection of the stormwater coordinator along with contact information on the City's website and in the annual SWMP report to the TCEQ.
- Evaluate, select, and report the departments/staff to be responsible for assisting in the implementation of the annual goals of the stormwater BMPs.

3.4.7 BMP No. 7 - Develop and Distribute Brochures to the Public

The Public Information Officer, in coordination with the Public Works department, will develop a variety of educational brochures to inform the community of the effects polluted stormwater runoff can have on water quality and how individuals can minimize the impacts they have on the environment. These educational materials will be distributed at community events and meetings, City departmental offices, City Hall, the public library, and upon request. All brochures will also be posted to the City's website.

The City of Copperas Cove will continue to develop, obtain, and distribute educational materials to the public on a variety of topics including, but not limited to:

- Lawn and garden management;
- Proper handling and disposal of household hazardous waste (HHW);
- Pet waste;
- Stormwater pollution;
- Littering;
- Illicit discharges;
- Commercial and industrial stormwater impacts; and
- Waste management.

Measurable Goals:

- Develop one brochure during each year to be distributed to residents and businesses.

Evaluation:

- Record the quantity of brochures distributed and report within the annual SWMP reports to the TCEQ.

3.4.8 BMP No. 8 - Public Meetings

The City of Copperas Cove will host a public meeting to discuss the City's stormwater management plan. The meeting will include information about the implementation of the SWMP as well as note ongoing practices within the City, which contribute to stormwater pollution. Public participation, in the form of comments on the SWMP will be encouraged. The comments and other feedback will be used to update the SWMP as necessary.

Measurable Goals:

- Conduct one public meeting annually regarding stormwater management.
- Advertise and conduct meetings in accordance with local and state public notice requirements.

Evaluation:

- Record and report the topics and number of attendees at each meeting.
- Record and report the methods of public notice used to advertise each meeting.

3.4.9 BMP No. 9 – Keep Copperas Cove Beautiful (KCCB) Clean Up Programs

The Copperas Cove City Council established the Keep Copperas Cove Beautiful Commission (KCCB) on September 17, 2002 with the responsibility to recommend policies related litter prevention, beautification and community improvement and the minimization of solid waste. The Commission board comprises of 15 volunteer members, each approved by the City Council. The Keep Copperas Cove Beautiful sponsored clean-up events present opportunities to teach young children about recycling and preventing waste and litter.

Measurable Goals:

- Track clean-up events and program goals for inclusion within the TCEQ annual report.
- Continue to establish policies for decreasing the amount of litter in the City.

Evaluation:

- Annually report the number of events and the number of individuals attending.
- Track the volume of garbage collected at each clean-up event.
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TABLE 3-1
PUBLIC EDUCATION, OUTREACH AND INVOLVEMENT

Best Management Practice	Measurable Goals	Permit Years					Key Departments/Divisions	Evaluation
		1	2	3	4	5		
Water Utility Bill Insert and Social Media	Send information about stormwater issues in the water utility insert annually.						Public Works	Record the quantity of inserts distributed and report within annual SWMP reports to the TCEQ.
	Identify the most appropriate social media platform for the City to use and send out updates regarding stormwater quality.						Public Information Officer	Track and report the number of public updates and other educational information provided through social media.
	Post stormwater quality information, bacteria related items, environmental activities promoting recycling and good stewardship, etc.						Public Information Officer	Track and report the number of individuals reached by social media.
	Evaluate if social media is a better option and discontinue inserts if necessary.						Public Works	Document evaluation and decision to reduce or phase out utility bill inserts in favor of social media.
Stormwater Web Page on City's Website	Add a stormwater page on the City website; update as needed.						Public Information Officer/Public Works	Track and report the number of individuals who view the website.
	Provide newly developed brochures/material on web page.						Public Information Officer/Public Works	Report the number of stormwater educational resources placed on the website annually.
	Provide copies of annual report to residents, business, etc. documenting City's progress on web page.						Public Information Officer/Public Works	Track and report the number of individuals who view the annual reports.
Stormwater Marking Program	Continue to mark new construction as it comes on-line.						Public Works	Record and report the number of storm inlets marked and volunteers utilized through the marking program.
Stormwater Information at Public Library	Provide copies of stormwater educational materials at Public Library.						Public Information Officer/Public Works	Record the quantity of educational materials distributed and report within the annual SWMP reports to the TCEQ.
Stormwater City Proclamations	Provide copies of annual City Council proclamations at City Hall						City Manager's Office/Public Works	Record the quantity of City Council proclamations distributed and report within the annual SWMP reports to the TCEQ.

TABLE 3-1
PUBLIC EDUCATION, OUTREACH AND INVOLVEMENT

Best Management Practice	Measurable Goals	Permit Years					Key Departments/Divisions	Evaluation
		1	2	3	4	5		
Designate Stormwater Coordinator	Designate stormwater Coordinator.						City Manager's Office/Public Works	Report the selection of the stormwater coordinator along with contact information on the City's website and in the annual SWMP report to the TCEQ.
	Provide support to stormwater Coordinator by City staff.						City Manager's Office/Public Works	Evaluate, select, and report the departments/staff to be responsible for the implementation of annual goals of the stormwater BMPs.
Develop and Distribute Brochures to the Public	Develop one brochure during each year to be distributed to residents and businesses.						Public Information Officer/Public Works	Record the quantity of brochures distributed and report within the annual SWMP reports to the TCEQ.
Comply with State Public Notification Guidelines	Submit copy of the notice and publisher's affidavit to the TCEQ Chief Clerk						City Secretary/Public Works	Provide a copy of the notice and affidavit on the City's website.
Public Meetings	Conduct 1 public meeting per year regarding stormwater management.						City Manager's Office/Public Information Officer/Public Works	Record and report the topics and number of attendees at each meeting.
	Advertise and conduct meetings in accordance with local and state public notice requirements.						City Manager's Office/Public Information Officer/Public Works	Record and report the methods of public notice used to advertise each meeting.
Keep Copperas Cove Beautiful (KCCB) Clean Up Programs	Track clean-up events and program for inclusion within Annual Report.						Public Works	Annually report the number of events and the number of individuals attending.
	Continue to establish policies for decreasing the amount of litter in the City.						Public Works	Track the volume of garbage collected at each clean up event.

Begins Permit Year 1	Begins Permit Year 2	Begins Permit Year 3	Begins Permit Year 4	Begins Permit Year 5

4. MCM2: ILLICIT DISCHARGE DETECTION AND ELIMINATION

4.1 OVERVIEW

The illicit discharge detection and elimination MCM is intended to detect and eliminate discharges to the MS4 system that are not entirely composed of stormwater. As identified in the Phase II TPDES permit, MS4 permittees are required to develop a strategy to detect and eliminate illicit discharges to the storm drain system. An illicit discharge has been defined by the EPA as "any discharge into a separate storm sewer system that is not composed entirely of stormwater."

4.2 TPDES PHASE II PERMIT REQUIREMENTS

Illicit Discharge Detection and Elimination

(a) Illicit Discharges

A section within the SWMP must be developed to establish a program to detect and eliminate illicit discharges to the small MS4. The SWMP must include procedures for tracking detected illicit discharges to their source and removing them. To the extent allowable under state and local law, an ordinance or other regulatory mechanism must be utilized to prohibit and eliminate illicit discharges. Elements must include:

(1) Detection

The SWMP must list the techniques used for detecting illicit discharges; and

(2) Elimination

The SWMP must include appropriate actions and, to the extent allowable under state and local law, establish enforcement procedures for removing the source of an illicit discharge.

Procedures for preventing and correcting any leaking on-site sewage disposal systems that discharge into the MS4.

(b) Allowable Non-Stormwater Discharges

Non-stormwater flows listed in Part II.C do not need to be considered by the MS4 operator as an illicit discharge requiring elimination unless the operator of the small MS4 or the executive director identifies the flow as a significant source of pollutants to the small MS4. In lieu of considering non-stormwater sources on a case-by-case basis, the MS4 operator may develop a list of common and incidental non-stormwater discharges

that will not be addressed as illicit discharges requiring elimination. If developed, the listed sources must not be reasonably expected to be significant sources of pollutants either because of the nature of the discharge or the conditions that are established by the MS4 operator prior to accepting the discharge to the small MS4. If this list is developed, then all local controls and conditions established for these listed discharges must be described in the SWMP and any changes to the SWMP must be included in the annual report described in Part IV.B.2 of this general permit, and must meet the requirements of Part II.D.3 of the general permit.

(c) Storm Sewer Map

(1) An updated map of the storm sewer system must be developed and must include the following:

i. the location of all outfalls operated by the permittee and the discharge in waters of the U.S.;

ii. the names and locations of all surface waters receiving discharges from MS4's outfalls; and

iii. Priority areas identified under Part III.B.2(g)(1)any additional information needed by the permittee to implement its SWMP.

(2) The SWMP must include the source of information used to develop the storm sewer map, including how the outfalls are verified and how the map will be regularly updated.

4.3 ALLOWABLE NON-STORMWATER DISCHARGES

The following non-stormwater sources may be discharged from the small MS4 and are not required to be addressed in the small MS4's Illicit Discharge and Detection or other minimum control measures, unless they are determined by the permittee or the TCEQ to be significant contributors of pollutants to the small MS4:

- water line flushing;
- runoff or return flow from landscape irrigation, lawn irrigation, and other irrigation utilizing potable water, groundwater, or surface water sources;
- discharges from potable water sources that do not violate Texas Surface Water Quality Standards;
- diverted stream flows;
- rising ground waters and springs;
- uncontaminated ground water infiltration;
- uncontaminated pumped ground water;
- foundation and footing drains;

- air conditioning condensation;
- water from crawl space pumps;
- individual residential vehicle washing;
- flows from wetlands and riparian habitats;
- dechlorinated swimming pool discharges that do not violate Texas Surface Water Quality Standards;
- street wash water;
- discharges or flows from firefighting activities (firefighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, and similar activities);
- other allowable non-stormwater discharges listed in 40 CFR 122.26(d)(2)(iv)(B)(1);
- non-stormwater discharges that are specifically listed in the TPDES Multi Sector General Permit (MSGP) TXR050000 or the TPDES Construction General permit (CGP) TXR150000;
- discharges that area authorized by a TPDES or NPDES permit or that are not required to be permitted; and
- other similar occasional incidental non-stormwater discharges, unless the TCEQ develops permits or regulations addressing these discharges.

The City of Copperas Cove has not identified any of these discharges as significant contributors of pollution to the City's MS4. Therefore, these discharges will not be specifically addressed in the City's SWMP. However, in order to manage the release of potential pollutants from these discharges, the City will review current policies and procedures to minimize water quality impacts throughout the community. If in the future the above-referenced discharges prove to be a significant contributor of pollution to the MS4, the SWMP will be revised to include BMPs for those discharges.

4.4 DISCUSSION OF STORMWATER PROGRAMS

The City of Copperas Cove currently implements a variety of illicit discharge detection programs to identify sources of stormwater pollution throughout the community.

4.4.1 BMP No. 1 – Spill Response

The City will review its existing spill response procedures and make any changes deemed necessary. Appropriate training will be given to applicable Public Works staff members that have the potential to respond to spills along with the Copperas Cove Fire Department.

Measurable Goals:

- Continue implementation of existing spill response procedures and training of fire department staff.

Evaluation:

- Document the number of training classes provided on spill response and the names and number of staff participating.

4.4.2 BMP No. 2 – Sanitary Sewer Overflow (SSO) Response Plan

The City will review its existing sanitary sewer overflow response plan and make changes as necessary. Sanitary sewer overflow can significantly affect stormwater quality if the overflow reaches stormwater inlets, as the overflow would act as a major source of bacteria for the stormwater runoff. The City will document all report sanitary sewer overflow and its corrective response at each location in the SWMP annual report to the TCEQ.

Measurable Goals:

- Regularly review SSO plan submitted to TCEQ to ensure existing locations corrected as indicated within the SSO plan schedule.

Evaluation:

- Document sanitary sewer overflow locations and corrective actions taken at each.

4.4.3 BMP No. 3 – Building Plan Review Process

The City of Copperas Cove will inspect all new construction plans for potential stormwater quality hazards during the building project review process. The City will review and inspect for illicit connections during the review process and take appropriate corrective actions.

Measurable Goals:

- Review and inspect for illicit connections during building project review process.

Evaluation:

- Document any illicit connections found and corrective actions to be taken.

4.4.4 BMP No. 4 – Storm Sewer Mapping

The City of Copperas Cove will develop a GIS work plan and a MS4 map of the storm sewer system to show the waters of the U.S. and the location of storm sewer pipes, ditches, and other conveyances owned by the City. The map will also detail the locations of major and minor outfalls to the waters of the U.S. An up-to-date storm sewer map is crucial in detecting and

removing illicit sewer connections and thereby eliminating illicit discharges. Outfall locations will be visually inspected and verified by field crews, and ongoing field verification may be necessary to keep the system map up-to-date. Additional drainage features located in areas outside the coverage of the developer-provided drawings will be identified and located by field surveying or GPS and will be included on the drainage system map.

Measurable Goals:

- Develop and update MS4 Outfall Map.
- Develop policies and procedures to ensure that the GIS system is update to ensure program accuracy.
- Compile data on all new and existing infrastructure in developing a storm sewer map to be updated on an as-needed basis.

Evaluation:

- Report the percentage of new infrastructure construction completed and mapping complete during each permit year.
- Compile and report changes to the GIS work plan and updates to policies and procedures.
- Document captured data from infrastructure and report percentages of new infrastructure construction and mapping completed.

4.4.5 BMP No. 5 – Illicit Detection and Elimination Program

The City will develop an illicit discharge detection and elimination program that will utilize a combination of techniques to respond to citizen complaints while proactively detecting illicit discharges. The program will also contain procedures for tracking down the actual source of the illicit discharges, eliminating them, and procedures on how to follow-up. All actions under this program shall be documented. The techniques used to detect discharges and the enforcement procedures and corrective actions will be determined during the implementation of this BMP.

Measurable Goals:

- Develop procedures for selecting areas with the most potential for illicit discharges. Illicit discharges include discharges such as wash out wastewater, fuels, oils, soaps, solvents, and dewatering activities.
- Develop and implement a screening, inspection, and detection program to identify illicit discharges.
- Field screen priority areas or those considered “hot spots” as having the highest potential of generating an illicit discharge.
- Develop and implement procedures for tracking illicit discharges to their source, follow-up investigations, elimination procedures, and corrective actions.

Evaluation:

- Document changes to existing programs, if any.
- Track the number of screenings performed.
- Record and report the number of illicit discharged detected and followed up on annually, noting elimination method/corrective action taken.

4.4.6 BMP No. 6 – Field Staff Training

The City will continue to implement a training program, including annual classroom and field training to all City staff that have the potential to encounter or respond to illicit discharges and identify spills.

Measurable Goals:

- Provide annual training to City staff that have the potential to encounter or respond to illicit discharges.

Evaluation:

- Document the number of training classes provided on illicit discharge and elimination and the names and number of staff participating

4.4.7 BMP No. 7 – On-site Sewage Disposal

The City of Copperas Cove will develop and adopt an on-site sewage disposal program to safeguard stormwater quality. On-site sewage can be a significant source of bacteria affecting stormwater runoff. The City will provide training to applicable employees on proper storage and disposal procedures for on-site storage.

Measurable Goals:

- Develop procedures to prevent and correct any leaking on-site sewage disposal systems that discharge into the MS4.

Evaluation:

- Track the number of employees trained and hours spent on training.

4.4.8 BMP No. 8 – Public Reporting of Illicit Discharges and Spills

Illicit discharges and spills that affect the City's MS4 may cause visible environmental impacts to the City's streams and waterways. These resulting environmental impacts may lead to fish

kills, discoloration in water, oil sheen on water, large-scale algal blooms, etc. and are impacts that the public will notify the City. In order to streamline responses to illicit discharges and spills, the City will develop and maintain a database of reported illicit discharges and spills and make them available to the public.

Measurable Goals:

- Develop, implement and maintain a method of reporting illicit discharges and spills to the public.
- Maintain a database of reported illicit discharges and spills.

Evaluation:

- Record and report the number of illicit discharges and spills reported.
- Perform annual updates of database information.

4.4.9 BMP No. 9 – Illicit Discharge Ordinance

The City of Copperas Cove will review the existing ordinances and revise their illicit discharge ordinance, if necessary. The ordinance will prohibit illicit discharges and connections, all non-stormwater discharges that significantly contribute pollutants to the MS4, and illegal dumping. The ordinance will include appropriate enforcement procedures and actions in addition to establishing the legal authority for the City to carry out inspection and monitoring procedures deemed necessary to ensure compliance.

Measurable Goals:

- Develop a draft ordinance.
- Conduct public review proceedings in accordance with state and local public notice requirements.
- Present ordinance to City Council for adoption.
- Educate and inform the public on the ordinance adoption.

Evaluation:

- Adopt the ordinance.
- Document and report public attendance and feedback from review proceedings.
- Compile the type and distribution techniques used to educate the public on the updated ordinance.
- Record the number of ordinance violations and compare with prior years to assess ordinance effectiveness.

4.4.10 BMP No. 10 – Recycling Program

Copperas Cove currently provides recycling options to its citizens through it Recycling Division. The goal of the Solid Waste Recycling Division is to reduce the City's waste through a curbside-recycling program and to promote utilization of the Copperas Cove Recycling Center.

The division operates a drop off recycling center, which provides residents with an opportunity to recycle a variety of materials including office paper, magazines, phonebooks, cardboard, aluminum cans, newspaper, plastics, and steel cans. These services help meet the community's desire for waste management options which provide an alternative to landfilling. A curbside recycling program is in place. This program allows citizens to have their recyclables collected twice a month.

City of Copperas Cove provides curbside recycling twice per month on the same day as bulky goods collection. Each residence is provided with up to (3) three 22-gallon bright blue recycle bins.

Measurable Goals:

- Continue to publicize and promote the City's curbside recycling and Copperas Cove Recycling Center.
- Continue to operate and maintain the recycling program.

Evaluation:

- Compile and report on the amount of publicity done as part of the recycling program.

Record and report the amount of waste collected at the recycling center and from curbside recycling.

TABLE 4-1
ILLICIT DISCHARGE DETECTION AND ELIMINATION

Best Management Practice	Measurable Goals	Permit Years					Key Departments/Divisions	Evaluation
		1	2	3	4	5		
Spill Response	Continue implementation of existing spill response procedures and training of fire department staff.						Fire Chief	Document the number of training classes provided on spill response and names/number of staff participating.
Sanitary Sewer Overflow (SSO) Response Plan	Regularly review SSO plan submitted to TCEQ to ensure existing locations corrected as indicated within the SSO plan schedule.						Public Works	Document sanitary sewer overflow locations and corrective actions taken at each.
Building Plan Review Process	Review and inspect for illicit connection during building project review process.						Chief Building Official	Document any illicit connections found and corrective actions to be taken.
Storm Sewer Mapping	Develop/update MS4 Outfall Map.						Public Works	Report percentage of new infrastructure construction completed and mapping completed during each permit year.
	Develop policies and procedures to ensure that the GIS system is updated to ensure program accuracy.						Public Works	Compile and report changes to GIS work plan and updates to policies and procedures.
	Compile data on all new and existing infrastructure in developing a storm sewer map to be updated on an as-needed basis.						Public Works	Document captured data from infrastructure; report the percentages of new infrastructure construction and mapping completed.
Illicit Detection and Elimination Program	Develop procedures for selecting areas with the most potential for illicit discharges. Illicit discharges include discharges such as wash out wastewater, fuels, oils, soaps, solvents, and dewatering activities.						Public Works	Document changes to programs, if any.
	Develop and implement a screening, inspection and detection program to identify illicit discharges. Screen hotspot areas within their MS4.						Public Works	Track the number of screenings performed.
	Develop and implement procedures for tracking illicit discharges to their source, follow up investigations, elimination procedures and corrective actions.						Public Works	Record and report the number of illicit discharges detected and followed up on annually, noting elimination method/corrective action taken.
Field Staff Training	Provide annual training to City staff that have the potential to encounter or respond to illicit discharges.						Public Works	Document the number of training classes provided on illicit discharge and elimination and names/number of staff participating.
On-site Sewage Disposal	Develop procedures to prevent and correct any leaking on-site sewage disposal systems that discharge into the MS4.						Public Works	Track the number of employees trained and hours spent on training.

TABLE 4-1
ILLICIT DISCHARGE DETECTION AND ELIMINATION

Best Management Practice	Measurable Goals	Permit Years					Key Departments/Divisions	Evaluation
		1	2	3	4	5		
Public Reporting of Illicit Discharges and Spills	Develop, implement and maintain a method of reporting illicit discharges and spills to the public.						Public Information Officer/Public Works	Record and report the number of illicit discharges and spills reported
	Maintain a database of reported illicit discharges and spills.						Public Information Officer/Public Works	Perform annual updates of database information.
Illicit Discharge Ordinance	Develop a draft ordinance.						Public Works/City Attorney	Adopt ordinance.
	Conduct public review proceedings in accordance with state and local public notice requirements.						Public Works/City Attorney	Document and report public attendance and feedback from review proceedings.
	Present ordinance to City Council for adoption.						Public Works/City Attorney	Adopt ordinance.
	Educate and inform the Public on the ordinance adoption.						Public Works/City Attorney	Compile the type and distribution techniques used to educate the public on the update ordinance.
	Implement the ordinance.						Public Works/City Attorney	Record the number of ordinance violations and compare with prior years to assess ordinance effectiveness.
Recycling Program	Continue to publicize and promote Copperas Cove Recycling Center, as well as curbside recycling.						Public Works	Compile and report on the amount of publicity done as part of the recycling program.
	Continue operation of recycling center and curbside recycling.						Public Works	Record and report the amount of waste collected at the recycling center and from curbside recycling.

Begins Permit Year 1	Begins Permit Year 2	Begins Permit Year 3	Begins Permit Year 4	Begins Permit Year 5

5. MCM3: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

5.1 OVERVIEW

Construction site stormwater runoff control measures are designed to prevent soil and construction debris from entering the MS4 system from construction sites. During construction activities, vegetation and topsoil are stripped away, making the area especially vulnerable to erosion, and the activities performed on construction sites usually disturb a large amount of land and generate large amounts of waste. This process is believed to lead to high levels of sediment, phosphorus, nitrogen, pesticides, petroleum derivatives, construction chemicals, and solid wastes in receiving streams nationwide.

5.2 TPDES PHASE II PERMIT REQUIREMENTS

Construction Site Stormwater Runoff Control

The MS4 operator, to the extent allowable under State and local law, must develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the small MS4 from construction activities that result in a land disturbance of greater than or equal to the small one acre or if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more of land. The MS4 operator is not required to develop, implement, and/or enforce a program to reduce pollutant discharges from sites where the construction site operator has obtained a waiver from permit requirements under NPDES or TPDES construction permitting requirements based on a low potential for erosion.

(a) The program must include the development and implementation of, at a minimum, an ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under state and local law.

(b) Requirements for construction site contractors to, at a minimum:

(1) implement appropriate erosion and sediment control BMPs; and

(2) control waste such as discarded building materials, concrete truck washout water, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.

(c) The MS4 operator must develop procedures for:

(1) site plan review which incorporate consideration of potential water quality impacts;

(2) receipt and consideration of information submitted by the public; and

(3) site inspection and enforcement of control measures to the extent allowable under state and local law.

5.3 DISCUSSION OF STORMWATER PROGRAMS

The City of Copperas Cove currently utilizes a variety of construction site stormwater runoff control measures to monitor and reduce pollutants from construction sites throughout the community.

5.3.1 BMP No. 1 – Site Development Plan Reviews

The City of Copperas Cove will evaluate the existing city procedures for site plan review of construction plans so that potential water quality impacts are considered. The Construction Site Plan Review Procedures should consider potential water quality effects from construction activities including control of erosion, sediment and waste at the site. The program will include the review of Stormwater Pollution Prevention Plans (SWPPP) and TCEQ permit documentation in order to ensure permit compliance. During the review process, staff will also consider the nature of construction, the topography of the site, soil characteristics of the site, and the condition of the receiving stream. Forms, checklists, and a standard format for the submission of plans will also be developed or revised.

Measurable Goals:

- Notify developers/design engineers on Stormwater requirements.
- Confirm and review Sedimentation/Erosion Control plans included in subdivision construction plans.
- Prepare comprehensive land disturbance ordinance requiring erosion control planning and implementation.

Evaluation:

- Document list of developers/design engineers notified of new stormwater requirements.
- Document submittal of NOI by developers.
- Record the number of plans reviewed and compare with number of plans submitted.

5.3.2 BMP No. 2 – Construction Site Inspection Program

The City of Copperas Cove will develop a program with procedures for a construction site inspections and enforcement with the goal of reducing stormwater runoff pollutants to the MS4. City staff will perform construction site inspections on municipal and non-municipal construction activities throughout the City. All construction site inspections will be performed in

accordance with the developed procedures, and enforcement proceedings will be administered in accordance with the adopted construction site runoff control ordinance and construction site waste control ordinance. The program will require construction site operators to implement erosion and sediment control BMPs to minimize the discharge of pollutants:

- Require soil stabilization measures, and implementation of BMPs to control pollutants from equipment and vehicle washing and other wash waters.
- Require operators to minimize exposure to stormwater of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, and other materials.
- Minimize the discharge of pollutants from spills and leaks.

Measurable Goals:

- Develop construction site inspection procedures and inspection forms. Operators will address erosion and sediment controls, soil stabilization, equipment and vehicle washing procedures, selection of appropriate BMPs, and development of SWPPP.
- Conduct site inspections during active construction.
- Perform enforcement proceedings in accordance with the adopted construction site ordinances and prohibited discharges.
- Resolve all non-compliance issues in a timely manner, number of days to be determined during program development.
- Develop, implement and maintain procedures for receipt and consideration from public.

Evaluation:

- Document construction site inspection procedures and inspection forms.
- Report the number of construction site inspections performed and compare with the number of land disturbance permit applications.
- Document the number of enforcement proceedings related to construction storm sewer sites.
- Report on status of all non-compliance issues.
- Report on revisions to public receipt and consideration procedures, if any.

5.3.3 BMP No. 3 - Construction Site Waste Control Ordinance

The City of Copperas Cove will develop and adopt an ordinance to require construction site operators to control and dispose of on-site waste materials such as discarded building materials, concrete truck washout water, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality, as well as sanctions to ensure compliance. The ordinance will mirror the City's solid waste ordinance and mandate that construction site operators employ solid waste haulers who are licensed by the City of Copperas Cove.

Measurable Goals:

- Develop a draft ordinance and modify existing ordinances as needed.
- Conduct public review proceedings in accordance with state and local public notice requirements.
- Present an ordinance to City Council for adoption.
- Implement the ordinance and continue enforcing proper management of construction waste at construction sites.
- Educate and inform the public of the ordinance adoption.

Evaluation:

- Adoption of Construction Site Waste Control Ordinance by the City Council.
- Document and report public attendance and feedback from public review proceedings.
- Compile the type and distribution techniques associated with educational outreach materials utilized to publicize the adoption of the ordinance.
- Record the number of ordinance violations and compare with prior years to assess ordinance effectiveness.

5.3.4 BMP No. 4 – Construction Site Runoff Control Ordinance

The City of Copperas Cove will develop and adopt a stormwater runoff control ordinance that will require construction site operators to utilize erosion and sediment control device during construction related activities, as well as sanctions to ensure compliance. The City will review and revise, if necessary, any current ordinances containing methods of enforcing violations, mirror the requirements of the TCEQ Construction General Permit TXR150000, and mandate that construction site operators install, maintain, and properly dispose of erosion and sediment controls.

Measurable Goals:

- Develop a draft ordinance and modify existing ordinances as needed.
- Conduct public review proceedings in accordance with state and local public notice requirements.
- Present an ordinance to City Council for adoption.
- Implement the ordinance and prohibit discharges according to the permit.
- Educate and inform the public of the ordinance adoption.

Evaluation:

- Adoption of Construction Site Runoff Control Ordinance by the City Council.
- Document and report public attendance and feedback from public review proceedings.
- Compile the type and distribution techniques associated with educational outreach materials utilized to publicize the adoption of the ordinance.
- Record the number of ordinance violations and compare with prior years to assess ordinance effectiveness.

5.3.5 BMP No. 5 – MS4 Staff Training

Copperas Cove will continue to implement a training program, including annual classroom and field training to City staff that have the potential to perform construction site inspections.

Measurable Goals:

- Compile a list of courses, presenters, and training materials to be provided to City staff requiring training.

Evaluation:

- Document the number of training classes presented, the topics of discussion, and the number of staff participating in the training sessions.

TABLE 5-1 CONSTRUCTION SITE STORMWATER RUNOFF CONTROL								
Best Management Practice	**Measurable Goals**	**Permit Years**					**Key Departments/Divisions**	**Evaluation**
		1	**2**	**3**	**4**	**5**		
Site Development Plan Reviews	Notify developers/design engineers on stormwater requirements.						Public Works	Document list of developers/design engineers notified of new storm water requirements.
	Develop requirement of Notice of Intent (NOI) for site to be submitted prior to City approving the permit.						Public Works	Document submittal of NOI by developers.
	Confirm and review Sedimentation/Erosion Control plans that require NOI.						Public Works	Record the number of plans reviewed and compare with number of plans submitted.
	Enhance review of site development plans to include water quality considerations, erosion control plans, and BMP details.						Public Works	Record the number of plans reviewed and compare with number of plans submitted.
Construction Site Inspection Program	Develop construction site inspection procedures and inspection forms. Operators will address erosion and sediment controls, soil stabilization, equipment and vehicle washing procedures, controls for minimizing pollutant discharges from spills and leaks, selection of appropriate BMPs, and development of SWPPP.						Public Works	Document construction site inspection procedures and inspection forms.
	Conduct site inspections during active construction.						Public Works	Report the number of construction site inspections performed and compare with the number of land disturbance permit applications.
	Perform enforcement proceedings in accordance with the adopted construction site ordinances and prohibited discharges.						Public Works	Document the number of enforcement proceedings related to construction storm sewer sites.
	Resolve all non-compliance issues in a timely manner, number of days to be determined during program development.						Public Works	Report on status of all non-compliance issues.
	Develop, implement, and maintain procedures for receipt and consideration from public.						Public Works	Report on revisions to procedures, if any.

TABLE 5-1
CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

Best Management Practice	Measurable Goals	Permit Years					Key Departments/Divisions	Evaluation
		1	2	3	4	5		
Construction Site Waste Control Ordinance	Develop a draft ordinance.						Public Works/City Engineer	Develop draft ordinance.
	Conduct public review proceedings in accordance with state and local public notice requirements.						Public Works	Document and report public attendance and feedback from review proceedings.
	Present ordinance to City Council for adoption.						Public Works	Adopt ordinance.
	Educate and inform the Public on the ordinance adoption.						Public Works/Public Information Officer	Compile the type and distribution techniques to educate the public on the update ordinance.
	Implement the ordinance and continue enforcing proper management of construction waste at construction sites.						Public Works	Record the number of ordinance violations and compare with prior years to assess ordinance effectiveness.
Construction Site Runoff Control Ordinance	Develop a draft ordinance.						Public Works/City Engineer	Develop draft ordinance.
	Conduct public review proceedings in accordance with state and local public notice requirements.						Public Works	Document and report public attendance and feedback from review proceedings.
	Present ordinance to City Council for adoption.						Public Works	Adopt ordinance.
	Educate and inform the Public on the ordinance adoption.						Public Works/Public Information Officer	Compile the type and distribution techniques to educate the public on the update ordinance.
	Implement the ordinance and prohibit discharges according to the permit.						Public Works	Record the number of ordinance violations and compare with prior years to assess ordinance effectiveness.
MS4 Staff Training	Provide annual training to City staff who will conduct construction site inspections.						Public Works	Document the number of training classes provided on construction site stormwater runoff control and the names/number of staff participating.

Begins Permit Year 1	Begins Permit Year 2	Begins Permit Year 3	Begins Permit Year 4	Begins Permit Year 5

6. MCM4: POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

6.1 OVERVIEW

Post-construction stormwater management in new development and redevelopment focuses on the implementation of controls to maintain good water quality conditions after an area has been developed. New development can also have a significant effect on water quality because during the course of development, natural landscapes are often replaced by impermeable roads, parking lots, sidewalks and other paved surfaces that lead to increases in both the volume of stormwater runoff and the accompanying pollutants that reach local water bodies.

The MS4s are required to develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale that discharge to the small MS4. The program must ensure that controls are in place to prevent or minimize water quality impacts.

6.2 TPDES PHASE II PERMIT REQUIREMENTS

Post Construction Stormwater Management in New Development and Redevelopment

To the extent allowable under state and local law, the MS4 operator must develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre of land, including projects less than one acre that are part of a larger common plan of development or sale that will result in disturbance of one or more acres, that discharge into the small MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts. The permittee shall:

(a) Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for the community;

(b) Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and re-development projects to the extent allowable under state and local law; and

(c) Ensure adequate long-term operation and maintenance of BMPs.

6.3 DISCUSSION OF SCHEDULED STORMWATER PROGRAMS

The City of Copperas Cove will attempt to lessen the amount of contaminates and sediments in the stormwater runoff from new development/redevelopment activities at sites one acre and greater including sites that are part of a larger common plan of development.

6.3.1 BMP No. 1 – Stream Buffer Preservation

In order to further promote stormwater management policies throughout the community, the City will evaluate the need to develop a policy to protect and preserve open space buffer areas and to establish no-mow zones to allow trees and shrubs to reclaim disturbed stream banks. The objective of this BMP is to reduce pollution and its effects by limiting maintenance operations near natural watercourses by leaving a buffer area that is natural and uncut.

Measurable Goals:

- Continue to encourage the preservation of stream buffers and inclusions of appropriate BMPs at outfalls into natural channels.

Evaluation:

- Record the number of stream buffer preservation design elements submitted.

6.3.2 BMP No. 2 – System Inspections

The City of Copperas Cove will develop and implement procedures for conducting dry weather screening on outfalls as part of its system inspection program. The City will conduct the dry weather screening to ensure that post-construction control measures were implemented correctly.

Measurable Goals:

- Conduct dry weather screenings of post-construction control measures.

Evaluation:

- Track the number of screenings performed annually.

6.3.3 BMP No. 3 - Post-Construction Ordinance

The City of Copperas Cove will develop an ordinance and modify existing ordinances to require management of post-construction stormwater in new development and redevelopment. The ordinance will allow the City to develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb one acre or

more. Also included are projects less than one acre that are part of a larger common plan of development or sale that will result in disturbance of one or more acres that discharge into the small MS4.

In developing this ordinance, the City must decide at what level stormwater management standards of redevelopment project will be held. Providing cost effective stormwater treatment at redevelopment sites is often difficult, and these projects maybe given reduced criteria to meet or non-structural requirements to allow for site constraints.

Measurable Goals:

- Evaluate existing ordinances for post-construction and significant redevelopment. Modify, develop and implement ordinances, as needed.
- Review existing criteria and integrate considerations for drainage and water quality.

Evaluation:

- Document changes to ordinances, if any.
- Adopt modified ordinance.

6.3.4 BMP No. 4 – Post-Construction Development Review Procedures

In order to reflect the adoption of a post-construction stormwater management development code requiring post-construction controls for new development and redevelopment, the City's existing development review procedures will be examined and revised, if necessary. In addition, the City will integrate post-construction stormwater quality requirements into the existing inspection programs. In order to address stormwater quality issues throughout the development process, the City will incorporate the review of stormwater quality features into the plan review process.

Measurable Goals:

- Develop Drainage Criteria Manual including specific language for sedimentation and erosion control.
- Review submitted plans for compliance with floodplain requirements, adequacy of infrastructure design for drainage, use of detention ponds, etc.
- Enforce post-construction stormwater quality requirements.

Evaluation:

- Document review process during development of Drainage Criteria Manual.
- Record the number of plans reviewed and compare with number of plans submitted.
- Report the number of post-construction activities not meeting the City's stormwater quality requirements. Document and maintain records of enforcement actions taken.

6.3.5 BMP No. 5 – Long-term Operation and Maintenance Program

The effectiveness of post-construction control measures depends upon the regular inspection and maintenance of stormwater control measures. The City of Copperas Cove will develop an operation and maintenance program to integrate post-construction stormwater quality requirements into the plan review process. The City will revise the plan review process to require developers to submit plans and provisions for the long-term maintenance of any stormwater structural controls installed and implemented within their development in order to maintain stormwater quality.

Routine maintenance of stormwater structural controls assist in the identification and repair of problems associated with the system before the problems become serious. In order to ensure that proper operation and maintenance procedures are performed, the City will develop a process for permitting and inspecting the stormwater structural controls installed throughout the community.

Measurable Goals:

- Review existing development plans and procedures to ensure long-term maintenance of structural controls, and revise them as necessary.
- Implement updated maintenance program.
- Enforce long-term operation and maintenance program requirements.

Evaluation:

- Document revisions made to long-term operation and maintenance programs.
- Report the number of maintenance activities.
- Report the number of long-term operation and maintenance activities not meeting the City's stormwater quality requirements. Document and maintain records of enforcement actions taken.

TABLE 6-1
POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

Best Management Practice	Measurable Goals	Permit Years					Key Departments/Divisions	Evaluation
		1	2	3	4	5		
Stream Buffer Preservation	Continue to encourage the preservation of stream buffers and inclusions of appropriate BMPs at outfalls into natural channels.						Public Works	Record the number of stream buffer preservation design elements submitted.
System Inspections	Conduct dry weather screening on post-construction control measures.						Public Works	Track the number of screenings performed annually.
Post-Construction Ordinance	Evaluate existing ordinances for post-construction and significant redevelopment, including enforcement procedures. Modify, develop and implement ordinances, as needed.						Public Works	Document changes to ordinances, if any.
	Review existing criteria and integrate considerations for drainage and water quality.						Public Works	Adopt modified ordinance.
Post-Construction Development Review Procedures	Develop Drainage Criteria Manual including specific language for sedimentation and erosion control.						Public Works	Document review process during development of Drainage Criteria Manual.
	Review submitted plans for compliance with floodplain requirements, adequacy of infrastructure design for drainage, use of detention ponds, etc.						Public Works	Record the number of plans reviewed and compare with number of plans submitted.
	Enforce post-construction stormwater quality requirements.						Public Works	Report the number of post-construction activities not meeting the City's stormwater quality requirements. Document and maintain records of enforcement actions taken.
Long-term Operation and Maintenance Program	Review existing development plans and procedures to ensure long-term maintenance of structural controls, and revise them as necessary.						Public Works	Document revisions made to long-term operation and maintenance programs.
	Implement updated maintenance program.						Public Works	Report the number of maintenance activities.
	Enforce long-term operation and maintenance program requirements.						Public Works	Report the number of long-term operation and maintenance activities not meeting the City's stormwater quality requirements. Document and maintain records of enforcement actions taken.

Begins Permit Year 1	Begins Permit Year 2	Begins Permit Year 3	Begins Permit Year 4	Begins Permit Year 5

7. MCM5: POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

7.1 OVERVIEW

Municipalities conduct a variety of activities throughout their daily operations, which have the potential to affect water quality throughout the community. With the adoption and implementation of stormwater management policies and procedures, the City of Copperas Cove will protect stormwater quality and continue to deliver public services at the present service levels. A variety of municipal operations will be affected by stormwater management policies and procedures. These municipal operations include, but are not limited to, parks maintenance, open space management, road and rights-of-way maintenance, water/wastewater water utilities, fleet and building maintenance, city construction projects, and stormwater system maintenance.

7.2 TPDES PHASE II PERMIT REQUIREMENTS

Pollution Prevention/Good Housekeeping for Municipal Operations

A section within the SWMP must be developed to establish an operation and maintenance program, including an employee-training component, which has the ultimate goal of preventing or reducing pollutant runoff from municipal operations.

(a) Good Housekeeping and Best Management Practices (BMPs)

Housekeeping measures and BMPs (which may include new or existing structural or non-structural controls) must be identified and either continued or implemented with the goal of preventing or reducing pollutant runoff from municipal operations. Examples of municipal operations and municipally owned areas include, but are not limited to:

(1) park and open space maintenance;
(2) street, road, or highway maintenance;
(3) fleet and building maintenance;
(4) stormwater system maintenance;
(5) new construction and land disturbances;
(6) municipal parking lots;
(7) vehicle and equipment maintenance and storage yards;
(8) waste transfer stations; and
(9) salt/sand storage locations.

(b) Training

A training program must be developed for all employees responsible for municipal operations subject to the pollution prevention/good housekeeping program. The training program must include training materials directed at preventing and reducing stormwater pollution from municipal operations. Materials may be developed, or obtained from the EPA, states, or other organizations and sources. Examples or descriptions of training materials being used must be included in the SWMP.

(c) Structural Control Maintenance

If BMPs include structural controls, maintenance of the controls must be performed at a frequency determined by the MS4 operator and consistent with maintaining the effectiveness of the BMP. The SWMP must list all of the following:

(1) maintenance activities;
(2) maintenance schedules; and
(3) long-term inspection procedures for controls used to reduce floatables and other pollutants.

(d) Disposal of Waste

Waste removed from the small MS4 and waste that is collected as a result of maintenance of stormwater structural controls must be properly disposed. A section within the SWMP must be developed to include procedures for the proper disposal of waste, including:

(1) dredge spoil;
(2) accumulated sediments; and
(3) floatables.

(e) Municipal Operations and Industrial Activities

The SWMP must include a list of all:

(1) municipal operations that are subject to the operation, maintenance, or training program developed under the conditions of this section; and

(2) municipally owned or operated industrial activities that are subject to TPDES industrial stormwater regulations.

7.3 DISCUSSION OF STORMWATER PROGRAMS

The City of Copperas Cove will examine multiple internal operations to see if they can be maintained or modified to prevent or minimize stormwater pollution or illicit discharges.

7.3.1 BMP No. 1 – Staff Training

The City will review and revise their current employee-training program. The purpose of the program is to prevent and reduce stormwater pollution from activities such as park maintenance, fleet and building maintenance, new construction, land disturbance, and stormwater system maintenance and promote good housekeeping procedures. Training programs ensure that stormwater quality programs are properly implemented and BMPs are properly installed and maintained. In addition, ensuring proper management practices can reduce the need for costly structural controls. City staff will develop a training curriculum by incorporating the City's own stormwater management policies and procedures with educational materials obtained through the EPA, the TCEQ, and additional MS4 entities throughout the country.

Measurable Goals:

- Provide annual training to staff regarding pollution prevention and good housekeeping.

Evaluation:

- Track the number of employees trained and the hours spent on training.

7.3.2 BMP No. 2 – Safe Material Storage (and Disposal of Waste Material)

The City of Copperas Cove will conduct an inventory of all storage locations and the types of materials utilized in municipal operations. The storage locations will be assessed for adequacy of storage and measures of stormwater protection. Any unused or potentially harmful materials will be recycled or properly disposed of. Staff will identify, implement, and maintain stormwater quality BMPS at storage facilities.

Measurable Goals:

- Evaluate, update, and implement storage/waste disposal program, as needed.

Evaluation:

- Document changes to program, if any.

7.3.3 BMP No. 3 - Permittee-owned Facilities and Control Inventory

The City of Copperas Cove will develop and maintain an inventory of all facilities and stormwater controls owned and operated by the City within the regulated areas of the small MS4. The inventory will help identify the need for stormwater management BMPs at each facility and an implementation plan for the effective management of the BMPs.

Measurable Goals:

- Perform initial inventory and document.
- Compile list of all TCEQ and other applicable permit numbers.
- Maintain inventory.

Evaluation:

- Document creation of inventory.
- Record and report all applicable permit numbers.
- Record and report updates to inventory data.

7.3.4 BMP No. 4 - Municipal Operations and Facility Activities

The City of Copperas Cove operates and maintains a variety of facilities and structural controls that have the potential to affect stormwater quality. The goal of the survey will be to assess the City's operations and maintenance practices, identify pollutants of concern, develop and implement a set of pollution prevention measures to reduce the discharge of pollutants in stormwater and perform pollution prevention inspection measures. The information collected during the survey will serve as a baseline for BMP development and implementation at each facility.

Measurable Goals:

- Perform a municipal operations and facility survey.
- Revise policies and procedures to implement stormwater BMPs as deemed necessary in the municipal operations and facility survey.

Evaluation:

- Report the number of facilities surveyed and compare the number to the total number of City facilities.
- Track the development and implementation of the stormwater BMPs.

7.3.5 BMP No. 5 – Fleet and Equipment Maintenance

The City of Copperas Cove will evaluate the operation and maintenance procedures of their current fleet and equipment maintenance to determine the needs, potential design, and implementation of a fleet and equipment maintenance program. Currently, the City does not have a vehicle and equipment wash facility of its own. Depending on the evaluation of the City's needs, a car wash bay(s) may need to be constructed to further protect the water quality of the City's waterways. As part of the implementation of this program, the City will develop a policy requiring all City departments to wash city vehicles and equipment at the new car wash bay, if constructed, or procedures to address possible pollution to the City's stormwater quality due to fleet and equipment washing.

Measurable Goals:

- Evaluate the needs, potential design, and implementation of a fleet and equipment maintenance program.
- Construct and utilize a car/truck wash bay(s), if found to be necessary.
- Implement fleet and equipment maintenance program.

Evaluation:

- Document evaluation, potential design, and implementation of a fleet and equipment maintenance program.
- Document construction of wash bay(s) or reasons why wash bays were not needed.
- Document and report implementation program developed.

7.3.6 BMP No. 6 - Structural Control and Maintenance Program

The City of Copperas Cove will develop and implement a structural control and maintenance program with the goal of preventing or reducing pollutant run-off from municipal operation into the storm sewer system. The operations to be included in this process shall include: park and open space maintenance, street maintenance, fleet and building maintenance, stormwater system maintenance, new construction and land disturbances, municipal parking lots, vehicle and equipment maintenance and storage yards, waste transfer stations, salt/sand storage locations, waste disposal from municipal operations, and structural control maintenance for BMPs. The program will include a list of all maintenance activities, maintenance schedules, and long-term inspection procedures for controls used to reduce floatables and other pollutants. As part of the program, procedures for the proper disposal of waste from structural controls and maintenance activities will be included.

Measurable Goals:

- Review City operations and maintenance activities.
- Create list of all municipal activities to be included in the program.

- Develop and implement a program to reduce pollutant runoff caused by municipal operations.
- Develop and implement more detailed storm sewer cleaning plan.

Evaluation:

- Document review of existing operations and maintenance activities.
- Record and report list of activities to be included in program.
- Adopt program.

7.3.7 BMP No. 7 – Contractor Requirements and Oversight

The City of Copperas Cove will work with local contractors that have the potential to affect stormwater quality runoff. The City will also make sure that such contractors adopt the City's stormwater quality practices.

Measurable Goals:

- Upon expiration of existing contracts that relate to City owned properties and have the potential of impacting stormwater quality, City will evaluate and revise contracts to adopt City stormwater quality BMPs..
- Implement revised contracts.

Evaluation:

- Record and report the number of landscaping contracts that follow the City adopted stormwater quality BMPs.
- Have new contracts adopt the City’s stormwater program.

TABLE 7-1
POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

Best Management Practice	Measurable Goals	Permit Years					Key Departments/Divisions	Evaluation
		1	2	3	4	5		
Staff Training	Provide annual training to staff regarding pollution prevention and good housekeeping.						Public Works/Parks/Planning	Track the number of employees trained and the hours spent on training.
Safe Material Storage (and Disposal of Waste Material)	Evaluate, update and implement storage/waste disposal program, as needed.						Public Works	Document changes to program, if any.
Permittee-owned Facilities and Control Inventory	Perform initial inventory and document.						Public Works	Document creation of inventory.
	Compile list of all TCEQ and other applicable permit numbers.						Public Works	Record and report all applicable permit numbers.
	Maintain inventory.						Public Works	Record and report updates to inventory data.
Municipal Operations and Facility Activities	Perform a municipal operations and facility survey.						Public Works	Report the number of facilities surveyed and compare the number to the total number of City facilities.
	Revise policies and procedures to implement storm water BMPs as deemed necessary in the municipal operations and facility survey.						Public Works	Track the development and implementation of the storm water BMPs.
Fleet and Equipment Maintenance	Evaluate the needs, potential design, and implementation of a fleet and equipment maintenance program.						Public Works	Document evaluation, potential design, and implementation of a fleet and equipment maintenance program.
	Construct and utilize a car/truck wash bay(s), if found to be necessary.						Public Works	Document construction of wash bay(s) or reasons why wash bays were not needed.
	Implement fleet and equipment maintenance program.						Public Works	Document and report implementation program developed.
Structural Control and Maintenance Program	Review City operations and maintenance activities.						Public Works	Document review of existing operations and maintenance activities.
	Create list of all municipal activities to be included in the program.						Public Works	Record and report list of activities to be included in program.
	Develop and implement a program to reduce pollutant runoff caused by municipal operations.						Public Works	Report program.

TABLE 7-1 POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS								
Best Management Practice	**Measurable Goals**	**Permit Years**					**Key Departments/Divisions**	**Evaluation**
		1	**2**	**3**	**4**	**5**		
Contractor Requirements and Oversight	Upon expiration of existing contracts that relate to City owned properties and have the potential of impacting stormwater quality, City will evaluate and revise contracts to adopt City stormwater quality BMPs.						Public Works	Record and report the number of landscaping contracts that follow the City adopted storm water quality BMPs
	Implement revised contracts.							Have new contracts adopt City's stormwater program.

Begins Permit Year 1	Begins Permit Year 2	Begins Permit Year 3	Begins Permit Year 4	Begins Permit Year 5

8. RECORDKEEPING AND REPORTING

As detailed in TPDES General Permit TXR040000, the City must document and report the implementation of all stormwater BMPs throughout the course of the permit period, and the TCEQ will require that the City submit annual reports to document the development and implementation of the SWMP.

8.1 RECORDKEEPING

In order to properly evaluate the success of the SWMP, the City must document the development and implementation of all stormwater programs throughout the permit period, and as referenced in the TPDES general permit, the City must comply with a series of recordkeeping requirements:

- Retain all records, a copy of the TPDES general permit, and records of all data used to complete the application (NOI) for the general permit.
- Satisfy the public participation requirements, for a period of at least three years, or for the remainder of the term of this general permit, whichever is longer.
- The SWMP required by this general permit (including a copy of the general permit) must be retained at a location accessible to the TCEQ.
- Make the NOI and the SWMP available to the public if requested to do so in writing. Copies of the SWMP must be made available within 10 working days of receipt of a written request. Other records must be provided in accordance with the Texas Public Information Act.

As previously referenced, a copy of the SWMP and all annual reports will be accessible on the City's stormwater website. Individuals may also contact the City to request additional program documentation. Reference the TPDES general permit for additional information regarding recordkeeping requirements.

8.2 REPORTING

The TPDES general permit requires that the City report to the TCEQ throughout the permit period and comply with specific reporting requirements:

- ***Noncompliance Notification*** - According to 30 TAC 305.125 (9), any noncompliance which may endanger human health or safety, or the environment, must be reported by the permittee to the TCEQ.
- ***Other Information*** – When the permittee becomes aware that it either submitted incorrect information or failed to submit complete and accurate information requested in an NOI, NOT, or NOC, or any other report, it must promptly submit the facts or information to the executive director.

- ***Annual Report*** – The MS4 operator must submit a concise annual report to the executive director within 90 days of the end of each permit year. The annual report must address the previous permit year and include the following information:

    - The status of the compliance with permit conditions, an assessment of the appropriateness of the identified BMPs, progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, the measurable goals for each of the minimum control measures, and an evaluation of the success of the implementation of the measurable goals;

    - Status of any additional control measures implemented by the permittee (if applicable);

    - Any minimum control measure activities initiated before permit issuance may be included, under the appropriate headings, as part of the first year's annual report;

    - A summary of the results of information (including monitoring data) collected and analyzed, if any, during the reporting period used to assess the success of the program at reducing the discharge of pollutants to the MEP;

    - A summary of the stormwater activities the MS4 operator plans to undertake during the next reporting cycle;

    - Proposed changes to the SWMP, including changes to any BMPs or any identified measurable goals that apply to the program elements;

    - The number of municipal construction activities authorized under this general permit and the total number of acres disturbed;

    - The number of non-municipal construction activities that occurred within the jurisdiction of the permittee (as noticed to the permittee by the construction operator);

    - Notice that the MS4 operator is relying on another government entity to satisfy some of its permit obligations (if applicable);

    - Each permittee must sign and certify the annual report in accordance with 30 TAC 305.128 (relating to Signatories to Reports); and

    - The annual report must be submitted to the following address:

Texas Commission on Environmental Quality
Stormwater & Pretreatment Team; MC – 148
P.O. Box 13087
Austin, Texas 78711-3087

REFERENCES

Texas Pollutant Discharge Elimination System General Permit No. TXR040000, General Permit to Discharge Under the Texas Pollutant Discharge Elimination System. Texas Commission on Environmental Quality. 28 September 2007 <http://www.tceq.state.tx.us/assets/public/permitting/waterquality/attachments/stormwater/txr040000.pdf>.

Title 40, Part 122 of the Code of Federal Regulations (40 CFR 122). 26 September 2007. GPO Access. 28 September 2007 <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=cd5a2e8a88a287e0c3e997c992a380d6&tpl=/ecfrbrowse/Title40/40cfr122_main_02.tpl>

APPENDIX A: DEFINITIONS AND TERMINOLOGY

I. DEFINITIONS

Arid Areas – Areas with an average annual rainfall of less than ten (10) inches.

Best Management Practices (BMPs) – Schedules of activities, prohibitions of practices, maintenance procedures, structural controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spills or leaks, waste disposal, or drainage from raw material storage areas.

Catch Basins – Storm drain inlets and curb inlets to the storm drain system. Catch basins typically include a grate or curb inlet that may accumulate sediment, debris, and other pollutants.

Classified Segment – A water body that is listed and described in Appendix A or Appendix C of the Texas Surface Water Quality Standards, at 30 Texas Administrative Code (TAC) § 307.10.

Clean Water Act (CWA) - The Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972, Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et. seq.

Common Plan of Development or Sale - A construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. A common plan of development or sale is identified by the documentation for the construction project that identifies the scope of the project, and may include plats, blueprints, marketing plans, contracts, building permits, a public notice or hearing, zoning requests, or other similar documentation and activities.

Construction Activity – Soil disturbance, including clearing, grading, and excavating; and not including routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site (e.g. the routine grading of exiting dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities). Regulated construction activity is defined in terms of small and large construction activity.

> **Small Construction Activity** is construction that results in land disturbances of equal to or great than one (1) acre and less than five (5) acres of land. Small construction activity also includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one (1) and less than five (5) acres of land.
>
> **Large Construction Activity** is construction that results in land disturbances of equal to or great than five (1) acres of land. Large construction activity also includes the disturbance of less than five (5) acres of total land area that is part of a larger common

plan of development or sale if the larger common plan will ultimately disturb equal to or greater than five (5) acres of land.

Construction Site Operator - The person or persons associated with a small or large construction project that meets either of the following two criteria:

(a) The entity or entities that have operational control over construction plans and specifications (including approval of revisions) to the extent necessary to meet the requirements and conditions of this general permit; or

(b) The entity or entities that have day-to-day operational control of those activities at a construction site that are necessary to ensure compliance with a stormwater pollution prevention plan (SWP3) for the site or other permit conditions (for example, they are authorized to direct workers at a site to carry out activities required by the SWP3 or comply with other permit conditions).

Control Measures – Any BMP or other method used to prevent or reduce the discharge of pollutants to water in the state.

Conveyance - Curbs, gutters, man-made channels and ditches, drains, pipes, and other constructed features designed or used for flood control or to otherwise transport stormwater runoff.

Discharge - When used without a qualifier, refers to the discharge of stormwater runoff or certain non-stormwater discharges as allowed under the authorization of this general permit.

Edwards Aquifer – As defined in 30 TAC § 213.3 (relating to the Edwards Aquifer), that portion of an arcuate belt of porous, water-bearing, predominantly carbonate rocks known as the Edwards and Associated Limestone in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, Edwards Formation, and Georgetown Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut Formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally.

Edwards Aquifer Recharge Zone – Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as that area designated as such on official maps located in the offices of the TCEQ or the TCEQ website.

Final Stabilization - A construction site where either of the following conditions are met:

(a) All soil disturbing activities at the site have been completed and a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70

percent of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

(b) For individual lots in a residential construction site by either:

(1) the homebuilder completing final stabilization as specified in condition (a) above; or

(2) the homebuilder establishing temporary stabilization for an individual lot prior to the time of transfer of the ownership of the home to the buyer and after informing the homeowner of the need for, and benefits of, final stabilization.

(c) For construction activities on land used for agricultural purposes (e.g. pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to a surface water and areas which are not being returned to their preconstruction agricultural use must meet the final stabilization conditions of condition (a) above.

General Permit – A permit issued to authorize the discharge of waste into or adjacent to water in the state for one or more categories of waste discharge within a geographical area of the state or the entire state as provided by Texas Water Code (TWC) § 26.040.

Ground Water Infiltration - For the purposes of this permit, groundwater that enters a municipal separate storm sewer system (including sewer service connections and foundation drains) through such means as defective pipes, pipe joints, connections, or manholes.

High Priority Facilities – High priority facilities are facilities with a high potential to generate stormwater pollutants. These facilities must include, at a minimum, the MS4 operator's maintenance yards, hazardous waste facilities, fuel storage locations, and other facilities where chemicals or other materials have a high potential to be discharged in stormwater. Among the factors that must be considered when giving a facility a high priority ranking are: the amount of urban pollutants stored at the site, the identification of improperly stored materials, activities that must not be performed outside (for example, changing automotive fluids, vehicle washing), proximity to water bodies, proximity to sensitive aquifer recharge features, poor housekeeping practices, and discharge of pollutant(s) of concern to impaired water(s).

Hyperchlorinated Water – Water resulting from hyperchlorination of waterlines or vessels, with a chlorine concentration greater than 10 milligrams per liter (mg/L).

Illicit Connection – Any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

Illicit Discharge – Any discharge to a municipal separate storm sewer that is not entirely composed of stormwater, except discharges pursuant to this general permit or a separate authorization and discharges resulting from emergency firefighting activities.

Impaired Water – A surface water body that is identified on the latest approved CWA § 303(d) List as not meeting applicable state water quality standards. Impaired waters include waters with approved or established total maximum daily loads (TMDLs), and those where a TMDL has been proposed by TCEQ but has not yet been approved or established.

Indian Country – Defined in 18 USC Section § 1151, means (a) all land within the limits of any Indian reservation under the jurisdiction of the United States (U.S.) Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation; (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. This definition includes all land held in trust for an Indian tribe.

Indicator Pollutant – An easily measured pollutant, that may or may not impact water quality that indicates the presence of other stormwater pollutants.

Industrial Activity – Any of the ten (10) categories of industrial activities included in the definition of "stormwater discharges associated with industrial activity" as defined in 40 Code of Federal Regulations (CFR) § 122.26(b)(14)(i)-(ix) and (xi).

Maximum Extent Possible (MEP) – The technology-based discharge standard for municipal separate storm sewer systems (MS4s) to reduce pollutants in stormwater discharges that was established by the CWA § 402(p). A discussion of MEP as it applies to small MS4s is found in 40 CFR § 122.34.

MS4 Operator – For the purpose of this permit, the public entity or the entity contracted by the public entity, responsible for management and operation of the small municipal separate storm sewer system that is subject to the terms of this general permit.

Municipal Separate Storm Sewer System (MS4) – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

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

(b) That is designated or used for collecting or conveying stormwater;

(c) That is not a combined sewer; and

(d) That is not part of a publicly owned treatment works (POTW) as defined in 40 CPR § 122.2.

Non-traditional Small MS4 – A small MS4 that often cannot pass ordinances and may not have the enforcement authority like a traditional small MS4 would have to enforce the stormwater management program. Examples of non-traditional small MS4s include counties, transportation authorities (including the Texas Department of Transportation), municipal utility districts, drainage districts, military bases, prisons and universities.

Notice of Change (NOC) – A written notification from the permittee to the executive director providing changes to information that was previously provided to the agency in a notice of intent.

Notice of Intent (NOI) – A written submission to the executive director from an applicant requesting coverage under this general permit.

Notice of Termination (NOT) – A written submission to the executive director from a permittee authorized under a general permit requesting termination of coverage under this general permit.

Outfall – A point source at the point where a small MS4 discharges to waters of the U.S. and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels, or other conveyances that connect segments of the same stream or other waters of the U.S. and are used to convey waters of the U.S. For the purpose of this permit, sheet flow leaving a linear transportation system without channelization is not considered an outfall. Point sources such as curb cuts, traffic or right-of-way barriers with drainage slots that drain into open culverts, open swales or an adjacent property, or otherwise not actually discharging into waters of the U.S. are not considered an outfall.

Permittee – The MS4 operator authorized under this general permit.

Point Source – (from 40 CFR § 122.22) any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

Pollutant(s) of Concern – For the purpose of this permit, includes biochemical oxygen demand (BOD), sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation), pathogens, oil and grease, and any pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from an MS4. (Definition from 40 CFR § 122.32(e)(3)).

Redevelopment – Alterations of a property that changed the "footprint" of a site or building in such a sway that there is a disturbance of equal to or greater than one (1) acre of land. This term

does not include such activities as exterior remodeling, routine maintenance activities, and linear utility installation.

Semiarid Areas – Areas with an average annual rainfall of at least ten (10) inches, but less than 20 inches.

Small Municipal Separate Storm Sewer System (MS4) – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

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

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

(c) Which is not a combined sewer;

(d) Which is not part of a publicly owned treatment works (POTW) as defined at 40 CFR § 122.2; and

(e) Which was not previously authorized under a National Pollutant Discharge Elimination System (NPDES) or a Texas Pollutant Discharge Elimination System (TPDES) individual permit as a medium or large municipal separate storm sewer system, as defined at 40 CFR §§ 122.26(b)(4) and (b)(7).

This term includes systems similar to separate storm sewer systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. This term does not include separate storm sewers in discrete areas, such as individual buildings. For the purpose of this permit, a discrete system also includes storm drains associated with certain municipal offices and education facilities serving a nonresidential population, where those storm drains do not function as a system, and where the buildings are not physically interconnected to an MS4 that is also operated by that public entity.

Stormwater and Stormwater Runoff – Rainfall runoff, snow melt runoff, and surface runoff and drainage.

Stormwater Associated with Construction Activity – Stormwater runoff from an area where there is either a large construction activity or a small construction activity.

Stormwater Management Program (SWMP) - A comprehensive program to manage the quality of discharges from the municipal separate storm sewer system.

Structural Control (or Practice) - A pollution prevention practice that requires the construction of a device, or the use of a device, to capture or prevent pollution in stormwater runoff. Structural controls and practices may include but are not limited to: wet ponds, bioretention, infiltration basins, stormwater wetlands, silt fences, earthen dikes, drainage swales, vegetative lined ditches, vegetative filter strips, sediment traps, check dams, subsurface drains, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

Surface Water in the State – Lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state (from the mean high water mark (MHWM) out 10.36 miles into the Gulf), and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or non-navigable, and including the beds and banks of all water-courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state; except that waters in treatment systems which are authorized by state or federal law, regulation, or permit, and which are created for the purpose of waste treatment are not considered to be water in the state.

Total Maximum Daily Load (TMDL) – The total amount of a substance that a water body can assimilate and still meet the Texas Surface Water Quality Standards.

Traditional Small MS4 – A small MS4 that can pass ordinances and have the enforcement authority to enforce the stormwater management program. An example of traditional MS4s includes cities.

Urbanized Area (UA) – An area of high population density that may include multiple MS4s as defined and used by the U.S. Census Bureau in the 2000 and 2010 Decennial census.

Waters of the United States - (from 40 CFR § 122.2) Waters of the United States or waters of the U.S. means:

(a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(b) All interstate waters, including interstate wetlands;

(c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds that the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:

(1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;

(2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or

(3) Which are used or could be used for industrial purposes by industries in interstate commerce;

(d) All impoundments of waters otherwise defined as waters of the United States under this definition;

(e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

(f) The territorial sea; and

(g) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR§ 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water, which neither were originally created in waters of the U.S. (such as disposal area in wetlands) nor resulted from the impoundment of waters of the U.S. Waters of the U.S. do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

II. COMMONLY USED ACRONYMS

BMP	Best Management Practice
CFR	Code of Federal Regulations
CGP	Construction General Permit, TXR150000
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency
FR	Federal Register
IP	Implementation Procedures
MCM	Minimum Control Measure
MSGP	Multi-Sector General Permit, TXR050000
MS4	Municipal Separate Storm Sewer System
NOC	Notice of Change
NOD	Notice of Deficiency
NOI	Notice of Intent
NOT	Notice of Termination (to terminate coverage under a general permit)
NPDES	National Pollutant Discharge Elimination System
SWMP	Stormwater Management Program
SWP3	Stormwater Pollution Prevention Plan
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TPDES	Texas Pollutant Discharge Elimination System
TWC	Texas Water Code