



CITY OF CHANDLER

STORMWATER
MANAGEMENT PROGRAM

Prepared By:

Michael Baker

I N T E R N A T I O N A L
2929 N Central Ave., Suite 800
Phoenix, AZ 85012

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1 Executive Summary

This Stormwater Management Program (SWMP) has been prepared for the City of Chandler (City) to comply with the Arizona Department of Environmental Quality's (ADEQ) Arizona Pollutant Discharge Elimination System (AZPDES), General Permit for Stormwater Discharges from Small Municipal Storm Sewer Systems, AZG2016-002.

This SWMP provides an overview of the Best Management Practices (BMPs) that have been selected by the City to comply with the permit requirements.

The intent of this SWMP, when implemented is to reduce the discharge of pollutants from Chandler's municipal separate storm sewer system (MS4) to the "maximum extent practicable" (MEP). The City will be responsible for the administration and implementation of this SWMP.

As required by the Permit, the SWMP addresses the six minimum control measures (MCMs):

1. Public Education and Outreach
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination (IDDE) Program
4. Construction Activity Stormwater Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention and Good Housekeeping for Municipal Operations

The Permit was issued by ADEQ effective on September 30, 2016 and will expire on September 29, 2021. If ADEQ does not reissue the general permit before the expiration date, this permit will be administratively continued until a new one is issued.

2 Certification Statement

Permittee Name: City of Chandler

Permit Number: AZG2016-002

Stormwater Management Program Contact

Name: David Verhelst

Title: Stormwater Programs Coordinator

Mailing Address:

PO Box 4008 Mail Stop 909

Chandler, AZ 85244

Phone: (480) 782-3503

Fax: (480) 782-3495

Email: david.verhelst@chandleraz.gov

Certifying Official

Name: Marsha Reed

Title: City Manager

Mailing Address:

PO Box 4008 Mail Stop 605

Chandler, AZ 85244

Phone: (480) 782-2210

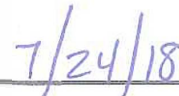
Fax: (480) 782-2209

Email: marsha.reed@chandleraz.gov

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.



Marsha Reed, City Manager



Date

3 Stormwater Management Program

3.1 Regulatory Background

AZPDES permit (AZG2016-002) is established by ADEQ pursuant to the Clean Water Act(CWA) Section 402(p)(3)(iii) to ensure that pollutant discharges from the (MS4s) are reduced to the (MEP), protect water quality, and satisfy the appropriate water quality requirements of the CWA. ADEQ’s 2002 AZPDES general permit required small MS4s to develop and implement SWMPs designed to control pollutants to the MEP and protect water quality. This general permit builds on the requirements of the previous general permit.

3.2 2016 Arizona Pollutant Discharge Elimination System (AZPDES) Small MS4 General Permit

The BMPs associated with each of the six MCMs will be identified in this SWMP for the City of Chandler. Each BMP includes an objective and measurable goals to assess the effectiveness and level of implementation. An implementation “start date” is provided for each of the BMPs, as well as the job titles of the City staff responsible for implementing them in their respective department/division.

In order to evaluate the effectiveness of the SWMP, the City will conduct a yearly review of best management practice effectiveness and report any updates in the annual report each year. The annual report will provide an update on the progress towards meeting the measurable goals.

3.3 Organization of SWMP

This SWMP has been organized into eight sections with their respective appendices. Each section is briefly described below:

Section 1 Executive Summary – Background information on the requirements of the AZPDES General Permit and the organization of the SWMP.

Section 2 Certification Statement

Section 3 Stormwater Management Program – A brief summary of the history and requirements of the City’s stormwater program.

Section 4 Program Management– The goals of the City’s stormwater program, the responsibilities of the City, developers, corporations, and individuals, and the legal authority/enforcement options available to the City.

Section 5 Public Education and Outreach – The purpose of this program is to distribute information, on the importance of clean stormwater runoff, to the general public and targeted business sectors.

Section 6 Public Involvement and Participation – This section outlines the City’s goals for involving the general public in the design of a successful stormwater pollution prevention program, and the methods of involving the public during its implementation.

Section 7 Illicit Discharge Detection and Elimination Program – This section describes the City’s program for prohibiting non-stormwater discharges into the MS4. The methods for detecting non-stormwater discharges, and the education of the public with concentration on target sectors of industry about the hazards of illegal dumping are addressed.

Section 8 Construction Activity Stormwater Runoff Control – The program set forth by the City to reduce polluted stormwater runoff from construction sites is described, and the procedures for review, inspection, and enforcement are described.

Section 9 Post-Construction Stormwater Management in New Development and Redevelopment – This section identifies programs to be carried out by the City to reduce pollution from post-construction BMPs, including both structural and nonstructural BMPs, maintenance of infrastructure, and enforcement of regulations.

Section 10 Pollution Prevention and Good Housekeeping for Municipal Operations – The operations for reducing pollution from routine municipal operations and the City staff’s training programs for stormwater pollution prevention are described in this section.

Section 11 Annual Program Evaluation Protocol – The procedure for reviewing and evaluating the City’s SWMP. The steps for preparing the annual report are also summarized.

Based on necessity, this SWMP will be updated periodically by the City to maintain an effective stormwater quality management program. Minor updates will occur at the staff level and will consist of bookkeeping matters, such as changes in who is responsible for a specific BMP, etc. Major updates will include changes in the SWMP such as the implementation of new BMPs or the discontinuance of ineffective ones, or policy changes.

This SWMP covers discharges from the City of Chandler. The City boundaries as well as the urbanized area boundary based on the 2010 census are shown in Figure 1.

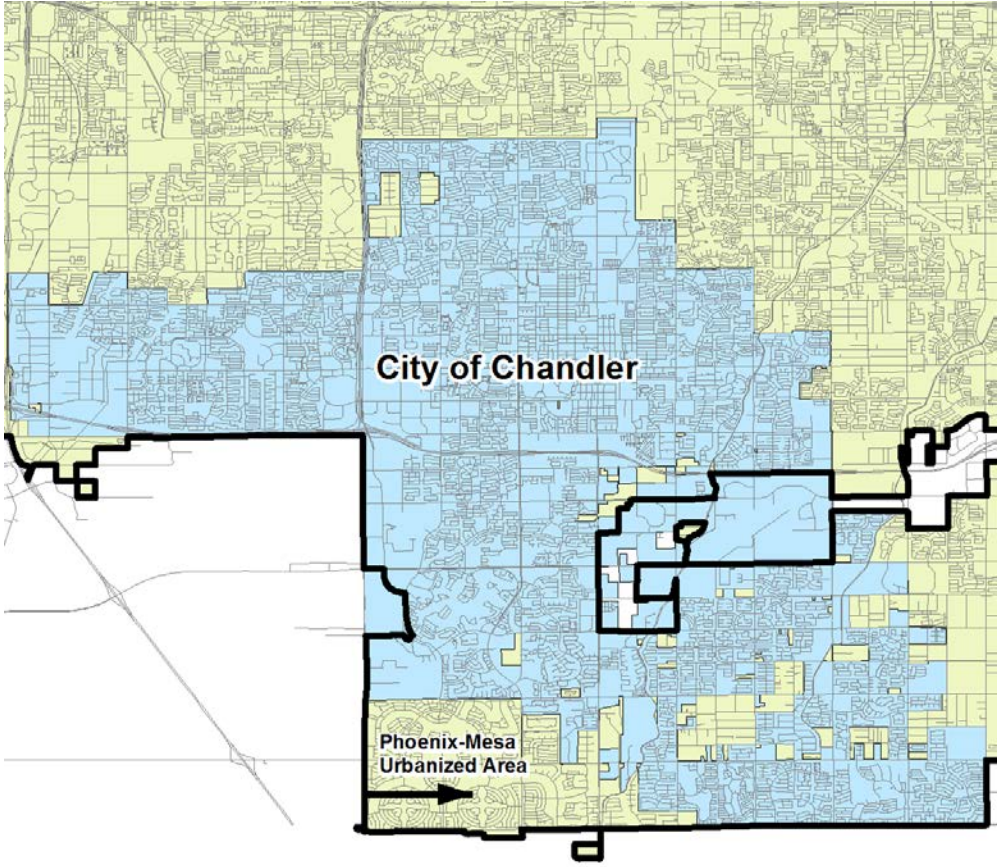


Figure 1 City of Chandler and Surrounding Urbanized Area

4 Program Management

4.1 Overview

The Stormwater Management Program will be implemented on an ongoing basis and will be updated as necessary during the permit term. This section describes the overall objectives of the City's SWMP, some of the local issues specific to the City, departmental implementation of the SWMP, and an overview of the legal authority to implement and enforce the program.

4.2 Discussion of Local Receiving Waters

The City of Chandler is located within the Middle Gila Watershed. This watershed is approximately 12,056 square miles in size and covers 9% of Arizona. The Gila River is the longest river and a predominate feature in the watershed.

Although located within the Middle Gila Watershed, the City of Chandler MS4 system does not directly outfall to any receiving waters in this or any other watersheds. All of the stormwater conveyed by the City of Chandler MS4 is collected and conveyed through the Arizona Department of Transportation (ADOT) stormwater infrastructure and the Gila Drain. A map of the City of Chandler's drainage system is included in Appendix A - Drainage Map.

4.3 Stormwater Management Responsibilities

The stormwater management program will be implemented by City of Chandler departments and staff. Throughout this SWMP, the department responsible for each BMP is identified. The job title responsible for ensuring the implementation of the BMPs assigned to each department is outlined in the BMP summary tables (Appendices A-G). This SWMP is meant to be a living document, and as departments or positions change within the City, the tables will be updated accordingly.

The City's Stormwater program is located in the Public Works & Utilities Department - Streets Division. The City's dedicated Stormwater Programs Coordinator will assume the lead role in the program implementation and coordinate all internal and external activities. The department will also be responsible for the development and submittal of the annual reports to the permitting authority.

4.4 Legal Authority and Enforcement

The City of Chandler has established the legal authority to implement and enforce their stormwater program. The City's legal authority is provided through the Chandler Municipal Code. The City Manager or designee has the authority to enforce the stormwater ordinance

requirements. The applicable city code sections that grant the City the legal authority to implement the stormwater program are summarized below. As part of this permit cycle, the City will review their legal authority to ensure it is compliant with the new permit requirements.

4.4.1 IDDE Enforcement Authority

The City of Chandler has the enforcement authority through their city code and ordinances. The specific code sections that grant the enforcement authority include:

- 1-8 Code enforcement.
- 30-5 Prohibition against creating a public nuisance.
- 30-6.5 Right of entry.
- 45-8 Prohibition on non-stormwater discharges.

4.4.2 Construction Site Stormwater Enforcement Authority

The City of Chandler has the enforcement authority through their city code and ordinances. The specific code sections that grant the enforcement authority include:

- 1-8 Code enforcement.
- 45-1 Construction sites stormwater design requirements.
- 45-2 Compliance with storm drainage regulations.
- 43-5.13 Adopts *City of Chandler Manual on Stormwater Quality Protection* by reference.
- *City of Chandler Manual on Stormwater Quality Protection- Section 3*
 - Requires submittal of an Erosion and Sediment Control Plan to the City's Planning and Development Department prior to the City issuing a grading permit.
 - Requires construction site BMPs to be maintained.
 - Requires prompt cleanup of any non-stormwater discharge.
- 45-1 Construction sites stormwater design requirements.
- 45-2 Compliance with storm drainage regulations.
- 45-8 Prohibition on non-stormwater discharges.

4.4.3 Post-Construction Stormwater Enforcement Authority

The City of Chandler has the enforcement authority through their city code and ordinances. The specific code sections that grant the enforcement authority include:

- 1-8 Code enforcement.
- 43-5.13 Adopts *City of Chandler Manual on Stormwater Quality Protection* by reference.
- *City of Chandler Manual on Stormwater Quality Protection- Section 3*
 - Requires stormwater controls are in place and properly maintained.
 - Requires site owner to correct any deficiencies found through either a City of Chandler or self-inspection.
- 45-2 Compliance with storm drainage regulations.

- 45-3 All stormwater basins shall drain within 36-hours. City granted right to enter onto property to drain basin if necessary.
- 45-8 Prohibition of non-stormwater discharges.

5 MCM–1 Public Education and Outreach

5.1 Overview

The City of Chandler is required to implement a public education and outreach program that will distribute educational materials and provide outreach to the MS4 community. This program is required by Section 6.4.1 of the Permit. The educational materials are required to provide messages for specific audiences regarding the impact of stormwater discharges within the community. Measurable goals must also be developed to assess the effectiveness of the BMPs. The purpose of the public education and outreach programs are to increase public knowledge regarding stormwater, change the behavior of the public, and reduce pollutants in the stormwater.

It is believed that when the public is better informed about stormwater, greater support for the program will exist. In addition, when the public becomes informed of the importance of stormwater pollution prevention, greater compliance with the goals of the program may be found, and a reduced pollutant load will reach the area’s water.

Methods will be developed to evaluate the effectiveness of the educational and outreach programs and tied to the defined goals of the program. The message used for each audience, the method of distribution, and the objective of changes in behavior and knowledge will be used to assess the overall effectiveness of the education program. Ineffective messages or distribution techniques will be modified.

5.2 Selected BMPs

The City of Chandler has evaluated the public education and outreach component of their stormwater program and has identified BMPs to better inform the residents and businesses of the importance of preventing stormwater pollution. The selected BMPs are summarized in Table 1, with a description of each BMP provided in this section. Detailed BMP information is provided in Appendix B- MCM-1 Public Education and Outreach BMP Details.

Table 1 MCM-1 Public Education and Outreach BMP Summary (Appendix B)

BMP	Description
MCM 1-1	Educational Materials
MCM 1-2	Educational Events
MCM 1-3	Stormwater Webpage
MCM 1-4	Regional Coordination

MCM 1-1 Educational Materials

Description: The City of Chandler will promote an education program that increases knowledge on stormwater pollution prevention.

Responsible Department: Public Works & Utilities Department – Streets Division

Measurable Goals: The City will develop and distribute educational materials to promote increased stormwater awareness including articles, brochures, a stormwater webpage, storm drain inlet markers and promotional items on an annual basis. Typical topics may include residential pollution prevention, water conservation, leaking vehicles, pool drainage, household hazardous waste, pet waste, trash management, illegal dumping, restaurants, HOAs, recycling program, webpages and newsletter articles. Materials may be displayed or distributed at City locations or events. Materials will be distributed, evaluated, tracked and modified when necessary. An example of materials distributed will be reported annually.

Target Audience: Primarily the public. Additional target audiences may be evaluated when necessary.

Metrics: The quantity of education materials distributed will be measured and tracked. Additionally, the material medium or type, the general information it contained, and the target audience who received the message, and how it was distributed will be tracked. This may include the number of new informational signs or inlet markers purchased and installed, and the purpose of the sign. The results will be reported annually.

MCM 1-2 Educational Events

Description: The City of Chandler will participate in educational events that provide opportunities to increase knowledge on stormwater related topics.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City will participate in educational events, community events, festivals, workshops and/or open houses. The educational events are tracked and reviewed annually. Updates will be made as necessary.

Target Audience: General public.

Metrics: For public educational events, the number of public events held, a summary of each event, and the number of event participants will be tracked. The number and type of any promotional or educational materials distributed will be tracked. The results will be reported annually.

MCM 1-3 Stormwater Webpage

Description: The City of Chandler will maintain a stormwater webpage to promote education and communication on stormwater related topics.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City's stormwater webpage will be reviewed and/or periodically updated to provide information on stormwater related topics. The webpage will also include a copy of the City's SWMP and annual reports. The information will be tracked and reviewed annually. Updates will be made as necessary.

Target Audience: General public.

Metrics: Number of annual website visitors, the number of total page views, and the number and date of website updates will be tracked. The results will be reported annually.

MCM 1-4 Regional Coordination

Description: The City of Chandler will participate in regional coordination efforts promoting greater public education and outreach.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City will participate in Stormwater Outreach for Regional Municipalities (STORM) and/or professional organizations (i.e. AZ Water; MAG). Participation in programs will be tracked and evaluated annually for effectiveness and modified as necessary.

Target Audience: City staff and general public. The attendance at the meetings will be completed by City staff. Many of the outreach efforts will be to better inform the general public.

Metrics: Participation in professional organizations related to stormwater will be tracked. The number of Chandler staff participating in each meeting and event will be tracked. The number of Chandler staff members serving on an executive board, committee or subcommittee will be tracked. The results will be reported annually.

6 MCM–2 Public Involvement and Participation

6.1 Overview

The second mandated minimum control measure includes seeking the active participation and involvement of the public. The objective of this requirement is to provide opportunities to engage the public to participate in the review and implementation of the City’s SWMP. The public involvement and participation requirements are outlined in Section 6.4.2 of the Permit. Getting the public to actively participate in events related to the stormwater program, and involving the public in the review of the SWMP is believed to result in increased support for the program. Increased support for the program will then lead to a reduction in pollutant loading in the stormwater.

Public participation events may include public meetings, outreach events, contests, and participation in professional organizations.

6.2 Selected BMPs

The City of Chandler has evaluated the public involvement and participation component of their stormwater program and has identified BMPs to better inform the residents and businesses of the importance of preventing stormwater pollution. The selected BMPs are summarized in Table 2, with a description of each BMP provided in this section. Detailed BMP information is provided in Appendix C- MCM-2 Public Involvement and Participation BMP Details.

Table 2 MCM-2 Public Involvement and Participation BMP Summary (Appendix C)

BMP	Description
MCM 2-1	Public Involvement and Participation
MCM 2-2	Regional Coordination
MCM 2-3	Annual SWMP Review

MCM 2-1 Public Involvement and Participation

Description: The City of Chandler will promote public involvement and participation for the public.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City will promote public involvement and participation through a variety of means which may include but not be limited to a community hotline, contact forms, social media, webpages, public meetings, City events/festivals, contests and training sessions. The City will follow public notice requirements for public meetings and track participation when

possible. Public involvement and participation will be tracked and evaluated annually for effectiveness and modified as necessary.

Metrics: The number of calls received by the City Stormwater Hotline will be tracked. The purpose of each public meeting held, the total number of public meetings held, and the number of City and public attendees at each meeting will be tracked. The results will be reported annually.

MCM 2-2 Regional Coordination

Description: The City of Chandler will participate in regional coordination efforts promoting greater public involvement and participation.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City will participate in STormwater Outreach for Regional Municipalities (STORM) and/or other professional organizations (i.e. AZ Water; MAG). Participation in programs will be tracked and evaluated annually for effectiveness and modified as necessary.

Metrics: The number of Chandler staff participating in professional organizations and outreach events will be tracked. The type and number of promotional materials distributed, a description of the event being promoted, and the total number of event attendees will be tracked. The results will be reported annually.

MCM 2-3 Annual SWMP Review

Description: The City of Chandler will promote public involvement and participation in an annual review of the City's Stormwater Management Plan.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The SWMP and Annual Reports will be posted on the City's Stormwater Program website year round. The City will promote a 30 day timeframe for the public to review the plan on an annual basis. The method for review will be evaluated for effectiveness and modified as necessary.

Metrics: Dates for public comment and number of comments received will be reported annually.

7 MCM–3 Illicit Discharge Detection and Elimination Program

7.1 Overview

The third mandated minimum control measure includes evaluating and updating the City’s program to detect and address illicit and non-stormwater discharges to the storm drain system. This program is commonly referred to as an Illicit Discharge Detection and Elimination program or IDDE. The City has developed a Standard Operating Procedure for their IDDE program.

The IDDE requirements based on the new Permit are outlined in Section 6.4.3 of the Permit. A brief summary of the IDDE program requirements is provided below. The City will be evaluating their program and updating the program if necessary to comply with the new Permit.

The objective of the IDDE program is to systematically find and eliminate sources of non-stormwater discharges to the (MS4) and to implement procedures to prevent illicit connections and discharges. It will include processes and procedures designed to prevent, identify, report, and mitigate illicit discharges to and from the MS4, and provide training for City employees involved in the IDDE program.

The IDDE program will be evaluated to address the following elements:

- Visual Dry Weather Outfall Monitoring
- Visual Stormwater Discharge Monitoring at a minimum of five outfalls
- Follow-up screening for identified or suspected illicit discharges

As part of the program, the City will identify procedures to accomplish the following tasks:

- Prohibit illicit discharges
- Investigate suspected illicit discharges
- Eliminate illicit discharges, including discharges from properties not owned or operated by the MS4 that discharge into the MS4 system
- Implement appropriate enforcement procedures and actions

The City’s current enforcement procedures consist of a current effective ordinance as described in Section 4.4.

The program will also include a written statement that clearly identifies program responsibilities for eliminating illicit discharges and identifies the department responsible for implementing the IDDE Program, including any other departments that may have responsibilities in the program.

The program will document the following information for all illicit or suspected illicit discharges:

- Location of the illicit discharge and its source(s)
- Description of the discharge

- Estimated illicit discharge duration (if known)
- Method of discovery
- Date of discovery
- Date of elimination
- Mitigation or enforcement action
- Responsible person (if known)
- Estimated volume (if known)

7.2 Selected BMPs

The City of Chandler has evaluated the illicit discharge detection and elimination program component of their stormwater program and has identified BMPs to better inform the residents and businesses of the importance of preventing stormwater pollution. The selected BMPs are summarized in Table 1, with a description of each BMP provided in this section. Detailed BMP information is provided in Appendix D- MCM-3 Illicit Discharge Detection and Elimination Program BMP Details.

Table 3 MCM-3 Illicit Discharge Detection and Elimination (IDDE) Program BMP Summary (Appendix D)

BMP	Description
MCM 3-1	Storm Sewer System Mapping
MCM 3-2	Legal Authority Review
MCM 3-3	Visual Dry Weather Outfall Monitoring
MCM 3-4	Illicit Discharge Response
MCM 3-5	IDDE Staff Training
MCM 3-6	Visual Stormwater Discharge Monitoring

MCM 3-1 Storm Sewer System Mapping

Description: The City of Chandler’s GIS system will incorporate modifications to the storm sewer system map as new public and private structures are added into the City’s system.

Responsible Department: Development Services Department - Data & Mapping Division

Measurable Goals: GIS features will be added into Chandler’s existing system following final inspections and submittal of as-built information has been confirmed. Additional features may be added and/or revised when necessary.

Metrics: Number of structures added will be reported annually.

MCM 3-2 Legal Authority Review

Description: The City of Chandler will review and update procedures to ensure they are compliant with the new permit.

Responsible Department: Law Department

Measurable Goals: Inspection Standard Operating Procedures and documentation procedures will be evaluated. Updates will be made as necessary.

Metrics: The number of reviews and the document reviewed will be tracked and reported when evaluated.

MCM 3-3 Visual Dry Weather Outfall Monitoring

Description: The City of Chandler will conduct visual dry weather outfall monitoring to ensure there are no illicit discharges, ineffective BMPs, or maintenance concerns.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: Inspections of City structures identified as dry weather screening points will be inspected a minimum of one time per year. The location and/or frequency of inspections may be modified as determined by conditions in the field on an annual basis.

Metrics: The date and location of each inspection will be tracked. The observations made will be recorded and information collected on data collection forms. Locations of structures inspected will be reported annually.

MCM 3-4 Illicit Discharge Response

Description: The City of Chandler will investigate illicit discharges and attempt to identify their source.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City will investigate illicit discharges immediately as noted by City staff, the general public, or complaints received. Investigations will follow SOPs outlined in the IDDE program, and will be resolved as quickly as possible.

Metrics: Number of incidents responded to will be reported annually.

MCM 3-5 IDDE Staff Training

Description: The City of Chandler will provide training for City staff on the illicit discharge detection and elimination program.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: Appropriate City staff will be trained on the IDDE program.

Metrics: The number of training events held will be tracked. The number of City staff attending each training event will be tracked. The results will be reported annually.

MCM 3-6 Visual Stormwater Discharge Monitoring

Description: The City of Chandler will implement a visual stormwater discharge monitoring program.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City will monitor a minimum of 5 representative outfalls two times during each wet season. Selected outfalls will be evaluated annually and modified if necessary.

Metrics: The date and location of each inspection will be tracked. The observations made will be recorded and information collected on data collection forms. Locations of structures inspected will be reported annually.

8 MCM-4 Construction Activity Stormwater Runoff Control

8.1 Overview

The fourth mandated minimum control measure requires the implementation of construction site stormwater runoff control measures. The Construction Activity Stormwater Runoff Control requirements are outlined in Section 6.4.4 of the Permit. The goal of the program is to prevent pollution of stormwater in the MS4 from construction site activities and wastes. The construction activity stormwater runoff control program is required to include the following measures:

- An ordinance or other regulatory mechanism that requires the use of sediment and erosion control practices.
- An inventory of all construction activities that disturb or will disturb one or more acres within the permitted area, including those that are less than one acre but are part of a larger common plan of development that will ultimately disturb greater than one acre.
- Written procedures for site inspections and enforcement of sediment and erosion control measures.
- Inspection frequency based on the following:
 - Phase of construction
 - Proximity to an impaired, not-attaining water or Outstanding Arizona Water;
 - Size of the construction activity (acreage disturbed); and
 - History of non-compliance (site or operator).
- Requirements to take all necessary follow-up actions to ensure compliance
- Requirements for construction operators to implement sediment and erosion control BMPs appropriate for the conditions at the construction activity.
- Requirements to control wastes such as discarded building materials, paints, fertilizers, concrete wash out, chemicals, litter, and sanitary wastes.
- Written procedures for site plan review.

The program must also provide education to contractors and construction personnel on erosion and sediment control best management practices requirements. The public should also be allowed to submit information and considerations for the program.

8.2 Selected BMPs

The City of Chandler has evaluated the construction activity stormwater runoff control component of their stormwater program and has identified BMPs to better inform the contractors of the importance of preventing stormwater pollution. The selected BMPs are summarized in Table 4, with a description of each BMP provided in this section. Detailed BMP information is provided in Appendix E- MCM-4 Construction Activity Stormwater Runoff Control BMP Details.

Table 4 MCM-4 Construction Activity Stormwater Runoff Control BMP Summary (Appendix E)

BMP	Description
MCM 4-1	Site Plan Review
MCM 4-2	Inspections
MCM 4-3	Educational Materials for Construction Activity Stormwater Runoff Control
MCM 4-4	Inventory

MCM 4-1 Site Plan Review

Description: The City of Chandler will maintain a construction plan review program.

Responsible Department: Development Services Department - Development Engineering Division

Measurable Goals: The City of Chandler will perform site plan reviews. Procedures will be reviewed annually and updated as necessary.

Metrics: The total number of construction plan reviews will be reported annually.

MCM 4-2 Inspections

Description: The City of Chandler will maintain a construction inspection program.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City of Chandler will perform construction inspections. Procedures will be reviewed annually and updated as necessary.

Metrics: Number of inspections conducted will be reported annually.

MCM 4-3 Educational Materials for Construction Activity Stormwater Runoff Control

Description: The City of Chandler will review and update educational materials for construction activity stormwater runoff control.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City will review the Construction Activity Stormwater Runoff Control program educational materials and/or brochures annually and update them as necessary.

Metrics: The number of education materials will be tracked. The type of educational material, the location of the distribution, and the number of items distributed will be reported annually.

MCM 4-4 Inventory

Description: The City of Chandler will maintain an inventory of construction sites

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City of Chandler will maintain an inventory of construction sites. Procedures will be reviewed annually and updated as necessary.

Metrics: An example of the inventory of construction sites will be reported annually.

9 MCM-5 Post-Construction Stormwater Management in New Development and Redevelopment

9.1 Overview

The fifth mandated minimum control measure includes developing, implementing, and enforcing a program to address post-construction stormwater pollution from new development and redevelopment projects. The post-construction requirements are outlined in Section 6.4.5 of the Permit.

The program will contain a regulatory mechanism that will specify that owners or operators of new development and redevelopment sites discharging to the MS4, shall design, install, and maintain post-construction stormwater controls. The controls must reduce or eliminate the discharge of pollutants from the site after construction activities are completed. Educational materials will be provided to development owners and operators to help increase awareness and knowledge of post-construction stormwater runoff.

The program will include inspections to evaluate and approve post-construction stormwater controls. It will also contain an inventory system of all post-construction structural stormwater control measures installed and implemented at new development and redeveloped sites. These will include both public and private sector sites located within the permit area that discharge into the MS4. The inventory will be searchable by property location and other relevant criteria.

9.2 Selected BMPs

The City of Chandler has evaluated the post-construction stormwater management in new development and redevelopment component of their stormwater program and has identified BMPs to address stormwater pollution from new development and redevelopment projects. The selected BMPs are summarized in Table 5, with a description of each BMP provided in this section. Detailed BMP information is provided in Appendix F- MCM-5 Post-Construction Stormwater Management in New Development and Redevelopment BMP Details.

Table 5 MCM-5 Post-Construction Stormwater Management in New Development and Redevelopment BMP Summary (Appendix F)

BMP	Description
MCM 5-1	Inspections
MCM 5-2	Educational Materials
MCM 5-3	Inventory
MCM 5-4	Site Plan Review

MCM 5-1 Inspections

Description: The City of Chandler will implement an inspection program that focuses on City storm sewer system structures.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City will conduct final, 1 year warranty and proactive inspections to identify potential concerns or deficiencies. Private structures found to be in need of maintenance or in disrepair will be addressed with the property owner. Inspection process and procedures will be reviewed and updated as necessary.

Metrics: The location, date, and type of inspections will be tracked. Inspection information will be recorded. Structures in need of maintenance or repair will be tracked. Type and number of structures inspected will be reported annually.

MCM 5-2 Educational Materials

Description: The City of Chandler will review and update educational materials for post construction management.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City will review educational materials for post construction management. Educational materials will be reviewed and updated as necessary.

Metrics: The number of education materials will be tracked. The type of educational material, the location of the distribution, and the number of items distributed will be reported annually.

MCM 5-3 Inventory

Description: The City of Chandler will maintain an up to date inventory of post-construction structural control measures.

Responsible Department: Development Services Department - Data & Mapping Division

Measurable Goals: The City will maintain an inventory of post-construction structural control measures in the GIS system. Structures will be added into Chandler's existing system following final inspections and submittal of as-built information has been confirmed. Additional features may be added and/or revised when necessary.

Metrics: The number of structures added will be reported annually.

MCM 5-4 Site Plan Review

Description: The City of Chandler will review civil plan submittals to ensure compliance with City standards and requirements.

Responsible Department: Development Services Department - Development Engineering Division

Measurable Goals: The City will perform a technical evaluation and review of building and site plans and design and construction documents to ensure compliance with City development ordinances and International Construction Codes, including but not limited to, architectural, structural, electrical, plumbing, mechanical, fire safety, health, and other applicable codes.

Metrics: Plans will be reviewed throughout the year.

10 MCM-6 Pollution Prevention and Good Housekeeping for Municipal Operations

10.1 Overview

The sixth mandated minimum control measure includes developing and implementing a pollution prevention program for municipal operations. The municipal operations requirements are outlined in Section 6.4.6 of the Permit. The goal of this program is to prevent or reduce pollutant runoff, and protect water quality from municipal facilities and their activities.

The program must include the following activities:

- Develop an inventory of municipal operations that may discharge
- Prioritize municipal facilities based on their risk to discharge pollutants
- Develop and implement a site inspection schedule
- Develop and implement an inspection schedule for municipally-owned and operated facilities and activities to ensure stormwater controls are effective and being properly maintained
- Update municipally-owned or operated facilities priority status and modify inspection frequency based on inspection findings
- Develop and implement stormwater controls at municipally-owned or operated facilities and discharge activities to reduce or eliminate the discharge of pollutants
- Develop and implement an employee training program to incorporate pollution prevention and good housekeeping techniques into everyday operations and maintenance activities
- Develop maintenance activities, maintenance schedules, and long-term inspection procedures for structural and non-structural stormwater controls to reduce floatables, trash, and other pollutants discharged from the MS4.

The program will also define street sweeping requirements to keep the roadway clean of sediment, dust and debris that could enter into the MS4.

10.2 Municipal Facilities

The City of Chandler has evaluated their municipal facilities that are not covered by a separate AZPDES permit to prioritize those facilities that will require site specific BMPs. A list of the facilities that have been identified for the development of BMPs are summarized in Table 6. The site specific BMPs are discussed in additional detail in Section 10.4.

Table 6 Chandler Municipal Facilities

Name
Recycling, Solid Waste Collection Center, and Household Hazardous Waste Facility (RSWCC/HHW)
Armstrong Yard

10.3 Impacted Municipal Operations

Specific O&M procedures and controls will be developed for Armstrong Yard as part of the program. These will include the installation of debris bins and the inspection and maintenance of equipment wash down areas. The debris bins will be used to collect dirt, debris, and street sweepings. The bins will contain the material and prevent it from being carried off site or into the MS4 system by stormwater. The equipment wash down areas will be periodically inspected to ensure that equipment wash down water, which may contain oil and other contaminants, is not being discharged to the MS4.

The program will also address the Recycling, Solid Waste Collection Center/Household Hazardous Waste Collection Facility (RSWCC/HHW). The facility is operated by City staff and collects waste from city residents. Collection of the waste will help to prevent illicit discharges or dumping of these materials that can potentially enter the MS4 and pollute stormwater runoff.

10.4 Selected BMPs

The City of Chandler has evaluated the Pollution Prevention and Good Housekeeping for Municipal Operations component of their stormwater program and has identified BMPs to reduce stormwater pollution. The selected BMPs are summarized in Table 7, with a description of each BMP provided in this section. Detailed BMP information is provided in Appendix G-MCM-6 Pollution Prevention/Good Housekeeping for Municipal Operations.

Table 7 MCM-6 Pollution Prevention/Good Housekeeping for Municipal Operations BMP Summary (Appendix G)

BMP	Description
MCM 6-1	Household Hazardous Waste Collection Facility
MCM 6-2	Implement Controls (Armstrong Yard)
MCM 6-3	O&M Procedures (Armstrong Yard)
MCM 6-4	Training
MCM 6-5	Street Sweeping
MCM 6-6	Inventory and Prioritization of Municipal Operations and Site Inspections
MCM 6-7	Operations and Maintenance of Storm Sewer System

MCM 6-1 Household Hazardous Waste Collection Facility

Description: The City of Chandler will manage a Household Hazardous Waste Collection Facility.

Responsible Department: Public Works & Utilities Department - Solid Waste Services Division

Measurable Goals: The City will track usage, amount of material reused, recycled, or properly managed for disposal.

Metrics: The number of residents dropping off materials will be tracked. The weight of materials collected will be tracked. The weight of material that is recycled, landfilled, or disposed of by other means will be tracked. Information on the amount of materials collected will be reported annually.

MCM 6-2 Implement Controls (Armstrong Yard)

Description: The City of Chandler will contain loose bulk materials such as dirt, street sweeping debris and other materials in separate three sided bins.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City will maintain bulk material bins and evaluate the effectiveness and need for additional bins and modify as necessary.

Metrics: The type of material stored in bins and the total number of bins in use will be tracked and reported annually.

MCM 6-3 O&M Procedures (Armstrong Yard)

Description: The City of Chandler will inspect and maintain vehicle and equipment wash areas.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City will inspect and maintain vehicle and equipment wash areas and conduct maintenance when needed.

Metrics: Maintenance activities will be tracked and reported annually

MCM 6-4 Training

Description: The City of Chandler will provide training on Pollution Prevention and Good Housekeeping Techniques.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: Appropriate City staff will participate in stormwater training focused on Pollution Prevention and Good Housekeeping Practices. Participation will be tracked and evaluated for effectiveness and modified as necessary.

Metrics: The number of City staff at each training session will be tracked. The training topic, date, and number of individual attendees at each event will be tracked. The total number of City Departments and Divisions participating will be tracked. Number of employees trained will be reported annually.

MCM 6-5 Street Sweeping

Description: The City of Chandler will maintain a street sweeping program.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City will track street sweeping metrics including lane miles swept and amount of materials removed.

Metrics: Amount of lane miles swept and materials removed will be reported annually.

MCM 6-6 Inventory and Prioritization of Municipal Operations and Site Inspections

Description: An inventory of city owned facilities will be collected and ranked according to potential environmental hazard or risk.

Responsible Department: Management Services Department - Environmental Management Division

Measurable Goals: A list of City owned facilities will be established and an annual prioritized inspection work plan will be developed. The inventories will identify activities performed at each facility, chemicals stored, and inspection guidelines based on each type of facility. Facilities inspected will be tracked and reported annually.

Metrics: The total number of locations in the inventory will be tracked. The number of new locations added to the inventory will be tracked. The date and location of each inspection performed will be tracked. Data collected during the inspection will be recorded. Facilities inspected will be reported annually.

MCM 6-7 Operations and Maintenance of Storm Sewer System

Description: The City of Chandler will conduct maintenance of the City storm sewer system.

Responsible Department: Public Works & Utilities Department - Streets Division

Measurable Goals: The City storm sewer system structures identified during proactive inspections will be maintained and work orders will be generated and tracked when maintenance needs are identified.

Metrics: Number of structures maintained will be reported annually.

11 Annual Program Evaluation Protocol

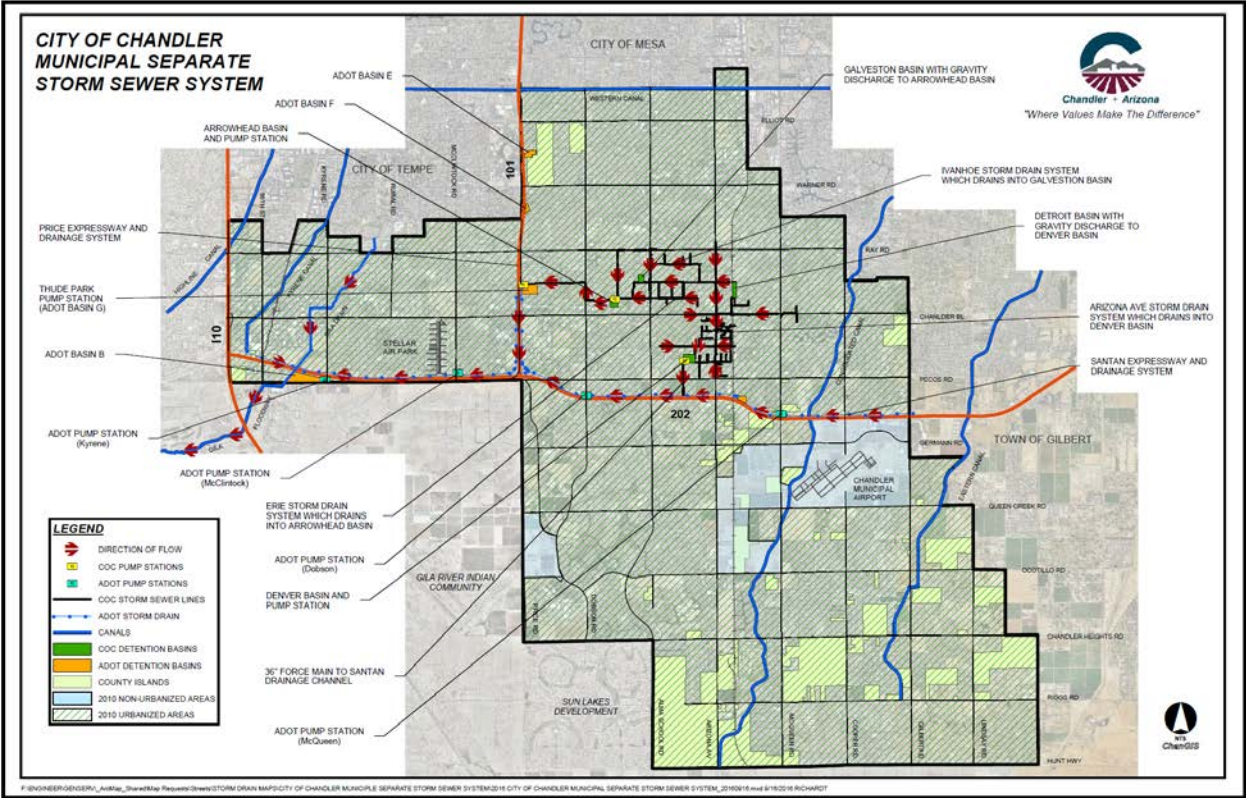
The City of Chandler will annually evaluate the BMPs that are implemented as part of this SWMP. The results of the annual evaluation will be summarized in an Annual Report that is submitted to ADEQ and available for review on the City's stormwater web page.

The annual SWMP evaluation will include an assessment of the effectiveness of the City's BMPs as well as the progress made towards achieving each of the BMP objectives. The BMPs may be updated and/or revised based on the results of the annual evaluation. Any BMP modifications will be made in accordance with Section 8.1 of the Permit.

The annual program evaluation protocol shall follow the following steps:

1. The Public Works & Utilities Department - Streets Division shall contact each responsible party requesting a summary of the progress that was made on each BMP over the course of the permit year. A minimum of 3 weeks will be provided for each responsible party to provide their information and backup data.
2. The Public Works & Utilities Department - Streets Division will review the information received and compare that to the BMP requirements outlined in this SWMP to ensure that the BMPs are being implemented.
3. The Public Works & Utilities Department - Streets Division will discuss with the other departments the efficacy of the BMPs and if any modifications are needed or recommended.
4. The Public Works & Utilities Department - Streets Division will compile the information received into an Annual Report.
5. The Annual Report and Discharge Monitoring Reports (DMR's) shall be submitted to ADEQ on or before September 30th of each permit year.
6. The Annual Report will be posted on the City's stormwater webpage for the public's information.
7. The backup records compiled for each annual report will be saved for a minimum of three years following the permit term.

Appendix A - Drainage Map



Appendix B- MCM-1 Public Education and Outreach BMP Details

MCM 1-1 Educational Materials

MCM 1-2 Educational Events

MCM 1-3 Stormwater Webpage

MCM 1-4 Regional Coordination

MCM 1-1: Educational Materials

<p>Objective: Develop and distribute educational materials with specific messages for specific target audiences to increase knowledge and change behavior of the public so that pollutants in stormwater are reduced.</p> <p>Educational materials may be print based such as articles, brochures, utility bill inserts, fact sheets, posters, signage, promotional items, etc. Additional materials may be developed and delivered via electronic communications such as the City’s website, Chandler 11 public access channel, and/or social media outlets.</p>
<p>Department/Division/Staff: Public Works & Utilities Department - Streets Division / Stormwater Programs Coordinator and/or Stormwater Program Specialist</p>
<p>Procedure: Assigned staff will develop and distribute educational materials with specific messages that include at least two specific educational messages directed at two distinct target audiences for each year of the permit term. The educational messages may include but are not limited to general awareness, specific pollutants and/or pollutant sources. Examples of messages may include, but are not limited to “Only Rain in the Storm Drain”, “Be the Solution to Stormwater Pollution”, “Keep Clutter out of the Gutter”, “Pick up after your pet”, “Do you know where Stormwater Pollutants End Up?”, etc. Target audiences may include but are not limited to residents, residential communities, homeowner’s associations, property management companies, restaurants, commercial facilities, automotive repair facilities, retail shopping centers, construction companies and industrial facilities.</p>
<p>Equipment: N/A</p>
<p>Target Audience: General Public</p>
<p>Measurable Goal(s): The number of educational messages and their respective target audiences will be documented. All educational messages and their respective distribution will be quantified to establish an approximate numerical value representative of each type of message and audience. A dedicated data table or form will be developed and maintained with other records by permit year.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>Reference(s): AZPDES Small MS4 General Permit (Section 6.4.1)</p>
<p>Implementation Status: Current BMP; Start Date 05/03</p>

MCM 1-2: Educational Events

<p>Objective: Identify and participate in educational events located in the City with the goal of increasing knowledge and changing behavior of the public so that pollutants in stormwater are reduced.</p>
<p>Department/Division/Staff: Public Works & Utilities Department - Streets Division / Stormwater Programs Coordinator and/or Stormwater Program Specialist</p>
<p>Procedure: Assigned staff will participate in public education and outreach events and activities throughout the City and actively engage the public whenever practicable. Such events may involve visual displays and promotional giveaway items that either relay specific messages and/or directly relate to pollutant sources. The educational messages may include, but are not limited to general awareness, specific pollutants and/or pollutant sources. Examples of messages may include but are not limited to “Only Rain in the Storm Drain”, “Be the Solution to Stormwater Pollution”, “Keep Clutter out of the Gutter”, “Pick up after your pet”, “Do you know where Stormwater Pollutants End Up?”</p>
<p>Equipment: Table throw, table(s), chair(s), vertical banners, brochures, promotional giveaway items, prize wheel, plinko game, literature/brochure holders, storage containers, business cards, hand truck</p>
<p>Target Audience: General Public</p>
<p>Measurable Goal(s): Assigned staff will participate in at least four outreach events for each year of the permit term. Participation at events will be documented. A dedicated data table or form will be developed and maintained with other records by permit year.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.1)</p>
<p>Implementation Status: Current BMP; Start Date 08/03</p>

MCM 1-3: Stormwater Webpage

<p>Objective: Develop and maintain a City website that conveys pertinent information in regards to the City’s Stormwater Management Program with the goal of increasing knowledge and changing the behavior of the public so that pollutants in stormwater are reduced.</p>
<p>Department/Division/Staff: Public Works & Utilities Department - Streets Division / Stormwater Programs Coordinator and/or Stormwater Program Specialist. Updates to the website will be conducted by the City’s Information Specialist in the Communications and Public Affairs Department.</p>
<p>Procedure: Assigned staff will periodically review the content to ensure that the subject matter and links to resources are still relevant and accurate. Updates to the website will occur when content is no longer applicable to the program or whenever new content or educational materials are available. Content may include but is not limited to general information, potential stormwater pollutants and sources, the SWMP, City Code, FAQ’s, contact information for questions or to report discharges into the MS4, educational materials, brochures, current and prior Annual Reports and links to stormwater related resources relevant to the general public, Homeowner’s Associations, the construction industry, industrial facilities, etc.</p> <p>Assigned staff will provide the City’s Information Specialist with necessary revisions via email request.</p>
<p>Equipment: N/A</p>
<p>Target Audience: General Public, Contractors</p>
<p>Measurable Goal(s): The website will be reviewed a minimum of one time per year to ensure that content is still relevant. Additional reviews may occur whenever new content is added. Email requests for revisions to the website will be maintained in a pdf document within the most current permit year folder. The number of visits and page views will be reported.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.1) City of Chandler Stormwater Program Website: http://www.chandleraz.gov/default.aspx?pageid=646 (www.chandleraz.gov/stormwater)</p>
<p>Implementation Status: Current BMP; Start Date 08/03</p>

MCM 1-4: Regional Coordination

<p>Objective: Maintain membership and be an active participant in STormwater Outreach for Regional Municipalities (STORM) and/or other professional organizations (i.e. AZ Water; MAG) with the goal of collectively promoting and distributing stormwater education and outreach throughout the greater Phoenix metropolitan area.</p>
<p>Department/Division/Staff: Public Works & Utilities Department - Streets Division / Stormwater Programs Coordinator and/or Stormwater Program Specialist</p>
<p>Procedure: Assigned staff will participate in regular monthly meetings, seminars, and outreach events as often as possible. Staff will be encouraged to volunteer for positions on committees, sub-committees and/or on the executive board.</p>
<p>Equipment: N/A</p>
<p>Target Audience: City Staff and General Public</p>
<p>Measurable Goal(s): Assigned staff will participate in activities associated with STORM with a goal of attending as many of the regular monthly meetings as possible and serve on the executive board and/or participate in at least one committee or subcommittee during each year of the permit term. Participation in STORM will be documented through monthly STORM meeting minutes captured and distributed by the STORM Secretary. The STORM Annual Report will be maintained with other records by permit year.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: Stormwater Outreach for Regional Municipalities (http://www.azstorm.org) AZ Water Association (http://www.azwater.org/group/stormwater)</p>
<p>Implementation Status: Current BMP; Start Date 03/03</p>

Appendix C- MCM-2 Public Involvement and Participation BMP Details

MCM 2-1 Public Involvement and Participation

MCM 2-2 Regional Coordination

MCM 2-3 Annual SWMP Review

MCM 2-1A: Community Hotline

<p>Objective: Maintain a stormwater hotline that is available to the general public and City staff with the intention of providing a dedicated source of information associated with the City’s SWMP, including, but not limited to general information, reporting of illicit discharges, questions regarding the SWMP, etc.</p>
<p>Department/Division/Staff: Public Works & Utilities Department - Streets Division / Stormwater Programs Coordinator and/or Stormwater Program Specialist</p>
<p>Procedure: The hotline will consist of a dedicated telephone number with voice messaging capabilities. Telephone calls associated with the reporting of illicit discharges into City right-of-way or calls in reference to standing water and storm drainage system maintenance will be recorded on a respective phone message book. The following information including, but not limited to the caller’s name, phone number, date, time and description of the issue or concern and the relevant reference to the Lucity database work request or work order number will be captured.</p>
<p>Equipment: Dedicated phone message book(s), writing utensil, telephone</p>
<p>Measurable Goal(s): The number of calls associated with the reporting of illicit discharges will be tabulated and reported within the annual report.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.2.3) Hotline Phone Number: (480) 782-3503</p>
<p>Implementation Status: Current BMP; Start Date 06/03</p>

MCM 2-1B: Stormwater Webpage

<p>Objective: Develop and maintain a City website that conveys pertinent information in regards to the City’s Stormwater Management Program with the goal of increasing knowledge and changing the behavior of the public so that pollutants in stormwater are reduced.</p>
<p>Department/Division/Staff: Public Works & Utilities Department - Streets Division. Updates to the website will be conducted by the City’s Information Specialist in the Communications and Public Affairs Department.</p>
<p>Procedure: Assigned staff will periodically review the content to ensure that the subject matter and links to resources are still relevant and accurate. Updates to the website will occur when content is no longer applicable to the program or whenever new content or educational materials are available. Content will include, but is not limited to general information, potential stormwater pollutants and sources, the SWMP, City Code, FAQ’s, hotline contact information for questions or to report discharges into the MS4, educational materials, brochures, current and prior Annual Reports and links to stormwater related resources relevant to the general public, Homeowner’s Associations, the construction industry, industrial facilities, etc.</p> <p>Assigned staff will provide the City’s Information Specialist with necessary revisions via email request.</p>
<p>Equipment: N/A</p>
<p>Measurable Goal(s): The website will be reviewed a minimum of one time per year to ensure that content is still relevant. Additional reviews may occur whenever new content is added. Email requests for revisions to the website will be maintained in a pdf document within the most current permit year folder. The number of visits and page views will be reported.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.2.3) http://www.chandleraz.gov/default.aspx?pageid=646 (www.chandleraz.gov/stormwater)</p>
<p>Implementation Status: Current BMP; Start Date 06/03</p>

MCM 2-1C: Public Meetings

<p>Objective: Inform the general public of meetings to share information associated with capital improvement projects that may involve the MS4 and/or opportunities to learn more about or comment on the SWMP.</p>
<p>Department/Division/Staff: Development Services Department / Planning or Engineering or Capital Improvement Projects staff and/or Public Works & Utilities Department - Streets Division / Stormwater Programs Coordinator or Stormwater Program Specialist or Communications and Public Affairs Department / Public Information staff and/or Neighborhood Resources Department / Neighborhood Programs Division staff.</p>
<p>Procedure: The City will inform the public of applicable scheduled meetings and/or notices associated with the SWMP or capital improvement projects. Such activities will be in accordance with state and local public notice requirements.</p>
<p>Equipment: N/A</p>
<p>Measurable Goal(s): Documentation of the purpose and number of attendees will occur for public meetings. Such information will be captured with sign-in sheets and the number of attendees will be reported within the annual report. A dedicated data table or form will be developed and maintained with other records by permit year.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.2.2) Communications Road Map for the City of Chandler: http://chanweb/capa/content/communicationsroadmap.pdf http://www.chandleraz.gov/calendar.aspx?type=City%20Meetings</p>
<p>Implementation Status: Current BMP; Start Date 06/03</p>

MCM 2-1D: Outreach Events

<p>Objective: Identify and participate in educational events in the City with the goal of increasing knowledge and changing the behavior of the public so that pollutants in stormwater are reduced.</p>
<p>Department/Division/Staff: Public Works & Utilities Department - Streets Division / Stormwater Programs Coordinator and/or Stormwater Program Specialist.</p>
<p>Procedure: Assigned staff will participate in public education and outreach events and activities throughout the City and actively engage the public whenever practicable. Such events may involve visual displays and promotional giveaway items that either relay specific messages and/or directly relate to pollutant sources. The educational messages may include, but are not limited to general awareness, specific pollutants and/or pollutant sources. Examples of messages may include “Only Rain in the Storm Drain”, “Be the Solution to Stormwater Pollution”, “Keep Clutter out of the Gutter”, “Pick up after your pet”, “Do you know where Stormwater Pollutants End Up?”</p>
<p>Equipment: Table throw, table(s), chair(s), vertical banners, brochures, promotional giveaway items, prize wheel, plinko game, literature/brochure holders, storage containers, business cards, hand truck</p>
<p>Measurable Goal(s): Assigned staff will participate in at least four outreach events for each year of the permit term. Participation at events will be documented. A dedicated data table or form will be developed and maintained with other records by permit year.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.3)</p>
<p>Implementation Status: Current BMP; Start Date 06/03</p>

MCM 2-1E: Environmental Art Contest (Temporary BMP)

<p>Objective: Implement an annual art contest focusing on fourth grade students. Submitted artwork will correspond to established messages associated with the City’s stormwater pollution prevention, recycling and water conservation programs.</p>
<p>Department/Division/Staff: Public Works & Utilities Department - Streets Division / Stormwater Programs Coordinator and/or Stormwater Program Specialist and/or Solid Waste Services / Recycling Coordinator and/or Environmental Resources / Water Conservation Coordinator and/or Water Conservation Specialist</p>
<p>Procedure: Contest applications will be distributed to 4th grade teachers associated with charter, private and public schools located in Chandler. Slogans for the artwork may include but are not limited to Stormwater: “Only Rain in the Storm Drain”, “Keep Clutter out of the Gutter” or “Be the Solution to Stormwater Pollution”. Recycling: “Every Day is Earth Day–Recycle!”, “Reduce, Reuse, Recycle”, “Chandler Recycles–Do You?”. Water Conservation: “Every Drop Counts!”, “Water Use it Wisely”, “Be a Water Saver”. Art work received by the designated deadline will be sorted by the respective programs. Assigned staff in each program will assign a small group to select six entries for each category, with the top four entries of each category being included in a twelve month calendar. The additional two entries for each category will be included on posters. A single entry that has incorporated a broader environmental message other than the established slogans will be selected for the cover of the calendar. Assigned program staff will select the cover artwork.</p> <p>An environmental art contest ceremony honoring the 19 contest winners will take place at the City Council Chambers or similar venue. All contest winners and their families will be invited to attend. The Mayor, City Council members, City Manager, Assistant City Managers, Department Directors and Division Managers will be invited to attend. The calendars and posters may be distributed to the general public, local schools, city staff, etc.</p>
<p>Equipment: Laptop computer, microphone, public address system, podium, tables, projection equipment, large screen monitors and other video equipment.</p>
<p>Measurable Goal(s): The number of contest entries, number of participating schools and the quantity of materials printed for distribution will be reported within the annual report.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.1.1) AZPDES Small MS4 General Permit (Section 6.4.2.3)</p>
<p>Implementation Status: Current BMP, Start Date 04/04</p>

MCM 2-2: Regional Coordination - AZ Water Association (Temporary BMP)

<p>Objective: Maintain membership and be an active participant in Stormwater Outreach for Regional Municipalities (STORM) and/or other professional organizations (i.e. AZ Water; MAG) with the goal of collectively promoting and distributing stormwater education and outreach throughout the greater Phoenix metropolitan area.</p>
<p>Department/Division/Staff: Public Works & Utilities Department - Streets Division / Stormwater Programs Coordinator and/or Stormwater Program Specialist</p>
<p>Procedure: Assigned staff will participate in regular monthly meetings, seminars, and outreach events as often as possible. Staff will be encouraged to volunteer for positions on committees, sub-committees and/or on the executive board.</p>
<p>Equipment: N/A</p>
<p>Target Audience: City Staff and General Public</p>
<p>Measurable Goal(s): Assigned staff will participate in activities associated with AZ Water Association with a goal of attending as many of the regular monthly meetings as possible. Participation in AZ Water Association will be documented through monthly meeting minutes captured and distributed by the Secretary. Records will be organized by permit year.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: Stormwater Outreach for Regional Municipalities (http://www.azstorm.org) AZ Water Association (http://www.azwater.org/group/stormwater)</p>
<p>Implementation Status: Current BMP; Start Date 03/03</p>

MCM 2-3: Annual SWMP Review

<p>Objective: Promote public involvement and participation in an annual review of the City’s Stormwater Management Program.</p>
<p>Department/Division/Staff: Public Works & Utilities Department - Streets Division / Stormwater Programs Coordinator and/or Stormwater Program Specialist</p>
<p>Procedure: The SWMP and Annual Reports will be posted on the City’s Stormwater Program website year round. The City will promote a 30 day timeframe for the public review of the SWMP on an annual basis. City staff will review all public comments that are submitted, and will modify and update the SWMP based on feedback received, when practicable.</p> <p>Feedback will be solicited through a web form that will be linked to the City’s stormwater webpage or received via email. The web form and/or comments received via email will allow the public to submit comments on the SWMP. The web form and/or opportunity to submit comments via email will be active during the 30 day comment period.</p>
<p>Equipment: N/A</p>
<p>Measurable Goal(s): All comments that are received will be documented and evaluated for inclusion/modification of the SWMP. The comments received and any changes to the SWMP will be reported.</p>
<p>Data Collection, Recordkeeping and Reporting: Comment collection will be conducted during a 30 day public comment window. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.2.2) http://www.chandleraz.gov/default.aspx?pageid=646 (www.chandleraz.gov/stormwater)</p>
<p>Implementation Status: Future BMP; Start Date 04/17</p>

Appendix D- MCM-3 Illicit Discharge Detection and Elimination Program BMP Details

MCM 3-1 Storm Sewer System Mapping

MCM 3-2 Legal Authority Review

MCM 3-3 Visual Dry Weather Outfall Monitoring

MCM 3-4 Illicit Discharge Response

MCM 3-5 IDDE Staff Training

MCM 3-6 Visual Stormwater Discharge Monitoring

MCM 3-1: Storm Sewer System Mapping

<p>Objective: Maintain an up to date map of the MS4 with sufficient scope and detail to identify and isolate illicit discharges and for use as a reference during proactive inspections of the storm sewer system. The map will be representative of the storm sewer system infrastructure and include the following: Locations of discharges to the Waters of the United States; jurisdictional MS4 boundaries; new land annexations during the respective permit year; interconnections with other MS4s including linear drainage structures used for conveyance (Example: streets, channels, floodways, pipes, etc.); storm drain inlet structures (Example: catch basins, scuppers, etc.); outfalls; dry weather field screening (monitoring) locations including unique identifier, receiving water, dimensions, shape, spatial location (latitude/longitude), Physical condition, indicators of potential non-stormwater discharges; detention/retention basins that are part of the MS4.</p>
<p>Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist and/or Development Services / GIS / GIS Technicians</p>
<p>Procedure: The location of features and their respective attributes will be collected by GIS Technicians using a portable handheld GPS receiver during or following a final inspection (post construction) of public and private developments and Capital Improvement Projects. Additional data collection or revisions of features will take place whenever a feature(s) has been located that was not previously collected or when a feature(s) and/or associated attribute is incorrect or no longer valid (e.g. ownership, feature type, modifications, etc.) Stormwater program staff will notify a GIS Technician via email whenever a discrepancy has been found during proactive inspections.</p>
<p>Equipment: Truck, appropriate personal protective equipment and safety equipment appropriate for site conditions and assigned activities, portable handheld GPS receiver, plan sheets, writing utensil</p>
<p>Measurable Goal(s): Features and/or attributes will be collected throughout the permit year as described above. The number of new structures collected and added to the GIS map will be tabulated.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: AZPDES Small MS4 General Permit (Section 4.0 thru 4.2)</p>
<p>Implementation Status: Current BMP; Start Date 03/03</p>

MCM 3-2: Legal Authority Review

Objective: Review City's existing stormwater ordinance requirements and update the ordinance as required to ensure that the ordinance complies with the new stormwater general permit.
Department/Division/Staff: Law Department
Procedure: Assigned staff will perform a legal review of the City's existing stormwater ordinance to ensure compliance with the new stormwater general permit requirements. If an amendment to the City's ordinance is required, the Law Department will prepare the amendment and work with the City council to adopt the revised ordinance requirements.
Equipment: Existing ordinance, MS4 general permit, writing utensil
Measurable Goal(s): Legal Department staff will review ordinance for compliance with the stormwater requirements. A summary of findings and if necessary a proposed ordinance amendment will be prepared.
Data Collection, Recordkeeping and Reporting: N/A.
Legal Authority: N/A
References: AZPDES Small MS4 General Permit (Section 3.1 thru 3.3)
Implementation Status: Current BMP; Future Date 05/17

MCM 3-3: Visual Dry Weather Outfall Monitoring

Objective: To detect and eliminate illicit discharges and connections to the City's MS4, and to identify and characterize discharges from the City's MS4 during periods of dry weather.

Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist or Streets Maintenance Supervisor and/or Streets Maintenance crew

Procedure: Dry weather monitoring must be conducted at least 72 hours after a storm event that resulted in a discharge from the storm sewer system. Field screening inspections will be completed at each of the locations identified below at a frequency no less than one time per year.

1. Proceed to the locations listed below.

Dry Weather Field Screening locations:

- SanTan 202 & 56th St (MH-12-41-005) (COC)
- SanTan 202 & Kyrene Rd (CB-12-42-001) and (CB-12-43-002) (ADOT)
- SanTan 202 & Stellar PW / Geronimo St (MH-12-45-010) (COC)
- SanTan 202 & Stellar AP Runway / Geronimo St (CB-12-46-005) (COC)
- SanTan 202 & McClintock Rd (MH-12-47-010) (COC)
- SanTan 202 & Los Feliz Dr (MH-12-47-001) (COC)
- SanTan 202 & Geronimo St / Kesler Ln (CB-12-47-004) (COC)
- SanTan 202 & Kenwood Ln (CB-12-47-005) (COC)
- SanTan 202 & Chandler Village Dr (MH-12-48-009) (COC)
- Price Fwy 101 Frontage Rd & Galveston St – Thude Park (Out-10-49-008) (COC)
- SanTan 202 & Dobson Rd (MH-13-50-001) (ADOT)
- SanTan 202 & Alma School Road (MH-13-52-002) (ADOT)
- SanTan 202 and Hartford Street (Denver Basin) (MH-13-53-005) (COC)
- SanTan 202 & Arizona Avenue (CB-13-54-001) (ADOT)
- SanTan 202 & McQueen Road (MH-13-56-026) (COC)
- SanTan 202 & Cooper Road (CB-14-58-001) and (CB-14-59-012) (ADOT)
- SanTan 202 & Gilbert Rd (CB-14-60-012) (ADOT)

2. Complete general information section including outfall name, date, time, last rain event information, and site description information on the *Dry Weather Field Screening Data Collection Form*.

3. Stand at major outfall location. Survey pipe for any dry weather flow. Follow instructions below.

If flow is observed:

1. Document that a dry weather flow is observed.
2. Take a photograph(s) documenting the flow.

3. Visually observe the flow. Complete the Visual Observations section by documenting the observed characteristics and conditions listed under the section.
4. Investigate the flow upstream to identify the source of the flow.
5. Provide comments on any observations, flow characteristics or conditions that may be applicable to require maintenance or potential illicit discharges e.g. irrigation tail water, observed pool drainage, low spot in pipe, etc.
6. Sign, date and print name.
7. Notify the Stormwater Programs Coordinator as soon as possible, if any observations, flow characteristics or conditions may be a result of a potential illicit discharge.
8. All potential illicit discharges or connections must be investigated and eliminated as soon as possible and in accordance with the City's Illicit Discharge Detection and Elimination Program (IDDE).
9. Attach the corresponding photo(s) to the completed *Dry Weather Field Screening Data Collection Form*

If flow is not observed:

1. Document that a dry weather flow was not observed.
2. Take a photograph(s) documenting the absence of flow.
3. Complete the Visual Observations section by documenting the observed characteristics and conditions listed under the section.
4. Provide comments on any observations or characteristics that may be applicable to required maintenance or evidence of a recent, potential illicit discharge.
5. Sign, date and print name.
6. Attach the corresponding photo(s) to the completed *Dry Weather Field Screening Data Collection Form*

Equipment: Truck, personal protective equipment and safety equipment appropriate for site conditions and assigned activities, *Dry Weather Field Screening Data Collection Form*, camera, clipboard, paper, writing utensil, inspection mirror, flashlight or spotlight, tape measure, hand tools (manhole hook, large slotted screwdriver, sledgehammer, etc.), distance wheel, outreach and/or reference materials such as brochures, City code chapter 45-8, etc.

Measurable Goal(s): Copies of completed *Dry Weather Field Screening Data Collection Forms* will be saved electronically on the shared drive and attached to the corresponding Lucity

work order. The number of inspections will be tabulated and reported within the annual report.
Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.
Legal Authority: N/A
References: AZPDES Small MS4 General Permit (Section 6.4.3.8a)
Implementation Status: Current BMP; Start Date 03/03

MCM 3-4: Illicit Discharge Response

Objective: To detect and eliminate illicit discharges and connections to the City's MS4.
Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist and/or Stormwater Maintenance Supervisor or Streets Crew Lead
Procedure: Illicit discharges may be identified through observations associated with dry weather field screening activities, field observations, and routine inspections of MS4 components or complaints received from City staff, residents or others. Discharges can be detected through active dry weather flows, staining, deposits, oily sheen, foam, discoloration, algae, odor, vegetation growth, etc. Such characteristics may be observed along gutters, on paved areas, at or near inlets openings, at or near outfalls, on bottoms of pipes or open ditches. The frequency of an illicit discharge may be continuous, intermittent or transitory. An illicit discharge can be a direct entry, where the discharge is directly connected into the inlet or associated pipe or an indirect entry, in which the discharge is generated outside of the storm drain system but travels along an impervious surface into the storm drainage system or deposited onto an impervious surface. Once an illicit discharge has been identified or the Street Division has been notified of such a discharge, an investigation will commence as soon as possible. Assigned staff will respond by following the steps below; <ol style="list-style-type: none">1. Locate the reported discharge or evidence of a recent discharge.2. Determine if the discharge is prohibited by City code chapter 45-8. If so, move on to step #3. If the discharge is not prohibited by City code then proceed by speaking with the responsible party and providing them with information on how to minimize pollutants that may enter into the MS4.3. Begin tracking the discharge or evidence of a recent discharge by inspecting upstream sources, including streets, gutters, catch basins, laterals, mains, manholes, etc., if necessary. Document evidence of a discharge through photographs, video, written notes, etc. Follow the source to determine the point and source of discharge. (City staff shall not enter confined spaces or have direct contact with the discharge(s)).4. Utilize as-built and/or GIS data to assist in the tracking process to determine storm drain connection points, laterals, mains, landmarks, etc., if necessary.5. Conduct video inspection of storm drainage system components if the source of the discharge cannot be identified.

<p>6. Contact the responsible party (applicable owner/operator, resident, business or other entity) upon determination of the source.</p> <p>7. Introduce yourself as a City employee and have City identification properly displayed.</p> <p>8. Explain to the owner/operator, resident, business or other entity (responsible party) that the observed discharge is prohibited by City code and that the discharge must be ceased immediately. Issue a Notice to Comply form if applicable.</p> <p>9. Request that the responsible party properly clean-up discharged materials (sediment, diatomaceous earth, motor oil, etc.) and note such information on the Notice to Comply form and provide a deadline for the clean-up efforts and notify the responsible party that a re-inspection will occur.</p> <p>10. Provide applicable reference materials including, but not limited to a stormwater pollution prevention brochure, pool drainage brochure, copy of City code, etc.</p> <p>11. Ensure a record of the discharge including the source, location, type of discharge, disposition, photographic evidence, verbal instructions and/or dialogue with the responsible party etc., is documented in the Lucity database.</p> <p>12. Conduct a re-inspection of the location if necessary.</p>
<p>Equipment: Truck, cell phone, personal protective equipment and safety equipment appropriate for site conditions and assigned activities, <i>Dry Weather Field Screening Data Collection Form</i>, camera, clipboard, paper, writing utensil, inspection mirror, flashlight or spotlight, tape measure, hand tools (manhole hook, large slotted screwdriver, sledgehammer, etc.), distance wheel, outreach and/or reference materials such as door hangars, brochures, City code chapter 45-8, etc.</p>
<p>Measurable Goal(s): Illicit discharges will be responded to as soon as practicable. The majority of responses will occur on the same day as reported if possible. The number of calls associated with the response of an illicit discharge will be tabulated and reported within the annual report.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: City of Chandler Ordinance # 3976 City of Chandler Manual on Stormwater Quality Protection City of Chandler City Code Section 45-8</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.3.4 thru 6.4.3.6)</p>
<p>Implementation Status: Current BMP; Start Date 03/03</p>

MCM 3-5: IDDE Staff Training

<p>Objective: To provide training for City staff on the illicit discharge detection and elimination program.</p>
<p>Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist</p>
<p>Procedure: Training topics or content may include, but is not limited to the identification of potential illicit discharges and the response to calls pertaining to illicit discharges and who to contact with questions, observations and/or concerns, and how to approach and deal with the source of the discharge.</p> <p>The delivery method of training may include, but is not limited to a classroom setting, via the City’s learning management system (ChandLearn), in the field, on the jobsite or at meetings. Training content may include video, PowerPoint presentations, verbal communication and/or handouts relevant to applicable job duties or activities.</p> <p>Training activities will occur throughout each year of the permit term. The frequency and number of training sessions may vary each year based on employee availability and other assigned duties. A training roster form will be prepared and all training participants will be asked to fill out and sign the form. The training roster form may include the following information: Date, time, Department, Division, employee number, signature, a brief description of training content and the trainer(s) administering the session.</p>
<p>Equipment: Smartboard, projection screen, projector, dry erase board, dry erase markers, desktop or laptop computer, flash drive, DVD player, DVD, CD, laser pointer, speaker system, writing utensil, training roster form.</p>
<p>Measurable Goal(s) The training of staff will occur throughout each year of the permit term. The number of staff trained will be tabulated and reported within the annual report.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>AZPDES Small MS4 General Permit (Section 6.4.3.10)</p>
<p>Implementation Status: Current BMP; Start Date 08/08</p>

MCM 3-6: Visual Stormwater Discharge Monitoring

Objective: Monitor stormwater outfalls where stormwater leaves the MS4's permitted area during storm events that result in a discharge from the storm sewer system and, to the extent practicable, should include the first flush. A minimum of two (2) monitoring events during each of the two wet seasons (Summer Wet Season – June 1 to October 31) and (Winter Wet Season – November 1 to May 31). The goal of the program is to identify and cease illicit discharges that are a significant contributor of pollutants to the MS4.

Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist and/or Streets Maintenance Supervisor and/or Streets Crew Lead and/or Sr. Streets Specialist and/or Streets Specialist

Procedure: Assigned staff will conduct visual observations of a minimum of five representative outfalls two times during each wet season. During the observations staff will note any physical and visual observations applicable to each of the monitoring locations.

*A minimum of two staff members will conduct monitoring activities at the outfall locations whenever possible.

** Staff members assigned to conduct monitoring activities must be aware of their surroundings at all times and cease monitoring activities whenever site conditions are determined to be unsafe or hazardous in nature.

1. Proceed to each of the locations listed below.

Visual Stormwater Discharge Monitoring locations:

- CB-12-46-005 (SanTan 202 & Stellar AP Runway /Geronimo St) (COC)
- MH-12-47-010 (SanTan 202 & McClintock Rd) (COC)
- MH-12-48-009 (SanTan 202 & Chandler Village Dr) (COC)
- CB-12-47-005 (SanTan 202 & Kenwood Ln) (COC)
- CB-11-42-001 (South side of Chandler Blvd @ Gila Drain (Canal) (COC)
- SCP-10-43-005 (South side of Gila Springs Blvd @ Gila Drain (Canal) (COC)

2. A *Visual Stormwater Discharge Monitoring Data Collection form* will be completed for each of the six monitoring locations detailed above. Use a flow probe if necessary to determine flow rate. Complete the General Inspection Information section
3. Stand at major outfall location. Follow instructions below.
4. Take a photograph(s) documenting the structure and flow, or absence of flow.
5. Visually observe the flow. Utilize a pole mounted dipper/ladle to capture a sample if necessary. Complete the Visual Observations section by documenting the observed characteristics and conditions listed under the section. The Current Weather Conditions section can be completed at the office by extrapolating data from the FCDMC Rainfall webpage at <https://www.maricopa.gov/625/Rainfall-Data>.

<ol style="list-style-type: none"> 6. Provide comments on any observations, flow characteristics or conditions that may be applicable to required maintenance or potential pollution from an illicit discharge, e.g. oil sheen, odor, etc. 7. Select staff present at time of monitoring activity. 8. Sign, date and print name. 9. Attach the corresponding photo(s) to the completed <i>Visual Stormwater Discharge Monitoring Data Collection Form</i>.
<p>Equipment: Truck, personal protective equipment and safety equipment appropriate for site conditions and assigned activities, flow meter, pole mounted dipper/ladle, camera, <i>Visual Stormwater Discharge Monitoring Data Collection Form</i>, flow meter, clipboard, paper, writing utensil, inspection mirror, flashlight, spotlight, hand tools (manhole hook, large slotted screwdriver, wrenches, sledgehammer, etc.)</p>
<p>Measurable Goal(s): The number of inspections and findings will be tabulated and reported within the annual report.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.3.8b)</p>
<p>Implementation Status: Future BMP; Start Date 04/17</p>

Appendix E- MCM-4 Construction Activity Stormwater Runoff Control BMP Details

MCM 4-1 Construction Plan Review

MCM 4-2 Inspections

MCM 4-3 Educational Materials for Construction Activity Stormwater Runoff Control

MCM 4-4 Inventory

MCM 4-1A: Site Plan Review

Objective: Review civil site plan submittals to ensure compliance with City design standards and requirements.
Department/Division/Staff: Development Services / Development Engineering Division Engineering / Plan Review Manager and/or Principal Plans Examiner and/or Sr. Plans Examiner and/or Plans Examiner
Procedure: Assigned staff will perform a technical evaluation and review of building and site plans and design and construction documents to ensure compliance with City development ordinances and International Construction Codes, including but not limited to, architectural, structural, electrical, plumbing, mechanical, fire safety, health, and other applicable codes.
Equipment: Desktop computer, plan sheets, writing utensil.
Measurable Goal(s): Assigned staff will review civil plans for all permitted projects.
Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.
Legal Authority: N/A
References: N/A
Implementation Status: Current BMP; Start Date 03/03

MCM 4-1B: Erosion and Sediment Control Plan

<p>Objective: Require the submittal of an Erosion and Sediment Control Plan for development projects that exceed one acre or greater in disturbed area.</p>
<p>Department/Division/Staff: Development Services / Development Engineering Division Engineering / Plan Review Manager and/or Principal Plans Examiner and/or Sr. Plans Examiner and/or Plans Examiner</p>
<p>Procedure: Review Erosion and Sediment Control Plans that have been submitted to the City with other civil plans associated with site work applicable to grading and drainage permitting.</p>
<p>Equipment: N/A</p>
<p>Measurable Goal(s): Plans will be reviewed throughout the permit term.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References AZPDES Small MS4 General Permit (Section 6.4.3.8h)</p>
<p>Implementation Status: Current BMP</p>

MCM 4-2: Construction Inspections

Objective: Develop, implement, and enforce a program to reduce pollutants in stormwater runoff to the City's MS4 from construction activities.

Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist

Procedure:

Construction activities that result in land disturbance of one acre or greater or sites that disturb less than one acre if part of a larger common plan of development will be subject to inspection.

Types of inspections: pre-construction meeting; routine; complaint received by the public or City staff; field observation; follow-up; or post storm event.

Method of determining locations of sites to be inspected: The Arizona Department of Environmental Quality NOI Construction Stormwater General Permit Database and/or Development Project Administrator (DPA) Log and/or Inspector Projects Assignment Log and/or Public Construction Activity Log (CIP) and/or Construction or building permit database or observation of active construction activity, notification of active construction by the public or City staff, notice by City staff of a scheduled pre-construction meeting, complaint received by the public or City staff and/or knowledge of locations that have already been inspected.

Frequency of Inspection: Sites will be inspected upon observation or notification of a sites location. The anticipated frequency of inspections is based on the size (acres) of the project as follows:

Goal for Private Development Projects:

< 1 to 4.99 acres = 1 Inspection
5 to 9.99 acres = 2 Inspections
10 to 19.99 acres = 3 Inspections
20 to 29.99 acres = 4 Inspections
30 acres + = 5 Inspections

Goal for Capital Improvement Projects (CIP):

< 1 to 4.99 acres = 1 Inspection
5 to 9.99 acres = 2 Inspections
10 to 19.99 acres = 3 Inspections
20 to 29.99 acres = 4 Inspections
30 acres + = 5 Inspections

The number of site inspections for private developments or CIP may vary depending on staffing, the phase of construction, compliance status, site location, field observations, complaints and/or concerns received by the public or City staff, greater potential for discharge to the MS4, or following significant rain events.

Inspection procedure for on-site inspections:

1. Introduce yourself as a City of Chandler employee and have City identification properly displayed. Begin the inspection and complete sections of the *Stormwater Site Inspection Report* form.
2. Conduct visual inspection of perimeter areas and identify the potential of or evidence of off-site discharges. Look for required AZCON # or NOI Certificate posting and observe implemented perimeter control best management practices for proper installation and maintenance. Complete General Information and Administrative Requirements sections of the *Stormwater Site Inspection Report* form.
3. Proceed to on-site construction office or notify the contact person listed on the posted NOI Certificate or the Maricopa County Dust Control signage or contact them via telephone. Inquire information on-site about the location of or contact information for a Site Superintendent, Project Manager or other authorized site representative if necessary. Once such contact has been made, inform the site representative of your name, that you are an employee of the City of Chandler and that you are there to conduct a stormwater site inspection. Inform the site representative of the inspection rights and a request a signature acknowledging receipt of the *Inspection Rights* form. The on-site representative will then receive the pink copy of the signed *Inspection Rights* form.
4. Ask the site representative if they wish to accompany you on the inspection or if you may proceed without them.
5. Proceed with the inspection and complete the Erosion and Sediment Controls and Housekeeping and Pollution Prevention sections of the inspection report form as you observe each of the applicable items listed therein. Circle “Yes” if the current conditions reflect substantial efforts in meeting the established criteria. A “No” will be circled if the established criteria is not substantially met, resulting in a “Corrective Action”.
6. Following the inspection, complete the Inspection Status section by circling “No Action Needed” or “Corrective Action(s) Required”. Note any comments and/or corrective actions necessary as it pertains to observations, site conditions, specific actions that require attention, etc.
7. Meet with the site representative to go over each section of the inspection report form. Clearly explain the outcome of the inspection and any corrective actions that require attention. If corrective actions are noted, complete the “Follow-up inspection to be conducted on:” section by inserting a date that should be no more than 10 days from the date of inspection or before the next rain event if practicable. (note: in most cases, follow-up inspections will be scheduled within seven days from the date of the

initial inspection provided that the inspectors schedule permits). The inspector will note on the inspection report form if a brochure, copy of applicable City code, etc. has been provided to the site representative at the time of inspection. Complete the inspection report form by signing your name, and noting the date and time. The on-site representative should also sign their name, provide their title and their company name. The on-site representative will then be provided with the pink copy of the inspection report form.

8. A follow-up inspection will be required if any corrective actions were noted. The original inspection report form will be utilized for documenting the status of the re-inspection(s) and completion of corrective actions. Inspector will document a date and initials next to the line item(s) that were found to be corrected upon re-inspection. The "Corrective Action(s) Required" section will be crossed out and the "No Action Needed" section will be circled. The on-site representative will then be provided with the yellow copy of the inspection report form.
9. Enforcement: Failure to address corrective actions documented during an inspection may result in an enforcement action including, but not limited to Chandler City Code provisions.

Inspection procedures for off-site inspections:

1. Off-site inspections may be conducted due to the following conditions: The site has previously been inspected and determined to be in significant compliance and, site is temporarily inactive, restricted access, the Superintendent, Supervisor or authorized site representative is not present, or during an active storm event or following a storm event. A *Stormwater Site Inspection Report* form will be completed to the extent practicable at the time of the off-site inspection. The inspection process will generally incorporate off-site observations associated with BMPs, including but not limited to; track out control device, posting of AZCON number, perimeter controls, observed discharges to the MS4 and/or potential of off-site discharges to the MS4. A copy of the inspection report will only be provided to a representative of the General Contractor associated with the site if corrective actions have been noted. The inspection report may be provided via email, facsimile or in person.

Equipment: Truck, personal protective equipment and safety equipment appropriate for site conditions and assigned activities, *Stormwater Construction Site Inspection form*, camera, clipboard, paper, writing utensil, inspection mirror, flashlight or spotlight, tape measure, hand tools (manhole hook, large slotted screwdriver, sledgehammer, etc.), distance wheel, outreach and/or reference materials such as construction brochure, City code chapter 45-8

Measurable Goal(s): Copies of completed *Stormwater Site Inspection* forms and other applicable information will be filed in chronological order and saved in the stormwater file cabinet located in the Streets Division office. Following the inspection, the excel spreadsheet will be revised to reflect the inspection. The number of inspections will be tabulated and reported within the annual report.

Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years

following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.

Legal Authority:

City of Chandler Ordinance # 3976
City of Chandler Manual on Stormwater Quality Protection
City of Chandler City Code Section 45-8

References:

AZPDES Small MS4 General Permit (Section 6.4.4.2a thru g)
ADEQ NOI Database: <http://www.azdeq.gov/databases/azpdesssearch.html>
ADEQ Construction General Permit: <http://www.azdeq.gov/environ/water/permits/cgp.html>
City of Chandler or STORM Construction Brochure

Implementation Status: Current BMP; Start Date 03/03

MCM 4-3: Educational Materials for Construction Activity Stormwater Runoff Control

<p>Objective: Develop and distribute a brochure or other educational material(s) that provides information applicable to construction activity with the goal of increasing knowledge of construction site operators so that pollutants in stormwater are reduced.</p>
<p>Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist</p>
<p>Procedure: Assigned staff will develop and distribute brochures or educational materials to construction site operators while participating in pre-construction meetings and/or during site inspections. The brochures may include, but not be limited to, information on the ADEQ Construction General Permit, administrative requirements, and the implementation and maintenance of best management practices. The brochures may also include checklists that can be used for SWPPP preparation.</p>
<p>Equipment: Brochures</p>
<p>Measurable Goal(s): The number of brochures distributed will be documented and their respective distribution will be quantified to establish an approximate numerical value. The Construction Site Inspection spreadsheet will include a column reflecting distribution of a brochure(s) to the specific site. The spreadsheet will cover each permit year of the permit term.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.4.4)</p>
<p>Implementation Status: Current BPM; Start Date 08/03</p>

MCM 4-4: Inventory

<p>Objective: Prepare and maintain an inventory of construction activities that disturb one or more acres within the permitted area, including those sites that are less than one acre but part of a larger common plan of development.</p>
<p>Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist</p>
<p>Procedure: The City will maintain an inventory of all active construction sites in a spreadsheet. Construction sites will be added to the spreadsheet at the time of initial inspection and/or following the issuance of the building or construction permit. Once the construction is complete and the final inspection has been completed, the site will be designated as inactive. Additional site information will be collected and maintained within the spreadsheet. Resources such as DPA project maps and databases may be utilized to identify locations of active construction sites.</p>
<p>Equipment: Desktop computer</p>
<p>Measurable Goal(s): The spreadsheet will be revised when new sites have been inspected and/or when new permits are issued or final inspections of construction sites have been performed.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.4.2b)</p>
<p>Implementation Status: Current BMP; Start Date 07/16</p>

Appendix F- MCM-5 Post-Construction Stormwater Management in New Development and Redevelopment BMP Details

MCM 5-1 Inspections

MCM 5-2 Educational Materials

MCM 5-3 Inventory

MCM 5-4 Site Plan Review

MCM 5-1A: Post-Construction Inspections

Objective: Develop, implement, and enforce a final, 1-year, and post-construction inspection program to reduce pollutants in stormwater runoff to the MS4 from new development and redevelopment projects and to provide for proper function of private and public stormwater drainage/collection facilities and stormwater system components.

Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist and/or Streets Maintenance Supervisor and/or Streets Crew Lead and/or Sr. Streets Specialist and/or Streets Specialist

Procedure: Capital improvement project and private development sites that have submitted plans for new development or redevelopment that result in land disturbance of one acre or greater or sites that disturb less than one acre if part of a larger common plan of development will be subject to a post construction inspection(s), including, but not limited to an initial final inspection immediately following completion of construction activities and necessary for certificate of occupancy and a final warranty inspection to be conducted approximately one year from the date of the initial final inspection. Sites may be inspected beyond the date of the final warranty inspection if construction and/or maintenance of stormwater drainage/collection facilities and/or stormwater system components are determined to be ineffective.

Types of inspections: initial final; final warranty; complaint received by the public or City staff; field observation; or post storm event.

Method of determining locations of sites to be inspected: invitation or notification of initial final or final warranty inspections by City staff; complaint received by the public or City staff; knowledge of locations that have already been inspected; field observation; or post storm event.

Frequency of Inspection: The frequency of inspections for a particular site will vary depending on site location, field observations, complaints and/or concerns received by the public or City staff, greater potential for discharge to the MS4, or following significant storm events.

Inspection procedure:

1. Conduct visual inspection of perimeter areas and identify the potential of or evidence of off-site discharges.
2. Observe all stormwater drainage/collection facilities and stormwater system components, including but not limited to retention areas, non-retention permeable areas, conveyance structures, drywells, scuppers, spillways, catch basins, underground retention tanks, velocity dissipation devices, headwalls, and associated structures for proper construction, connection and maintenance per City of Chandler and Maricopa Association of Governments (MAG) standard details and specifications.

<p>3. Drainage/collection facilities and stormwater system components shall provide for safe and efficient drainage, conveyance, percolation and disposal of stormwater per City of Chandler Technical Design Manual #3.</p> <p>4. All retention and non-retention permeable areas shall be adequately stabilized to prevent erosion and subsequent sediment deposition.</p> <p>5. Punch lists shall be completed and forwarded to the Construction Management representative e.g. Development Project Administrator, Public Works Inspector, Project Manager, Engineering Assistant or Engineer as soon as possible following the inspection. Punch lists shall document all observed defects or discrepancies in construction, stabilization, connectivity and effectiveness. Punch lists will be completed for initial final and final warranty inspections.</p> <p>6. Issues observed to be associated with defects in construction, stabilization, connectivity and/or effectiveness of private or public stormwater drainage/collection facilities and/or stormwater system components beyond the final warranty inspection period will be documented and/or brought to the attention of the Stormwater Programs Coordinator for follow up. Efforts should be made to further investigate the defect(s), and determine a course of action, along with notification of the private or public property owner or the Engineer on record responsible for the referenced defects.</p> <p>7. Enforcement: Failure to reasonably address defects in construction, stabilization, connectivity and/or effectiveness upon notification may result in an enforcement action including, but not limited to Chandler City Code provisions.</p>
<p>Equipment: Truck, personal protective equipment and safety equipment appropriate for site conditions and assigned activities, camera, clipboard, paper, writing utensil, inspection mirror, flashlight, spotlight or headlamp, tape measure, hand tools (manhole hook, large slotted screwdriver, sledgehammer, etc.), distance wheel.</p>
<p>Measurable Goal(s): The number of initial final and final warranty inspections will be tabulated and reported within the annual report.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: Drainage Policies and Standards: Technical Design Manual #3</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.5), Drainage Policies and Standards: Technical Design Manual #3: http://www.chandleraz.gov/content/UDM_TDM3.pdf City of Chandler Standard Details C-500 series http://www.chandleraz.gov/content/UDM_500StormSewerDrainage.pdf</p>
<p>Implementation Status: Current BMP; Start date 03/03</p>

MCM 5-1B: Site Plan Review

Objective: As part of the civil plan approval process, the City will review civil site plan submittals to evaluate post-construction stormwater controls.
Department/Division/Staff: Development Services / Development Engineering Division Engineering / Plan Review Manager and/or Principal Plans Examiner and/or Sr. Plans Examiner and/or Plans Examiner
Procedure: Assigned staff will perform a technical evaluation and review of building and site plans and design and construction documents to ensure compliance with City development ordinances and to evaluate the post-construction stormwater controls.
Equipment: Desktop computer, plan sheets, writing utensil
Measurable Goal(s): Assigned staff will review civil site plans for all permitted projects.
Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.
Legal Authority: N/A
References: AZPDES Small MS4 General Permit (Section 6.4.5.2)
Implementation Status: Current BMP; Start Date 03/03

MCM 5-2: Educational Materials

Educational Material Type 1: Property Owner’s Manual for Stormwater Management

<p>Objective: Develop, maintain and distribute the City of Chandler <i>Property Owner’s Manual for Stormwater Management</i>.</p>
<p>Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist</p>
<p>Procedure: Assigned staff will periodically review and/or revise and distribute the <i>Property Owner’s Manual for Stormwater Management</i> to Homeowner’s Association’s, Board Member’s and Property Manager’s on request to assist them in properly budgeting and maintaining privately owned stormwater drainage system structures.</p>
<p>Equipment: N/A</p>
<p>Measurable Goal(s): The <i>Property Owner’s Manual for Stormwater Management</i> will be distributed upon request throughout the year.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: Drainage Policies and Standards: Technical Design Manual #3: http://www.chandleraz.gov/content/UDM_TDM3.pdf City of Chandler Standard Details C-500 series http://www.chandleraz.gov/content/UDM_500StormSewerDrainage.pdf</p>
<p>References: AZPDES Small MS4 General Permit (Section 6.4.5.4)</p>
<p>Implementation Status: Current BMP; Start Date 08/03</p>

Educational Material Type 2: Stormwater Brochure and/or Fact Sheet and/or Manual

Objective: Develop and distribute a fact sheet for developers, homeowner’s associations, property managers and maintenance professionals that assist’s with reducing pollutants from new developments and redevelopment to the MS4.
Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist
Procedure: Assigned staff will create a fact sheet that will be made available for distribution. At a minimum, the fact sheet will include the following information; storm drainage system structures, operations and maintenance, outreach, applicable City code, and resources.
Equipment: N/A
Measurable Goal(s): A copy of the fact sheet will be included on the stormwater program website and will be distributed as needed.
Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.
Legal Authority:
References: AZPDES Small MS4 General Permit (Section 6.4.5.4)
Implementation Status: Future BMP

MCM 5-3: Post-Construction Inventory

Objective: Prepare and maintain and up to date inventory of post-construction structural control measures.
Department/Division/Staff: Development Services / GIS / GIS Technicians
Procedure: The City will maintain an inventory of post-construction structural control measures in the GIS system. Structures will be added into Chandler’s existing system following final inspections and submittal of as-built information has been confirmed. Additional features may be added and/or revised when necessary.
Equipment: N/A
Measurable Goal(s): The map will be updated when the construction of new control measures is complete or in the case where an existing facility was not previously identified.
Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.
Legal Authority: N/A
References: AZPDES Small MS4 General Permit (Section 6.4.5.3)
Implementation Status: Current BMP; Start Date 03/03

Appendix G- MCM-6 Pollution Prevention/Good Housekeeping for Municipal Operations BMP Details

MCM 6-1 Recycling, Solid Waste Collection Center/Household Hazardous Waste Collection Facility

MCM 6-2 Implement Controls at Armstrong Yard

MCM 6-3 O&M Procedures at Armstrong Yard

MCM 6-4 Training

MCM 6-5 Street Sweeping

MCM 6-6 Inventory and Prioritization of Municipal Operations and Site Inspections

MCM 6-7 Operations and Maintenance of Storm Sewer System

MCM 6-1: Recycling, Solid Waste Collection Center/Household Hazardous Waste Collection Facility

Objective: Provide residents with the service of collecting Household Hazardous Waste by providing a convenient and secure location for drop off.

Department/Division/Staff: Public Works & Utilities / Solid Waste Services / Solid Waste staff

Procedure: Assigned staff will greet the public in a prompt, professional, and friendly manner. Staff will proceed by conducting a HHW survey and asking the resident(s) if they possess infectious medical wastes (sharps or lancets) for special handling. The resident will also be asked if they possess any unacceptable waste such as ammunition, explosive materials as defined by 40 CFR, Section 173.5, or radioactive waste. Such materials will not be accepted. Staff will provide residents with options for proper handling.

Types of Household Hazardous Waste Accepted:

- Cleaning products
- Pesticides and herbicides
- Lawn and garden chemicals
- Pool chemicals
- Motor oil, antifreeze, vehicle related fluids
- Gasoline and other fuels
- *Tires
- Mercury and mercury related waste
- Lithium and nickel cadmium batteries
- Lead acid batteries
- Acids
- Fire extinguishers
- Fluorescent bulbs
- Poisons
- Paint and paint related products
- Aerosols
- Sharps, lancets and prescription drugs
- * Computers and other electronics
- Photography chemical products
- Propane tanks

* Collected at the Recycling – Solid Waste Collection Center in the recycling drop-off area.

Waste not accepted at the City of Chandler Household Hazardous Waste Collection Facility include:

- Ammunition
- Infectious medical waste (excluding sharps and lancets secured in sealed and labeled containers)

- Explosives
- Radioactive wastes

Unloading Area

Staff assigned to unloading vehicles will remind the resident(s) to:

1. Remain in the vehicle while in the vicinity of the HHW collection facility
2. Smoking is prohibited
3. If the HHW is not accessible by staff, ask the driver to release the trunk or allow staff to access the vehicle to remove the waste.
4. Check the general condition of the waste prior to unloading (leaking, open containers, deteriorated, not identified or not acceptable).
5. If leaking items or items that could cause potential spills are present, alert the resident(s) and staff for special handling. Use plastic bags or lined boxes (with absorbent, if necessary) to remove waste from the vehicle.
6. Seal poorly fitting lids or tops with duct or electrical tape.
7. Ask resident to identify any materials that are unknown or not labeled (if possible), prior to directing the resident from the unloading area.

Handling and Management of Known Materials

1. All materials will be placed on the sorting tables for segregation. Paints, paint related materials, motor oil, oil filters, antifreeze, poisons and pesticides, and bases in non-leaking containers are stored in the designated bay for storage, processing and consolidation.
2. Auto batteries, propane tanks and cylinders are to be stored outside the north end of the main processing building. Auto batteries shall be placed on the pallet and secondary containment platform as designated. Propane tanks and cylinders shall be secured in the secured storage system or adjacent to the building.

Handling and Management of Unknown Materials

Staff will handle all unknown materials received at the Household Hazardous Waste Collection Facility as follows:

1. Staff unloading the material will scan the load for any material that is not in an original container (i.e., glass jars, coffee cans, plastic milk jugs, etc.).
2. Staff will ask the participant if they know the contents of a container and will relay that information to other staff members for assistance, if necessary.

3. Staff will observe characteristics such as color and physical state (i.e., liquid, solid, gaseous, semi-solid, etc.), and any other indications of the material.
4. Once initial observations are made, staff shall secure the material for handling by the contractor for HazCat Testing.

Any waste that is unknown and cannot easily be identified will be secured in the designated area by staff. This waste will be HazCat tested by trained staff or contractor for proper identification and Department of Transportation (DOT) and/or Environmental Protection Agency (EPA) classification. Once identified, the waste shall be collected in the proper waste stream for recycling, packaging, and/or disposal.

Equipment: Personal protective equipment and safety equipment appropriate for site conditions and assigned activities, sorting table(s), plastic bags, lined boxes, absorbent material, duct tape, electrical tape, 55 gallon metal, fiber lined and poly drums, 30 gallon fiber drums, fiber tubes, 5 gallon buckets, mailing boxes, pallets, secondary containment, storage cabinet, shelving, plastic tub, cart, dolly, label(s), MSDS sheet(s), inventory sheet(s), funnel(s), fire extinguisher(s), non-spark tools.

Measurable Goal(s): The number of residents utilizing the facility and total quantity of materials (pounds) dropped off to the facility will be tabulated and reported within the annual report. Additional information associated with the quantity of materials reused and/or recycled may be reported.

Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.

Legal Authority: N/A

References:

City of Chandler Household Hazardous Waste Collection Facility Standard Operating Procedures – Unloading and Handling Materials

City of Chandler Household Hazardous Waste Collection Center Operations – General Plan

Implementation Status: Current BMP; Start Date 03/03

MCM 6-2: Implement Controls at Armstrong Yard

<p>Objective: Contain loose bulk material's such as dirt, street sweeping debris, and other materials in separate three sided bins to contain the debris.</p>
<p>Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist or other Streets Division staff</p>
<p>Procedure: Bulk material bin's will be maintained in the yard storage area. All material and debris will be deposited in the appropriate bin's when equipment such as trucks and sweepers are emptied. Separate bin's will be used for each material type. The area around the bin's will be kept clean by routinely sweeping the area and recycling and/or disposing of materials that are no longer needed.</p> <p>The bin's will be used to help contain the material to reduce the amount of dust, debris, and other material that could enter the MS4.</p>
<p>Equipment: Storage bins, shovels, brooms.</p>
<p>Measurable Goal(s): The City will maintain bulk material bins and evaluate the effectiveness and need for additional bins and modify as necessary.</p>
<p>Data Collection, Recordkeeping, and Reporting: The type of material and total number of bin's will be recorded. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: N/A</p>
<p>Implementation Status: Future BMP; Start Date 04/17</p>

MCM 6-3: O&M Procedures at Armstrong Yard

<p>Objective: Inspect and maintain City vehicle and equipment wash areas and storm drains to reduce the discharge of pollutants from the MS4.</p>
<p>Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist</p>
<p>Procedure: Assigned staff will conduct proactive inspections of wash areas, storm drains, and surrounding areas throughout the year. Additional inspections will be performed as needed. The assigned staff will then create work orders in the Lucity asset management system for all problems identified during the inspection.</p> <p>The inspection will be performed to identify structures or other BMPs that are damaged, in need of repair or maintenance or to identify those drains that are at risk of collecting pollutant for a nearby location. The inspection should also include the identification of possible pollutant sources for each structure.</p>
<p>Equipment: Camera, clipboard, paper, writing utensil, inspection mirror, flashlight or spotlight, tape measure, distance wheel, hand tools (manhole hook, rake, shovel, broom, large slotted screwdriver, wrenches, sledgehammer, etc.)</p>
<p>Measurable Goal(s): The number of inspections and work orders generated will be tabulated and reported within the annual report. Data collected from each inspection will be recorded.</p>
<p>Data Collection, Recordkeeping, and Reporting: The type of structure's and inspection/maintenance activities will be recorded. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: N/A</p>
<p>Implementation Status: Future BMP; Start Date 04/17</p>

MCM 6-4: Training

<p>Objective: Develop and implement a training program with the goal of informing City staff about preventing and reducing the discharge of pollutants to and from the MS4.</p>
<p>Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist and/or Management Services / Environmental Management / Environmental Manager and/or Environmental Program Specialist or Administrative Services / Human Resources / Safety Analyst or Contracted Consultant</p>
<p>Procedure: Training topics or content may include, but is not limited to, the proper storage and clean-up of potential pollutant sources, maintenance practices, sediment and erosion control measures, identification of potential illicit discharges and the response to calls pertaining to illicit discharges and who to contact with questions, observations and/or concerns.</p> <p>Such training will focus on those employees that may be involved in field oriented roles, associated with construction activities and/or field staff that may use, store and/or dispose of potential pollutant sources.</p> <p>The delivery method of training may include, but is not limited to a classroom setting, via the City’s learning management system (ChandLearn), in the field, on the jobsite or at meetings. Training content may include video, PowerPoint presentations, verbal communication and/or handouts relevant to applicable job duties or activities. Training activities will occur throughout each year of the permit term. The frequency and number of training sessions may vary each year based on employee availability and other assigned duties. A training roster form will be prepared and all training participants will be asked to fill out and sign the form. The training roster form may include the following information: Date, time, Department, Division, employee number, signature, a brief description of training content and the trainer(s) administering the session.</p>
<p>Equipment: Smartboard, projection screen, projector, dry erase board, dry erase markers, desktop or laptop computer, flash drive, DVD player, DVD, CD, laser pointer, speaker system, writing utensil, training roster form.</p>
<p>Measurable Goal(s): The training of staff will occur throughout each year of the permit term. The number of staff trained will be tabulated and reported within the annual report.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: EPA Municipal Employee Training and Education http://water.epa.gov/polwaste/npdes/swbmp/Municipal-Employee-Training-and-Education.cfm</p>
<p>Implementation Status: Current BMP; Start Date 03/03</p>

MCM 6-5: Street Sweeping

Objective: To maintain clean, safe streets for the residents of the City of Chandler and to reduce fugitive dust particulates from being entrained into the ambient air. Keep gutters clear of dirt and refuse to ensure proper flow of water within the gutter and protection of asphalt surfaces along gutter line from deterioration due to water and dirt accumulation.

Department/Division/Staff: Public Works & Utilities / Streets / Street Sweeping Staff

Procedure:

- Residential streets are scheduled to be cleaned at a frequency of approximately once per month. Arterial roadways are cleaned weekly, alternating from curbside to medians bi-weekly, and the downtown area is addressed once per week. Rotations may vary depending on available staff, operational equipment, etc.
- These cycles will be followed by each sweeper operator that is responsible to report work completed to the sweeping supervisor by logging it in their daily report and or recording it on the appropriate map to indicate area swept.
- Before beginning work, check the sweeper. Operators are responsible for the cleanliness of equipment, maintaining proper fluid levels to ensure safe and efficient operation, proper operation of all safety devices, (warning lights, back-up alarms), proper lubrication of all areas per manufacturers specifications, necessary adjustments to gutter booms and pick-up brooms to provide optimal performance, (attack and tilt angles, down pressure on gutter broom platters and pick-up broom float adjustments where applicable). Operators will complete a walk around of equipment at the beginning and end of each work shift.
- The operator determines the necessity of replacement of brooms when a point of wear reduces capability for optimal performance.
- Notify sweeping Supervisor of all scheduled and un-scheduled maintenance required by completing form cc 68, vehicle work request.
- Operators will clean equipment daily, prior to the end of shift and prepare vehicle for next day use ensuring all operational parts are free from excessive wear and fully functional. Ensure that all hydraulic hose connections are tight and hoses are free of potential problems.
- Sweep to provide proper dust control with use of water spray bars, sweeping speed compatible to road surfaces and amount and type of debris, RPM adjustments to sweeping components can also be used in equipment with this availability. A goal of 90% pick up of debris should be expected in a single pass; in some cases a second pass may be required.
- While sweeping, large debris (branches, rocks, bricks, etc.) will be removed to the side of the street and off of the roadway. Use care to avoid parked vehicles. Avoid sweeping areas where large piles of rock/dirt, track-out from construction sites, etc. may exist.
- Monitor gauges and re-fill water tank and empty sweeper in designated areas as needed.
- Sweeping of residential areas will be done only in assigned areas per daily sweeping schedule maps. Exceptions are emergency situations or when special projects are

<p>designated. Sweep radius returns and medians as scheduled.</p> <ul style="list-style-type: none"> • The foremost consideration in the operation of street sweeping is safety. If sweeping function cannot be performed safely with regard to personal and private protection, it cannot be accomplished until safe conditions exist. • Empty sweeper at end of shift in sweeping pile at yard or appropriate roll off dumpsters located at well sites and clean equipment and park in appropriate location. • All street sweeper operators are required to assist in storm clean up during their normal work shift if weather does not permit efficient and safe operation in there geographical sweeping area or at the request of supervisors in emergency situations as outlined in job specification for senior street specialist (other duties). • There shall be no un-approved alterations to any sweeper including stickers or writing! (check with sweeping supervisor first) • There shall not be any other persons in the cab except for another sweeping crew member unless approved by the street sweeping supervisor in advance. • The following items are subject to change at any time to accommodate the needs of street sweeping operations: <ol style="list-style-type: none"> 1. Roll off bin's loading assignment or any sweeping dump location 2. Wash bay maintenance 3. Truck assignment 4. Route assignment 5. Maintenance bay
<p>Equipment: Street sweeper, personal protective equipment and safety equipment appropriate for site conditions and assigned activities, hand tools, shovel, etc.).</p>
<p>Measurable Goal(s): The total number of miles swept and amount of material removed from the street (tons) will be tabulated and reported within the annual report.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: N/A</p>
<p>Implementation Status: Current BMP; Start Date 03/03</p>

MCM 6-6: Inventory and Prioritization of Municipal Operations and Site Inspection

Part 1: Facility Inventory

<p>Objective: Conduct an inventory of municipal facilities that may have the potential to discharge pollutants to the MS4.</p>
<p>Department/Division/Staff: Management Services / Environmental Management / Environmental Manager and/or Environmental Program Specialist and/or Administrative Services / Human Resources / Safety Analyst or Contracted Consultant</p>
<p>Procedure: Assigned staff will develop and maintain a map and/or a list of all municipal facilities that can be utilized for conducting site inspections. Facilities may include, but are not limited to City Hall, police and fire stations, municipal pools, parking garages, city yards, well sites, airport, water and wastewater treatment facilities, fleet repair, etc.</p>
<p>Equipment: N/A</p>
<p>Measurable Goal(s): The map and/or list will be updated when new municipal facilities have been added and/or in the case where an existing facility was not previously identified or a change in prioritization has occurred.</p>
<p>Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.</p>
<p>Legal Authority: N/A</p>
<p>References: Illicit Discharge Detection and Elimination Program Development (EPA): http://water.epa.gov/polwaste/npdes/swbmp/Illicit-Discharge-Detection-and-Elimination-Program-Development.cfm Illicit Discharge Detection and Elimination (EPA): http://water.epa.gov/polwaste/npdes/swbmp/Illicit-Discharge-Detection-and-Elimination.cfm</p>
<p>Implementation Status: Future BMP; Start Date 04/17</p>

Part 2: Facility Inspection

<p>Objective: Inspect municipal facilities to minimize or prevent exposure and/or discharges of pollutant runoff from municipal operations to the MS4.</p>
<p>Department/Division/Staff: Management Services / Environmental Management / Environmental Manager and/or Environmental Program Specialist and/or Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist and/or Administrative Services / Human Resources / Safety Analyst or Contracted Consultant</p>
<p>Procedure: Assigned staff will conduct site inspections of all prioritized sites and municipal facilities identified during the most recent inventory/mapping of facilities. The inspection may include, but is not limited to storage of containers, waste management, vehicle and equipment storage, wash water collection and walking the perimeter (outside) of the facility.</p>

Equipment: Truck or van, personal protective equipment and safety equipment appropriate for site conditions and assigned activities, camera, clipboard, paper, writing utensil, inspection mirror, flashlight or spotlight, tape measure, distance wheel, hand tools (manhole hook, large slotted screwdriver, wrenches, sledgehammer, etc.)
Measurable Goal(s): The number of inspections will be tabulated and reported within the annual report. The map will be updated when new municipal facilities have been added.
Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.
Legal Authority: N/A
References: N/A
Implementation Status: Future BMP; Start Date 04/17

Part 3: Facility Prioritization

Objective: Prioritize the municipal facilities inventory to identify the facilities that may have the highest potential to discharge pollutants to the MS4.
Department/Division/Staff: Management Services / Environmental Management / Environmental Manager and/or Environmental Program Specialist and/or Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist and/or Administrative Services / Human Resources / Safety Analyst or Contracted Consultant
Procedure: Assigned staff will review the inspection records for municipal facilities and assign a priority ranking based upon the facility condition and usage. Facilities may include, but are not limited to City Hall, police and fire stations, municipal pools, parking garages, city yards, well sites, airport, water and wastewater treatment facilities, fleet repair, etc.
Equipment: Desktop or laptop computer
Measurable Goal(s): The prioritization will be assigned or updated when facility inspection occur.
Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.
Legal Authority: N/A
References: N/A
Implementation Status: Future BMP; Start Date 04/17

MCM 6-7: Operations and Maintenance of Storm Sewer System

Objective: Inspect and maintain the storm drainage system to reduce the discharge of pollutants from the MS4.

Department/Division/Staff: Public Works & Utilities / Streets / Stormwater Programs Coordinator and/or Stormwater Program Specialist and/or Stormwater Maintenance Supervisor and/or Stormwater Maintenance Crew

Procedure: Assigned staff will conduct proactive inspections of catch basins, scuppers and drywells throughout the year. Additional MS4 structures will be inspected as a result of a complaint, field observation and/or a report of an illicit discharge.

Inspection procedure:

1. Work orders for proactive inspections will be created in the Lucity asset management system. Proactive inspections will be primarily conducted by FMA. The inspector will utilize a GIS map to assist in navigation and orientation in the field and to identify specific structures to be inspected.
2. The inspector will look for obstructions or significant sediment or materials within the structure that may hinder flow. The structural integrity of the structure will also be evaluated. If significant standing water is observed to be present in a catch basin, the infrastructure downstream leading to the discharge or end point (headwall, bubbler box, drywell, etc.), will be inspected to determine the cause.
3. The inspector will document field notes for each structure that was visually observed to have obstructions, significant sediment or materials or structural damage that may result in failure, street flooding or create a safety concern.
4. Following completion of the inspection, the inspector will return to the office and create work orders in the Lucity asset management system for any City owned storm sewer system structures within the FMA that require maintenance. In the case where a drywell was identified as requiring service, the inspector will notify the Stormwater Programs Coordinator so that a contractor can be scheduled to conduct the maintenance. Work orders will be separated by catch basins and scuppers, with no more than 5 catch basins or 10 scuppers included in a single work order. Work orders will be assigned to the stormwater maintenance crew.
5. In the case where privately owned structures located on commercial or residential properties have been determined to require maintenance for obstructions, significant sediment or materials or structural damage, the inspector will contact the applicable Property Manager, Homeowner's Association or property owner and inform them of the specific issue and the required maintenance or repair necessary to correct the issue. All post-construction issues will be entered into the Lucity asset management system. Applicable photos, correspondence, etc., will be documented within the respective work order.

Maintenance procedure:

1. Obtain assigned work order(s) for the day.
2. Equipment is checked before leaving the City yard following the “walk around” procedure for CDL operators.
3. Proceed in a logical, geographical, sequential fashion to maintain storm drainage structures such as, catch basins, scuppers, bubbler boxes, spillways, laterals, culverts, drywells, pipes, and other areas where water is drained off of streets.
4. Employees are to wear all appropriate personal protective equipment and safety equipment including but not limited to: safety glasses, ear protection, safety vests or orange shirts, dust masks, etc.
5. Use all appropriate safety/warning lights referring to the City of Chandler Barricade and Traffic Control Manual.
6. On the site, secure the equipment off the road or sidewalks as much as possible. Use traffic cones, barricades, warning signs, arrow board, warning lights, etc. to secure the area before work begins.
7. Sweep (spillways) or vacuum (catch basins) the area to be cleaned. Remove grates and/or covers as needed to clean the area completely. Sludge out areas where there is buildup of mud, dirt, and debris. Shovel out for removal. Run the rodder through the lines when necessary/plugged.
8. After area is clean, staff will secure grates, covers and/or lids before leaving site. Note on daily work log any grates, covers and/or lids that need repair or replacement.
9. At end of the day, empty hydraulic vacuum truck and clean out check hoses and tools for any defects. Dispose of material in the vacor wash bay area located at the City Yard and clean out the truck.
10. Provide log of work completed with locations and applicable field notes to Crew Leader for completing Lucity work orders.

Equipment: (Inspection) Truck, personal protective equipment and safety equipment appropriate for site conditions and assigned activities, camera, clipboard, paper, writing utensil, inspection mirror, flashlight or spotlight, tape measure, distance wheel, hand tools (manhole hook, rake, shovel, broom, large slotted screwdriver, wrenches, sledgehammer, etc.) **(Maintenance)** Truck, service truck and/or hydrovac truck (vactor), personal protective equipment and safety equipment appropriate for site conditions and assigned activities, camera, clipboard, paper, writing utensil, inspection mirror, flashlight or spotlight, tape measure, hand tools (manhole hook, rake, shovels, hoses, broom, large slotted screwdriver, wrenches, sledgehammer, etc.)

Measurable Goal(s): The number of structures inspected and maintained will be tabulated and reported within the annual report.
Data Collection, Recordkeeping and Reporting: Data collection will be conducted throughout the permit term. Applicable records will be maintained for a minimum of three years following the end of the permit term. Applicable information associated with the BMP will be reported in each Annual Report during the permit term.
Legal Authority: N/A
References: N/A
Implementation Status: Current BMP; Start Date 03/03

Revision log:

7/17/18: Revisions were made throughout the SWMP to reflect the recent merging of the Municipal Utilities Department and the Transportation & Development Department, which is currently referred to as the Public Works & Utilities Department. Other observed errors and/or discrepancies, including, but not limited to changes to Departments, revisions to Standard Operating Procedures, nomenclature, etc., were corrected.