

**ARIZONA POLLUTANT DISCHARGE ELIMINATION SYSTEM  
GENERAL PERMIT FOR DISCHARGE FROM  
SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS  
(MS4s)  
TO WATERS OF THE UNITED STATES  
FOR THE  
CITY OF CHANDLER**



**Chandler + Arizona**  
Where Values Make The Difference

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**2008 Storm Water Management Program Update**

Prepared by:

**City of Chandler  
Public Works Department  
975 East Armstrong Way, Building C  
Chandler, Arizona 85286**

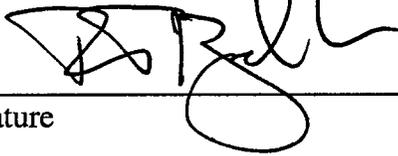
**April 2008**

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**Certification Statement**  
**City of Chandler Stormwater Management Program**  
**2008 Update**

Certification

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



\_\_\_\_\_  
Signature

Robert J. Zeder, Jr.

\_\_\_\_\_  
Name (printed)

Public Works Director

\_\_\_\_\_  
Title

4-21-08

\_\_\_\_\_  
Date

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ALL REQUESTED  
INFORMATION MUST  
BE PROVIDED ON  
THIS FORM



Arizona Department of Environmental Quality  
Surface Water Section / Permits Unit  
1110 W. Washington, 5415A-1, Phoenix, Arizona 85007  
**NOTICE OF INTENT (NOI) FOR COVERAGE**  
under AZPDES Permit No. AZG2002-002 for  
*Discharges from Small MS4s to Waters of the United States*

CHECK AS APPLICABLE: NEW NOI \_\_\_\_\_ REVISED NOI   
IF A REVISION, PROVIDE PRIOR AUTHORIZATION NO.  
MS42002-07

Applicant is:  
\_\_\_\_\_ Federal \_\_\_\_\_ State  
 Other \_\_\_\_\_ Municipal

**PERMITTEE (Agency Responsible for the Discharge)**

Applicant's Name: City of Chandler Phone: (480) 782-3400  
Applicant's Mailing Address: P.O. Box 4008, MS 403  
City: Chandler, AZ Zip Code: 85244-4008

**CONTACT PERSON**

Name: David Verhelst Phone: (480) 782-3503  
E-mail Address: david.verhelst@chandleraz.gov Fax: (480) 782-3495  
Contact Person's Agency and Title: City of Chandler, Stormwater Programs Coordinator

**LOCATION INFORMATION**

Name of Urbanized Area where the MS4 is located: Chandler, AZ  
Name of county(ies) where the MS4 is located: Maricopa  
Provide the following information on the approximate center of the MS4:  
Latitude: 33 ° 17 ' 42 " Longitude: -111 ° 52 ' 1 "  
Township: 1 South Range: 5 East Section: 32  
Is any portion of the MS4 located in Indian Country? No  Yes \_\_\_\_\_ If yes, name \_\_\_\_\_  
Does any portion of the MS4 service a population within Indian Country? No  Yes \_\_\_\_\_  
If yes, how many people within the Indian Country are served by your MS4? \_\_\_\_\_

Name(s) of neighboring Tribes/Counties/Cities/Towns (places that share borders with the permittee):

<u>Gila River Indian Community</u>	_____	_____
<u>Town of Gilbert</u>	_____	_____
<u>City of Mesa</u>	_____	_____
<u>City of Tempe</u>	_____	_____
<u>City of Phoenix</u>	_____	_____

**WATERSHED INFORMATION**

Name of Watershed: Middle Gila

Name of Receiving Water(s):

Is the Receiving Water a 303(d) Impaired Water?

Gila Drain  
Gila Floodway, Tributary to Gila River via  
SanTan Freeway Drainage Channel

Yes  No   
Yes  No   
Yes  No

If any of the receiving waters are 303 (d)-listed Impaired Waters, you must complete the Impaired Water Information portion of this form.

**IMPAIRED WATERS INFORMATION**

If you indicated that any of the receiving waters to which you discharge are listed as a 303 (d) Impaired Water, please answer the following questions.

Is there a Total Maximum Daily Load (TMDL) for the 303(d) Impaired Water?

Yes  Proceed to Part A No  Proceed to Part B

**Part A.** Does the TMDL prescribe a wasteload allocation to stormwater discharge from your MS4?

Yes  Check the box below No  Proceed to Part B

I certify that the SWMP identifies specific BMPs that will be used to meet wasteload allocations. I also certify that I will monitor for pollutants for which my MS4 is assigned a wasteload allocation.

**Part B.** Check the box below if the MS4 has the potential to discharge the pollutants identified on the 303(d) list.

I certify that the description of the SWMP addresses specific BMPs for reducing the discharge of 303(d)-listed pollutants.

**ADDITIONAL INFORMATION**

This NOI must include the following attachments prepared as specified in Part III of the general permit.

A description of your Stormwater Management Program.

Has another governmental entity agreed to satisfy any of your permit obligations?

Yes  If yes, check the boxes below No

The agreement is explained in the description of your Stormwater Management Program.

Written documentation of your agreement is included as an attachment.

**CERTIFICATION**

This certification must be signed by the appropriate party as specified in this general permit Part VI.L.

"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 the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. In addition I certify that the permittee will comply with all terms and conditions stipulated in General Permit No. AZG2002-002 issued by the Director."

Printed Name of Applicant's Representative: Daniel W Cook

Title: Acting Public Works Director

Signature of Applicant's Representative: [Signature]

Date: 3-5-07

## **Section 2**

# **Description of City of Chandler's Small Municipal Separate Storm Sewer System (MS4)**

## **2.1 City of Chandler Drainage System**

The City of Chandler (City) encompasses approximately 71-square miles and is located in eastern Maricopa County in the State of Arizona. According to recent census figures, the population of Chandler is approximately 240,000 people. The Chandler General Plan for Land Use was developed in 1990 and updated in 2001 to guide development in the City. Currently, the Chandler area includes a mix of residential, commercial, industrial and agricultural land uses. The General Plan projects that industrial and commercial growth will be concentrated in west Chandler along Chandler Boulevard, in south Chandler along Price Road and in north Chandler along Arizona Avenue. The General Plan also anticipates that in the future very little land will be used for agricultural use at build out conditions.

As the City of Chandler has developed, it has adopted and implemented a stormwater control philosophy that is based on on-site retention of the 100-year 2-hour storm event. Today, many developed areas of Chandler do not discharge off-site, but retain stormwater runoff, which then percolates through the ground or is pumped to another City-owned basin or an Arizona Department of Transportation (ADOT)-owned basin. As a consequence, the MS4 is limited in size and accordingly the Phase II permit program has limited applicability to the City.

Older areas of Chandler, which were built prior to the implementation of the on-site retention strategy, e.g., the downtown area, have limited stormwater retention capabilities. Accordingly, these areas of the city direct stormwater flows to large centralized storage basins that provide retention of the initial stormwater runoff event. Typically water stored in these basins is then pumped to drainage channels, e.g., those constructed by the ADOT to collect highway stormwater runoff. Stormwater pumped to ADOT may result in the indirect discharge of stormwater originating from the City to a jurisdictional water. However, by the time that discharge occurs, stormwater originating from the jurisdiction of the City of Chandler will have commingled with direct highway runoff and stormwater originating from other jurisdictions linked to the ADOT drainage system.

Following is a brief description of the key elements of the City of Chandler MS4 and their relationship to jurisdictional surface waters, i.e., waters of the United States, that have the potential to receive indirect stormwater discharge from the City.

### **2.1.1 Downtown Area**

The downtown area is an older portion of the City, which was developed prior to the adoption of any City ordinances established to control drainage and require on-site retention. A portion of the downtown area of Chandler drains into the Price Freeway

Drainage Channel through a series of basins - the Galveston Basin, the Arrowhead Basin and ADOT Basin G (See Appendix A). Currently, stormwater routed to the Galveston Basin, is temporarily detained and slowly discharged to the Arrowhead Basin. Also, the Arrowhead Basin currently accepts stormwater and routes the stormwater to ADOT Basin G through a forcemain. ADOT Basin G drains to the Price Freeway Drainage Channel.

The Galveston Basin collects stormwater from the area south of Ray Road, north of Galveston Street, west of Arizona Avenue and east of Alma School Road. Currently, the Galveston basin detains the design storm event (100-year, 2 hour) and drains into the Arrowhead Basin.

The Arrowhead Basin collects stormwater from the area south of Galveston Street, north of Chandler Boulevard, west of California Street, east of Alma School. The Arrowhead Basin also collects stormwater from its surrounding neighborhood, which is north of Chandler Boulevard, south of Ray Road, east of Arrowhead Drive and west of Alma School Road. Currently, Arrowhead Basin pumps stormwater into ADOT Basin G, which ultimately drains to the Price Freeway Drainage Channel. The southern portion of the Price Freeway Drainage Channel drains into the Santan Freeway Drainage Channel.

The Denver Basin, which is also in the downtown area, receives stormwater from two areas. The area south of Ray Road, east of California Street, north of Pecos Road, west of the Southern Pacific Railroad drains into the Denver Basin and the portion of Chandler Blvd west of McQueen and the east of the Southern Pacific Railroad. The Detroit Basin collects stormwater from area east of the Southern Pacific Railroad, west of Hamilton between Galveston and Erie Streets, and then conveys that stormwater to the Denver Basin. The Denver Basin conveys stormwater by force main to the Santan Freeway Drainage Channel and then to ADOT Basin H. ADOT Basin H will convey stormwater through the Santan Freeway Drainage Channel (see Appendix A).

### **2.1.2 Discharge to ADOT Drainage System**

The City of Chandler stormwater control program is designed so that best management practices are implemented in a manner that controls the quality of stormwater discharged to the ADOT drainage system. In addition, much of the stormwater that enters the ADOT drainage system is first discharged to retention basins as described above. As a result, the first flush of stormwater is captured providing an opportunity for sediment to settle out prior to discharge to the drainage system.

All discharges from the City to the Santan Freeway Drainage Channel as well as from other jurisdictions that discharge to the same channel, may during particularly large stormwater runoff events reach the Gila Floodway, located on the Gila River Indian Reservation. Ultimately, if sufficient flow is discharged to the Gila Floodway, the potential exists for stormwater to drain to the Gila River, approximately 10 miles

downstream. The ADOT drainage system associated with the Santan Freeway is uniquely designed to provide stormwater quality treatment through constructed wetlands prior to any discharge to the Gila Floodway. Thus any stormwater from the City of Chandler that reaches the Gila Floodway not only is commingled with stormwater from many other sources but also receives treatment prior to discharge to the Floodway.

The volume and quality of discharge to the ADOT drainage system are governed by intergovernmental agreements established between the City of Chandler and ADOT. The ADOT freeway system is classified as a state urban transportation system and as such is classified as an MS4 and permitted under the Phase I NPDES stormwater permit program.

### **2.1.3 Other Chandler Areas**

The northern area of Chandler, with the exception of the downtown area, and the southern and western portions of Chandler use on-site retention of stormwater runoff to retain 100-year, 2-hour storm events based on City ordinances (See Appendix E). The runoff is collected through surface flow and/or street flow by a limited storm drain network. The storm drains in these areas are short pipes that drain into the Apache Parks and Brooks Crossing Basins or other local retention basins (See Appendix A).

Residential subdivision retention basins are built by developers to satisfy the City stormwater retention ordinance. Unless a Homeowner's Association manages the subdivision, these basins have been deeded to the City and incorporated into the City's Maintenance Program. Emphasis on the use of retention basins for stormwater collection results in no discharge to the MS4 for the design storm event (100-year; 2-hour).

The Gila Drain, which passes through the western part of the City, receives some minor direct stormwater discharge from streets that cross the drain (see Appendix A). The Gila Drain ultimately discharges to the Gila River on the Gila River Indian Reservation. During the first permit term, the City plans to identify on the stormwater system map the specific locations of its outfalls that discharge to the Gila Drain.

A few small areas of the western part of the City discharge directly to the Santan Freeway Drainage Channel, e.g., areas along 56<sup>th</sup> Street and along the freeway east and west of McClintock Drive (see Appendix A). During the first permit term, the City plans to identify on the stormwater system map the specific locations of its outfalls in this area and the drainage area that may result in stormwater discharge to the Santan Freeway Drainage Channel.

## **2.2 Summary**

The City of Chandler MS4 that is the subject of this permit application is currently limited to those areas of the City that discharge to the ADOT stormwater drainage system and a few locations that discharge to the Gila Drain. The attached Stormwater Management Program has been developed to meet the minimum Phase II general permit requirements that are applicable to this MS4.

# Section 3

## Stormwater Management Program (SWMP)

Presented herein is the City of Chandler's (City) Stormwater Management Program (SWMP), per Part V of the Arizona Department of Environmental Quality (ADEQ) Small Municipal Separate Storm Sewer System (MS4) General Permit (AZG2002-002). To aid in the review of the application, the SWMP is presented in the following order:

- **BMP Summary Table**
  - The BMP Summary Table provides an overview of the BMPs established for each control measure that will be implemented during the first 5-year permit cycle.
- **SWMP**
  - The SWMP provides a comprehensive discussion of the City's stormwater program designed to comply with requirements of General Permit. To aid in the review of the City's response to required permit elements, the City's application is presented in a response format that links program elements to specific permit requirements. Specifically, General Permit requirements are *italicized* and the City's response to each of these requirements is presented in non-*italicized* text.
- **Non-Stormwater Discharge Table**
  - A description of the non-stormwater discharges allowed in the small MS4 pursuant to Part V, Section B.3.a.ii.
- **Supporting Appendices**
  - The application includes appendices that provide supporting documentation to illustrate program elements. Where applicable, these appendices are referenced in the text of the permit application.

Best Management Practice	Year 1	Year 2	Year 3	Year 4	Year 5	Department/Position Responsible
	MAR'03 - JUN'04	JUL'04 - JUN'05	JUL'05 - JUN'06	JUL'06 - JUN'07	JUL'07 - DEC'07	
<b>Public Education and Outreach</b>						
<b>Newsletters</b>						
Create, publish and distribute two (2) articles in newsletters per year	■	■	■	■	■	Stormwater Coordinator
<b>Stormwater Brochure</b>						
Conduct school artwork contest	■					Public Information Officer/ Stormwater Coord.
Create brochure on contest results		■				Stormwater Coord./ Public Information Officer
Monitor brochures taken at events			■		■	Stormwater Coord./ Public Information Officer
<b>Stormwater Web Page</b>						
Conduct school artwork contest	■					Public Information Officer/ Stormwater Coord.
Create web page on City's current website based on contest results		■				Stormwater Coord./ Public Information Officer
Monitor site visits			■		■	Stormwater Coord./ Public Information Officer
<b>Stormwater Signage</b>						
Create signs	■					Stormwater Coordinator
Place signs and inspect existing signs of 25% of City-owned basins per year.		■	■	■	■	Stormwater Coordinator
<b>Storm Drain Placards</b>						
Determine where to place /purchase placards	■					Stormwater Coordinator
Create work plan and/ or obtain community support		■				Stormwater Coordinator
Place placards on stormwater structures			■	■	■	Stormwater Coordinator
<b>Landscaping and lawn care</b>						
Document each year the number of applicants for the Water Conservation Rebate Program	■	■	■	■	■	Water Conservation

City of Chandler - AZPDES Phase II Permit  
 Summary of Phase II Stormwater Program  
 Best Management Practices - 2006 Update

Best Management Practice	Year 1 MAR'03 - JUN'04	Year 2 JUL'04 - JUN'05	Year 3 JUL'05 - JUN'06	Year 4 JUL'06 - JUN'07	Year 5 JUL'07 - DEC'07	Department/Position Responsible
<b>Conservation Calendar</b>						
Conduct school artwork contest	■	■	■	■	■	Public Information Officer/ Stormwater Coord.
Develop 12-month Conservation Calendar using art work and monitoring how many calendars distributed	■	■	■	■	■	Stormwater Coordinator
<b>Classroom Presentations</b>						
Document number of presentation and students	■	■	■	■	■	Stormwater Coordinator
<b>Hamilton Science Fair</b>						
Document number attendees and educational material distributed	■	■	■	■	■	Stormwater Coordinator
<b>STORM Membership</b>						
Document education materials developed and distribution of material	■	■	■	■	■	Stormwater Coordinator
<b>Educational/Promotional Items</b>						
Document event and number of items distributed	■	■	■	■	■	Stormwater Coordinator
<b>Public Works @ Work City Cable Show</b>						
Document number of times episode shown on station	■	■	■	■	■	Stormwater Coordinator

Best Management Practice	Year 1 MAR'03 - JUN'04	Year 2 JUL'04 - JUN'05	Year 3 JUL'05 - JUN'06	Year 4 JUL'06 - JUN'07	Year 5 JUL'07 - DEC'07	Department/Position Responsible
<b>Public Participation &amp; Involvement</b>						
<b>Public Meetings</b>						
<i>Document the description of the purpose and number of attendees for each public meeting held regarding MS4 activities.</i>	■	■	■	■	■	Public Information Officer
<b>Storm Drain Placards</b>						
<i>Determine where to place /purchase placards</i>	■					Stormwater Coordinator
<i>Create work plan and / or obtain community support</i>		■				Stormwater Coordinator
<i>Place placards on stormwater structures</i>			■		■	Stormwater Coordinator
<b>Stormwater Pollution Hotline</b>						
<i>Set-up hotline</i>		■				Stormwater Coordinator
<i>Publish hotline in newsletters, brochures, web page and stormwater signs at City owned basins</i>		■				Stormwater Coordinator
<i>Track phone calls and document any needed follow up.</i>			■		■	Stormwater Coordinator
<b>Stormwater Web Page</b>						
<i>Conduct school artwork contest</i>	■					Public Information Officer/ Stormwater Coord.
<i>Create web page on City's current website based on contest results</i>		■				Stormwater Coord./ Public Information Officer
<i>Monitor site visits</i>			■		■	Stormwater Coord./ Public Information Officer
<b>Conservation Calendar</b>						
<i>Conduct school artwork contest</i>	■	■	■	■	■	Public Information Officer/ Stormwater Coord.
<i>Develop 12-month Conservation Calendar using art work and monitoring how many calendars distributed</i>	■	■	■	■	■	Stormwater Coordinator
<b>Classroom Presentations</b>						
<i>Document number of presentation and students</i>	■	■	■	■	■	Stormwater Coordinator

Best Management Practice	Year 1 MAR'03 - JUN'04	Year 2 JUL'04 - JUN'05	Year 3 JUL'05 - JUN'06	Year 4 JUL'06 - JUN'07	Year 5 JUL'07 - DEC'07	Department/Position Responsible
<b>Hamilton Science Fair</b> <i>Document number attendees and educational material distributed</i>	■	■	■	■	■	Stormwater Coordinator
<b>Illicit Discharge Detection and Elimination</b>						
<b>Stormwater System Map</b>						
<i>Review existing map</i>	■					Stormwater Coord./ Streets Superintendent
<i>Collect as-built data</i>		■				Stormwater Coord./ Streets Superintendent
<i>Map 1/3 of the storm drain map and collect data as needed</i>			■		■	Stormwater Coord./ Streets Superintendent
<b>Plan Reviews</b>						
<i>Continue City review procedures, annually document project, type of project, and location</i>	■	■	■	■	■	Development Services
<b>Spill Prevention and Containment</b>						
<i>Annually document number of spills, spill location, response and actions taken</i>	■	■	■	■	■	Streets / Fire Dept. / Environmental Mgmt.
<b>Dry Weather Field Screening</b>						
<i>Visually inspect 20% of the outfalls per permit year</i>	■	■	■	■	■	Stormwater Coord./ Streets Superintendent
<b>Stormwater Pollution Hotline</b>						
<i>Set-up hotline</i>	■					Stormwater Coordinator
<i>Distribute hotline in newsletters, brochures, web page and stormwater signs at City owned basins</i>		■				Stormwater Coordinator
<i>Track, document and follow up on phone calls</i>			■	■	■	Stormwater Coordinator
<b>Storm Drain Video Inspection</b>						
<i>Document number of feet inspected and any illicit connections detected</i>		■	■	■	■	Stormwater Coordinator

Best Management Practice	Year 1 MAR'03 - JUN'04	Year 2 JUL'04 - JUN'05	Year 3 JUL'05 - JUN'06	Year 4 JUL'06 - JUN'07	Year 5 JUL'07 - DEC'07	Department/Position Responsible
<b>Construction Site Stormwater Runoff Control</b>						
<b>Grading and Drainage Permit</b>						
<i>Establish procedures for documenting all developers and/or contractors that apply for a grading &amp; drainage permit.</i>	■					Stormwater Coord./ Development Services
<i>Issue and document the project, project type and number of permits given</i>		■	■	■	■	Development Services
<b>Construction Site Inspections</b>						
<i>Inspectors shall document sites inspected and any infractions to the grading and drainage permit</i>	■	■	■	■	■	Construction Mgmt. (CIP & Non-CIP)
<b>Construction Stormwater Handbook</b>						
<i>Develop handbook</i>		■				Stormwater Coord./ Construction Mgmt. (CIP & Non-CIP)
<i>Provide handbook to Contractors and Developers and document who received the handbooks</i>			■	■	■	Development Services
<b>Post-Construction Stormwater Management</b>						
<b>Planning Developmental Review Process</b>						
<i>Continue City review procedures, annually document number of projects, type of project, and location.</i>	■	■	■	■	■	Development Services
<b>Property Owner Manual</b>						
<i>Develop manual</i>		■				Stormwater Coordinator
<i>Distribute manuals to businesses and HOA's</i>			■	■	■	Development Services
<b>Storm Drainage System Technical Design Manual</b>						
<i>Continue distributing and annually document number distributed, type of project distributed for and location.</i>	■	■	■	■	■	Development Services / Stormwater Coordinator
<b>One-Year Warranty Inspection</b>						
<i>Develop record keeping procedures</i>	■					Stormwater Coord./ Construction Mgmt. (Non-CIP)/ Streets
<i>Document all one-year warranty inspections and any Code violations</i>		■	■	■	■	Stormwater Coord./ Construction Mgmt. (Non-CIP)/ Streets

Best Management Practice	Year 1	Year 2	Year 3	Year 4	Year 5	Department/Position Responsible
	MAR'03 - JUN'04	JUL'04 - JUN'05	JUL'05 - JUN'06	JUL'06 - JUN'07	JUL'07 - DEC'07	
<b>Pollution Prevention and Good Housekeeping</b>						
<b>Street Cleaning</b>						
Conduct street cleaning twice per year	■	■	■	■	■	Streets Superintendent
Illegal Dumping						
Document each illegal dumping call and pick-up	■	■	■	■	■	Stormwater Coordinator / Solid Waste
Cleaning of Catch Basins and Outfalls						
Document number of catch basins and outfalls cleaned and document location	■	■	■	■	■	Streets Superintendent
Hazardous Material Storage						
Documented through employee training.	■	■	■	■	■	Stormwater Coordinator
Spill Prevention and Containment						
Annually document number of spills, spill location, response and actions taken	■	■	■	■	■	Streets / Fire Dept. / Environmental Mgmt.
Employee Training						
Document employee attendance of employee training.	■	■	■	■	■	Stormwater Coordinator
Household Hazardous Waste Collection						
Document events and amount of waste collected.	■	■	■	■	■	Solid Waste Services Superintendent

## **PART V. STORMWATER MANAGEMENT PROGRAM (SWMP)**

- A. General Requirements. *An applicant shall develop, and a permittee shall implement, and enforce a SWMP designed to reduce the discharge of pollutants from a small MS4 to the maximum extent practicable (MEP) to protect water quality. The SWMP shall include management practices; control techniques; system, design, and engineering methods; and other provisions the Department determines appropriate for the control of pollutants.*
1. *A permittee must fully implement the SWMP, including its measurable goals, no later than December 19, 2007 (except as provided under Part V, Section A.2).*
  2. *If a permittee is required to obtain permit coverage after March 10, 2003, the permittee shall implement the SWMP, including its measurable goals, for the period between the date of authorization to discharge and the expiration date of this permit. For example, if the permittee was authorized to discharge under this permit on March 10, 2006 the measurable goals established in the SWMP for the period between 2006 and the expiration date of this general permit must be met.*
  3. *The SWMP shall address each of the minimum control measures of Part V, Section B and must include measurable goals, including interim milestones, for each BMP, including as appropriate, the months and years in which the MS4 will undertake the required actions and the frequency of the action. The name and title of the person or persons responsible for implementing the SWMP shall also be included.*
  4. *The permittee shall protect water quality by ensuring, to the maximum extent practicable, that no discharge shall cause or contribute to an exceedance of applicable water quality standard. To do so, the permittee shall fully implement all SWMP and permit requirements in accordance with the established time frames.*
- B. Minimum control measures.
1. **Public Education and Outreach on Stormwater Impacts.** *The permittee or applicant, as applicable, shall:*
    - a. *Implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impact of stormwater discharges on waterbodies and the steps that the public can take to reduce pollutants in stormwater runoff; **See information provided under item b.***
    - b. *Include the following information in the SWMP: **See following.***
      - i. *A description of the education program and outreach activities;*
        - a. **Newsletters:** *The City distributes newsletters that contain information regarding the disposal of household hazardous wastes; the recycling program and the disposal of oversized and unusual refuse items, see Appendix B for an example.*
        - b. **Stormwater Management Brochure:** *The City shall develop a*

brochure specifically designed to educate the general public on proper stormwater management. The brochure shall be distributed at public events and in new resident packets. Also, the brochures shall be made available at businesses, such as hardware stores and pool vendors. The brochures will educate the public on disposing of household hazardous waste, pool discharges, lawn irrigation, landscaping products and potential effects on the environment.

- c. Stormwater Management Web Page: The stormwater web page provides an easy, friendly way to educate the public. At a minimum, information that will be available via the web page shall include similar information that is supplied within the brochures, such as disposing of household hazardous waste, pool discharges, lawn irrigation, landscaping products and potential effects on the environment. Also, a link will be provided to access the NOI and the SWMP. The stormwater web page will be made available on the City's current web site (<http://www.chandleraz.org>).
- d. Stormwater Signage: The City shall post signs at City-Owned basins that drain into the MS4, in order to educate the public on stormwater pollution "do's and don'ts." The signs, at a minimum, will include the telephone number for the pollution hotline (See BMPs for Public Involvement/Participation) and web address.
- e. Storm Drain Placards: Storm drain placards provide a means for community clubs and/or schools to participate in the SWMP by installing storm drain placards that read "Storm Drain, No Dumping." These placards will be placed on the curb near City catch basins, scuppers and outfalls that discharge to the MS4. At a minimum, placards will be in English.
- f. Landscaping and Lawn Care: The City has a rebate program for the use of desert landscaping and the use of an irrigation timer to assist in managing the runoff of irrigation water. The City advertises this program on the City's website. Water conservation in landscaping and lawn care prevents the discharge of pollutants to the storm sewer system by encouraging residents to limit irrigation use. This decrease in irrigation also decreases the potential discharge of landscaping chemicals (pesticides and fertilizers) to the storm sewer system. Documentation will be provided on the number of rebate applications per year, see Appendix H.
- g. Conservation Calendar: The City holds an annual Conservation Art contest for 4<sup>th</sup> grade students. The City then creates a 12-month "Chandler Kids for Conservation" calendar. The calendar is created using drawings from the art contest. The calendar contains tips on stormwater pollution prevention, water

conservation and solid waste/recycling. The calendars are distributed at public events.

- h. Classroom Presentations: At the request of teachers, the City of Chandler provides classroom presentations on stormwater pollution prevention. These presentations typically involve use of non-point source models, hands-on activities and give-away products with storm water messages. The teachers typically initiate the opportunities.
  - i. Hamilton High School Science Fair: Hamilton High School hosts an annual science fair for elementary through high school students. The City attends the event and distributes information on stormwater pollution prevention, water conservation and solid waste/recycling.
  - j. STORM Membership: The City of Chandler is a member of Stormwater Outreach for Regional Municipalities (STORM). This regional organization promotes stormwater quality education within the greater Phoenix metropolitan area. As a member of STORM the City of Chandler benefits by having access to Public Service Announcements (PSA's), educational items by STORM and promotional give-aways developed by the STORM members. The PSA's are used throughout the Phoenix metropolitan area including the City of Chandler. During public event opportunities in the City of Chandler the educational banners and give-aways developed by STORM are distributed.
  - k. Educational/Promotional Items: The City of Chandler will purchase items to be distributed at public events. These items will have educational information about stormwater or tips/reminders of things residents can do to prevent stormwater pollution. This BMP is subject to available funding each fiscal year. Since the amount of funding is only known at the beginning of each fiscal year, the items to be purchased/developed can only be chosen after funding. If funding is available and used for educational/promotional items, the City of Chandler will report the items in the Annual Report for that year.
  - l. Public Works @ Work: The City's Communication and Public Affairs Office produces Public Works @ Work cable show that is broadcast on the local cable access channel. Episodes or short clips about stormwater related topics are filmed for inclusion in this series.
- ii. *A description of the methods for disseminating information;*
- a. Newsletters: Through mailings, the City distributes to residents newsletters that contain information regarding storm water pollution prevention tips, the disposal of household hazardous

wastes; the recycling program and the disposal of oversized and unusual refuse items, see Appendix B for an example.

- b. Stormwater Management Brochure: The City shall develop a brochure specifically designed to educate the general public on proper stormwater management. The brochure shall be distributed at public events and in packets for new residents. Also, the brochures shall be made available at businesses, such as hardware stores and pool vendors. The brochures will educate the public on disposing of household hazardous waste, pool discharges, lawn irrigation, landscaping products and potential effects on the environment.
- c. Stormwater Management Web Page: The stormwater web page provides an easy, friendly way to educate the public. At a minimum, information that will be available via the web page shall include similar information that is supplied within the brochures, such as disposing of household hazardous waste, pool discharges, lawn irrigation, landscaping products and potential effects on the environment. Also, a link will be provided to access the NOI and the SWMP. The stormwater web page will be made available on the City's current web site (<http://www.chandleraz.org>).
- d. Stormwater Signage: The City shall post signs at City-Owned basins that drain into the MS4, in order to educate the public on stormwater pollution "do's and don'ts." The signs at a minimum will include the telephone number for the pollution hotline and web address.
- e. Storm Drain Placards: Storm drain placards provide a means for community clubs and/or schools to participate in the SWMP by installing storm drain placards that read "Storm Drain, No Dumping." These placards will be placed on the curb near City catch basins, scuppers and outfalls that discharge to the MS4. At a minimum, placards will be in English.
- f. Landscaping and Lawn Care – The City provides rebate programs for use of desert landscaping and use of an irrigation timer, to assist in managing the runoff of irrigation water. The City advertises this program on the City's web site. Documentation will be provided on the number rebate applicants per year, see Appendix H.
- g. Conservation Calendar: The calendars shall be distributed at public events, to art contest winners, and City staff. The calendars will educate the public on stormwater pollution prevention, water conservation and solid waste/recycling.
- h. Classroom Presentations: At the request of teachers, the City of Chandler will provide classroom presentations on stormwater

and pollution prevention. These presentations typically involve use of non-point source models, hands-on activities and give-away products with storm water messages.

- i. Hamilton High School Science Fair: Hamilton High School hosts an annual science fair for elementary through high school students. The City attends the event and distributes information on stormwater pollution prevention, water conservation and solid waste/recycling. Additional educational information is exchanged through hands-on displays.
- j. STORM Membership: The City of Chandler is a member of Stormwater Outreach for Regional Municipalities (STORM). This regional organization promotes stormwater quality education within the greater Phoenix metropolitan area. STORM distributes educational material through radio, television and print media. Annual reports from STORM include details of the public education efforts including number of programs, stations broadcasting information and numbers of listeners/viewers.
- k. Educational/Promotional Items: The City of Chandler will purchase items to be distributed at public events. These items will have educational information about stormwater or tips/reminders of things residents can do to prevent stormwater pollution. Events and number of items distributed will be recorded.
- l. Public Works @ Work: The City's Communication and Public Affairs Office produces Public Works @ Work cable show that is broadcast on the local cable access channel. Episodes or short clips about stormwater related topics are filmed for inclusion in this series. Length of episodes, times broadcast and time of year broadcast will be reported.

iii. *The target audiences and target pollutants and sources that the applicant will address in the program, and how they were selected;*

- a. Newsletters:
  - i. Target Audience: Residents of the City of Chandler.
  - ii. Target Pollutant(s): Household hazardous wastes, pet waste, trash management and swimming pool water.
  - iii. Reason for Selection: Based on evaluation of EPA guidance of potential pollutant sources in municipal stormwater systems.
- b. Stormwater Management Brochure & Web Page:
  - i. Target Audience: Residents and non-residents of the City

of Chandler.

- ii. Target Pollutant(s): Household hazardous wastes, pet waste, trash management and swimming pool water.
  - iii. Reason for Selection: Based on evaluation of EPA guidance of potential pollutant sources in municipal stormwater systems.
- c. Stormwater Signage:
- i. Target Audience: Residents and non-residents of the City of Chandler.
  - ii. Target Pollutant(s): Illegal dumping and littering.
  - iii. Reason for Selection: Based on evaluation of EPA guidance of potential pollutant sources in municipal stormwater systems.
- d. Storm Drain Placards:
- i. Target Audience: Residents and non-residents of the City of Chandler.
  - ii. Target Pollutant(s): Illegal dumping and littering.
  - iii. Reason for Selection: Based on evaluation of EPA guidance of potential pollutant sources in municipal stormwater systems.
- e. Landscaping and Lawn Care:
- i. Target Audience: Residents and non-residents of the City of Chandler.
  - ii. Target Pollutant(s): Irrigation water, pesticides and herbicides.
  - iii. Reason for Selection: Based on evaluation of EPA guidance of potential pollutant sources in municipal stormwater systems.
- f. Conservation Calendar
- i. Target Audience: Residents and non-residents of the City of Chandler.
  - ii. Target Pollutant(s): Illegal dumping and littering.
  - iii. Reason for Selection: Based on evaluation of EPA guidance of potential pollutant sources in municipal

stormwater systems.

g. Classroom Presentations

- i. Target Audience: Residents and non-residents of the City of Chandler.
- ii. Target Pollutant(s): Household hazardous wastes, pet waste, trash management, illegal dumping and littering.
- iii. Reason for Selection: Based on evaluation of EPA guidance of potential pollutant sources in municipal stormwater systems.

h. Hamilton High School Science Fair

- i. Target Audience: Residents and non-residents of the City of Chandler.
- ii. Target Pollutant(s): Household hazardous wastes, pet waste, trash management, illegal dumping and littering.
- iii. Reason for Selection: Based on evaluation of EPA guidance of potential pollutant sources in municipal stormwater systems.

i. Educational/Promotional Items

- i. Target Audience: Residents and non-residents of the City of Chandler.
- ii. Target Pollutant(s): Household hazardous wastes, pet waste, trash management, illegal dumping and littering.
- iii. Reason for Selection: Based on evaluation of EPA guidance of potential pollutant sources in municipal stormwater systems.

j. Public Works @ Work

- i. Target Audience: Residents and non-residents of the City of Chandler.
- ii. Target Pollutant(s): Household hazardous wastes, pet waste, trash management, illegal dumping and littering.
- iii. Reason for Selection: Based on evaluation of EPA guidance of potential pollutant sources in municipal stormwater systems.

*iv. An estimation of the number of people with whom the applicant intends to*

*communicate;*

- a. The approximate population of the City is 240,000 people. The program is intended to reach all residents and non-residents, e.g. those who commute to the City for employment, shopping or events.

v. *A list of measurable goals for the public education and outreach program;*

- a. Newsletters: Create, publish and distribute two newsletter articles in each calendar year

- b. Stormwater Management Brochure:

- i. Year 1 – Conduct school artwork contest.

- ii. Year 2 – Create brochure based upon contest results.

- iii. Year 2 through Year 5 – Monitor number of brochures taken at events.

- c. Stormwater Management Web Page:

- i. Year 1 through Year 5– Conduct annual school artwork contest.

- ii. Year 2 – Create stormwater webpage based upon contest results.

- iii. Year 3 through Year 5 – Update site with new artwork and information. Monitor number of visits to the web page.

- d. Stormwater Signage:

- i. Year 1 – Create signs.

- ii. Year 2 - Sign content and location approval by City Staff.

- iii. Year 3 through Year 5 –Place signs and inspect existing signs for 25% of the City-owned basins in the City that discharge stormwater to basins and from the MS4 to waters of the U.S.

- e. Storm Drain Placards:

- i. Year 1 – Determine where to place/purchase placards.

- ii. Year 2 – Create a work plan and/or obtain community support for installation.

- iii. Year 3 through Year 5 – Place placards on the City's

storm drain structures that discharge stormwater to the MS4 until completion.

- f. Landscaping and Lawn Care:
  - i. Document each year the number of applicants for the Water Conservation Rebate Program.
- g. Conservation Calendar:
  - i. Year 1 through Year 5 - Conduct school artwork contest and create calendar.
  - ii. Year 1 through Year 5 – Document each year the number of calendars distributed.
- h. Classroom Presentations:
  - i. Year 1 through Year 5 – Conduct classroom presentations
  - ii. Year 1 through Year 5 – Document each year the number of presentations and number of students present.
- i. Hamilton Science Fair:
  - i. Year 1 through Year 5 – Attend Science Fair and document number of attendees and educational material distributed.
- j. STORM Membership:
  - i. Year 1 through Year 5 – Continue membership in STORM and document educational material produced, numbers of materials produced and how distributed.
- k. Public Works @ Work:
  - i. Year 2 – Produce Video Continue and document number of broadcast.
- vi. *Dates, in terms of months and years, by which the permittee will achieve specific measurable goals*
  - a. Newsletter articles:
    - i. June 2004: Create, publish and distribute two newsletter articles in each calendar year. The first newsletter containing stormwater educational information was published in March 2003.
  - b. Stormwater Management Brochure:
    - i. June 2004 – Conduct school artwork contest. Brochure

content was developed in August 2003. School artwork contest held in June 2004.

- ii. June 2005 – Create brochure based on contest results. 20,000 brochures printed in May 2005.
  - iii. June 2006 – Monitor number of brochures taken at events. Distribution of brochures began in May 2005.
- c. Stormwater Management Web Page:
- i. June 2004 – Conduct school artwork contest. First annual school artwork contest beginning in June 2004.
  - ii. June 2005 – Create stormwater web page based on contest results. Artwork results displayed on webpage in July 2004
  - iii. June 2006 – Update site with new artwork and information. Monitor number of visits to the web page.
- d. Stormwater Signage:
- i. June 2004 – Create signs. Sign content created in January 2004
  - ii. June 2005 – Sign installation approved by City Staff in March 2005
  - iii. June 2006 - Place signs and inspect existing signs for 25% of the City-owned basins that discharge stormwater from the MS4 to waters of the U.S. 20 signs purchased and installation began in September 2005.
- e. Storm Drain Placards:
- i. June 2004 – Determine where to place/purchase placards. 6,000 placards with message “Storm Drain, No Dumping” purchased in March 2005.
  - ii. June 2005 – Create a work plan and/or obtain community support for installation.
  - iii. June 2006 – Place placards on the City’s storm drain structures that discharge stormwater to the MS4 until completion. Installation of placards began in March 2005.
- f. Landscaping and Lawn Care:
- i. June 2004 - Document each year the number of applicants for the Water Conservation Rebate Program. Documentation of program began in March 2003.
- g. Conservation Calendar:
- i. June 2004 – Hold contest and create calendar each year and document calendars distributed. First art contest completed in June 2004 and June 2004 to July 2005 calendar created.
- h. Classroom Presentations:

- i. May 2004 – Document number of presentations and total attendees. Attended first classroom presentation at Bologna Elementary in May 2004.
    - i. Hamilton High School Science Fair:
      - i. February 2004 – Document number of attendees and material distributed. Attend annual Hamilton Science Fair beginning in February 2004. Approximately 5,000 attendees at each event.
    - j. STORM Membership:
      - i. March 2003 – Document materials developed, produced and number distributed. Details of STORM activities are included in the STORM Annual Report that is included in each annual report. Activities include PSA's, promotional give-aways and display boards.
    - k. Educational/Promotional Items:
      - i. April 2005 – Document materials developed, purchased and numbers distributed. To date funding has allowed for the purchase of rain gauges and dog treats that have been distributed at public events.
    - l. Public Works @ Work:
      - i. March 2005 – Document programs and number of broadcasts. Two Public Works @ Work programs were developed and aired in June 2003 and November 2004.
  - vii. *The name(s) and title(s) of the person(s) responsible for implementing and coordinating the education activities.*
    - a. Dave Verhelst; Stormwater Coordinator
    - b. Jim Phipps; Public Information Officer
    - c. Gregg Capps; Water Resources Manager
2. **Public Involvement/Participation.** *The permittee or applicant, as applicable, shall:*
  - a. *Develop and implement a plan to encourage public involvement and participation in the development and implementation of the SWMP; See information provided under item c.*
  - b. *Comply with state and local public notice requirements when implementing the public involvement/participation program.*
  - c. *Include the following information in the SWMP: See following.*
    - i. *A description of the general plan for informing the public of involvement and participation opportunities;*
      - a. Public Meetings: The City has public notice procedures for City

projects and public meetings to inform the community of construction within neighborhoods. These procedures will continue to be implemented, see Appendix C for public notice procedures.

- b. Storm Drain Placards: Storm drain placards provide a means for community clubs and/or schools to participate in the SWMP by installing storm drain placards that read "Storm Drain, No Dumping." These placards will be placed on the curb near City catch basins, scuppers and outfalls that discharge to the MS4. At a minimum, placards will be in English.
  - c. Stormwater Pollution Hotline: The City, at a minimum, will set up a dedicated telephone number with voice mail capabilities that citizens can call if they witness an activity or observe pollution that could impact stormwater quality. At a minimum, the City will review the phone calls and conduct an initial investigation. City personnel will take appropriate action if investigation identifies a concern. At a minimum, the phone number will be published in the newsletters, brochures, on the web page and on signs.
  - d. Conservation Calendar: The calendars shall be distributed at public events, to art contest winners, and City staff. The calendars will educate the public on stormwater pollution prevention, water conservation and solid waste/recycling.
  - e. Classroom Presentations: At the request of teachers, the City of Chandler will provide classroom presentations on stormwater pollution prevention. These presentations typically involve use of non-point source models, hands-on activities and give-away products with storm water messages.
  - f. Hamilton High School Science Fair: Hamilton High School hosts an annual science fair for elementary through high school students. The City attends the event and distributes information on stormwater pollution prevention, water conservation and solid waste/recycling. Additional educational information is exchanged through hands-on displays.
  - g. School Artwork Contest: The City of Chandler will hold annual conservation art contest for 4<sup>th</sup> grade students. The students create artwork in the areas of Stormwater Pollution Prevention, Solid Waste/Recycling and Water Conservation. The artwork and messages contained in the artwork are then used to create the Conservation Calendar and are included on the City's website.
- ii. *The types of activities for public involvement that the program will include and the target audiences;*

The target audience for public involvement activities is the residents and non-residents of the City of Chandler. The following activities are intended to reach this audience:

- a. **Public Meetings:** The City has public notice procedures for City projects and public meetings to inform the community of construction within neighborhoods. These procedures will continue to be implemented, see Appendix C for public notice procedures.
- b. **Storm Drain Placards:** Storm drain placards provide a means for community clubs and/or schools to participate in the SWMP by installing storm drain placards that read "Storm Drain, No Dumping." These placards will be placed on the curb near City catch basins, scuppers and outfalls that discharge to the MS4. At a minimum, placards will be in English.
- c. **Stormwater Pollution Hotline:** The City, at a minimum, will specify a dedicated telephone number with voice mail capabilities that citizens can call if they witness an activity or observe pollution that could impact stormwater quality. At a minimum, the City will review the phone calls and conduct an initial investigation. City personnel will take appropriate action if investigation identifies a concern. At a minimum, the phone number will be published in the newsletters, brochures, on the web page and on signs.
- d. **Conservation Calendar:** The calendars shall be distributed at public events to art contest winners, and City staff. The calendars will educate the public on stormwater pollution prevention, water conservation and solid waste/recycling.
- e. **Classroom Presentations:** At the request of teachers, the City of Chandler will provide classroom presentations on stormwater and pollution prevention. These presentations typically involve use of non-point source models, hands-on activities and give-away products with storm water messages.
- f. **Hamilton High School Science Fair:** Hamilton High School hosts an annual science fair for elementary through high school students. The City attends the event and distributes information on stormwater pollution prevention, water conservation and solid waste/recycling. Additional educational information is exchanged through hands-on displays.
- g. **School Artwork Contest:** The City of Chandler will hold annual conservation art contest for 4<sup>th</sup> grade students. The students create artwork in the areas of Stormwater Pollution Prevention, Solid Waste/Recycling and Water Conservation. The artwork and messages contained in the artwork are then used to create the Conservation Calendar and are included on the City's website.

- iii. *A description of the procedure for receiving and reviewing public comments;*
  - a. **Public Meetings:** Public meeting notices are published when the City is planning on implementing construction within a particular neighborhood. City project managers, department heads and if applicable, the consultant attend public meetings to incorporate the public's comments during the planning and design stages, see Appendix C for public notice procedures. In addition to the opportunity to provide comment at public meetings, the public may also provide comment or ask questions about City projects through the use of email.
  - b. **Stormwater Pollution Hotline:** The City, at a minimum, will specify a dedicated telephone number with voice mail capabilities that citizens can call if they witness an activity or observe pollution that could impact stormwater quality. At a minimum, the City will review the phone calls and conduct an initial investigation. City personnel will take appropriate action if investigation identifies a concern. At a minimum, the phone number will be published in the newsletters, brochures, on the web page and on signs.
- iv. *An explanation of how interested parties may access the SWMP and NOI;*
  - a. **Stormwater Management Web Page:** A link will be provided on the web page to access the NOI and the SWMP. The stormwater web page will be made available on the City's current web site (<http://www.chandleraz.org>). Copies of the SWMP and NOI will also be available for review at the Main Branch of the City Library.
- v. *A list of measurable goals for the public involvement/participation program;*
  - a. **Public Meetings:** A description of the purpose and number of attendees for each public meeting held regarding MS4 activities will be documented.
  - b. **Storm Drain Placards:**
    - i. Year 1 – Determine where to place/purchase placards.
    - ii. Year 2 – Create a work plan and/or obtain community support for installation.
    - iii. Year 3 through Year 5 – Place placards on the City's storm drain structures that discharge stormwater to the MS4 until completion.
  - c. **Stormwater Pollution Hotline:**
    - i. Year 2 – Set-up hotline
    - ii. Year 2 – Publish hotline in newsletters, brochures, on web page and on stormwater signs at City-owned basins.

- iii. Year 3 through Year 5 – Track phone calls and document any needed follow up.
  - d. Conservation Calendar:
    - i. Year 1 through Year 5 - Conduct school artwork contest and create calendar.
    - ii. Year 1 through Year 5 – Document each year the number of calendars distributed.
  - e. Classroom Presentations:
    - i. Year 1 through Year 5 – Conduct classroom presentations
    - ii. Year 1 through Year 5 – Document each year the number presentations and number of students.
  - f. Hamilton Science Fair:
    - i. Year 1 through Year 5 – Attend Science Fair and document number of attendees and educational material distributed.
  - g. School Artwork Contest:
    - i. Year 1 through Year 5 – Hold Annual Artwork Contest.
- vi. *Dates, in terms of months and years, by which the permittee will achieve specific measurable goals and;*
  - a. Public Meetings:
    - i. June 2004: Establish procedures to document purpose and number of attendees for each public meeting held regarding MS4 activities. The first public meeting was held in June 2003. Specifics on public meetings held can be found in the Annual Reports.
  - b. Storm Drain Placards:
    - i. June 2004: Determine where to place/purchase placards. 6,000 placards with message “Storm Drain, No Dumping” purchased in March 2005.
    - ii. June 2005: Create a work plan and/or obtain community support for installation.
    - iii. June 2006: Place placards on the City’s storm drain structures that discharge stormwater to the MS4 until completion. Installation of placards began in March 2005.
  - c. Stormwater Pollution Hotline:
    - i. November 2004: Set-up hotline

- ii. June 2005: Published hotline in newsletters, brochures, on web page and on stormwater signs at City-Owned Basins.
      - iii. June 2006: Track, document and follow up on phone calls.
    - d. Conservation Calendar:
      - i. June 2004 – Hold contest and create calendar each year and document calendars distributed. First art contest completed in June 2004 and June 2004 to July 2005 calendar created.
    - e. Classroom Presentations:
      - i. May 2004 – Document number of presentations and total attendees. Attended first classroom presentation at Bologna Elementary in May 2004.
    - f. Hamilton High School Science Fair:
      - i. February 2004 – Document number of attendees and material distributed. Attend annual Hamilton Science Fair beginning in February 2004. Approximately 5,000 attendees at each event.
    - vii. *The name(s) and title(s) of the person(s) responsible for implementing and coordinating the public involvement/participation activities.*
      - a. Dave Verhelst; Stormwater Coordinator
      - b. Jim Phipps; Public Information Officer
3. ***Illicit Discharge Detection and Elimination.*** *The permittee or applicant, as applicable, shall:*
- a. *Develop, implement, and enforce a program to detect and eliminate illicit discharges into the small MS4, except those discharges listed below: **See information provided under item g.***
    - i. *Non-stormwater discharges as listed in Part I, Section C.2; This exception does not apply to those categories of discharge which the permittee or applicant has determined to be a significant contributor of pollutants to the small MS4; or*
    - ii. *Occasional incidental non-stormwater discharges (e.g. non-commercial or charity car washes, etc.) that the permittee does not expect (based on information available to the permittee) to be a significant contributor of pollutants to the small MS4 because of either the nature of the discharges or conditions the permittee has established for allowing these discharges to the small MS4 (e.g., a charity car wash with appropriate controls on frequency, proximity to sensitive waterbodies, BMPs on the wash water, etc.).*
  - b. *Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls; **See information provided under item g.***
  - c. *To the extent allowable under state or local law, effectively prohibit through ordinance or other regulatory mechanism, non-stormwater discharges into the storm*

*sewer system and implement appropriate enforcement procedures and actions; See information provided under item g.*

- d. *Develop and implement a plan to detect, identify the source of, and address non-stormwater discharges, including illegal dumping, to the system; See information provided under item g.*
- e. *Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste; See information provided under item g.*
- f. *Conduct dry weather field screening for non-stormwater flows. The screening must include qualitative field tests based on color, odor, or visually observed characteristics as indicators of discharge sources. If the qualitative field tests do not provide enough information for the permittee to determine the source of the discharge, the permittee must test the discharge, while in the field, for selected chemical parameters. The permittee must investigate the illicit discharge within 15 days of its detection, and must follow up investigation with an action to further study the source of the discharge or eliminate it. See information provided under item g.*
- g. *Include the following information in the SWMP: See following.*
  - i. *A description of detection methods;*
    - a. Stormwater System Map: The City has a storm drainage system map that identifies the known locations of outfalls, catch basins, scuppers and other stormwater structures that drain to the MS4. This map will be updated during the permit term to better delineate the MS4 in areas where the specific area of contribution to the MS4 is unknown, see discussion in Section 2 and existing stormwater system map in Appendix A.
    - b. Plan Reviews: Plan reviews catch illicit connections from wastewater discharge into the City's stormwater system; see Appendix D for a more detailed explanation of the plan review process.
    - c. Spill Prevention and Containment: Fire Department responds to all calls, the Fire Department then notifies the department managing the affected facility (normally Streets Division). The Streets Division handles the situation with the equipment contained in their maintenance vehicles. Most spills are handled by the Streets Maintenance Crews. If the material is something that they cannot deal with, then they call the Environmental Management Department to manage the incident; the Streets Division staff would support the Environmental Management Department.
    - d. Illicit discharges will be investigated within 15 days of detection. Two Divisions typically complete illicit discharge investigations

within the City, Public Works and Environmental Management. Environmental Management's procedures for illicit discharges is as follows:

As soon as Environmental Management is notified of a potential sewage or chemical spill we go to the scene, try to identify the responsible party and require them to begin cleanup procedures and then confirmation sampling (if needed) to determine if the remediation is complete. If a responsible party cannot be identified or does not take clean-up responsibility, the City will remediate the discharge or will call in an environmental remediation contractor, who normally completes the clean-up/sampling within a 24-hour time frame.

Public Work's procedure for reports of illicit discharges is as follows:

- Respond to 100% of the complaints received within 3 business days 90% of the time, and within 7 business days 100% of the time.
- Determine if the complaint is valid and if it is not valid, close the case. If the complaint is valid, determine the likelihood that the discharge will negatively impact the storm water system and if impacted to what degree.
- Determine if City's Environmental Management Division needs to be notified of the issue, and make contact if necessary.
- After verification of the discharge problem, determine the responsible person(s). Contact the responsible person(s) to advise of the issue and/or determine exactly what was discharged to the system, and at what estimated quantity.
- Request the responsible party immediately halt the discharge, and assure they are performing work or taking immediate actions to correct the problem. Work with the responsible party to establish a timeline, detailing when each work element is expected to be completed. Notify all involved property owners and/or responsible parties of the issues, action plan and schedule for clean-up efforts between affected parties and the responsible parties.
- Monitor the property throughout the work process. Re-inspect the property to ensure that the work has been performed to a satisfactory standard, and ensure that corrective actions have been taken to prevent similar discharges in the future.
- The entire process to be documented in a report and stored electronically including photos and/or video documentation attachments to the electronic report. The

report will outline the events of the case as well as the contact information for future needs.

- e. Dry Weather Field Screening: Dry weather field screening will include, but not be limited to, conducting visual inspections of stormwater outfalls into City detention basins that eventually drain into a water of the U.S. The field visual screening will include, but not be limited, to a visual inspection that will consist of the description of the pipe and structure, any discernable flow, depth of water, land use area, odor, color, turbidity, floatables, any stains or deposits in the outfall structure, vegetation growth, structural conditions, any fauna or algae.
  - f. Stormwater Pollution Hotline: The City, at a minimum, will specify a dedicated telephone number with voice mail capabilities that citizens can call if they witness an activity or observe pollution that could impact stormwater quality. At a minimum, the City will review the phone calls and conduct an initial investigation. City personnel will take appropriate action if investigation identifies a concern. At a minimum, the phone number will be published in the newsletters, brochures, on the web page and on signs.
  - g. Storm Drain Video Inspection: The City, at a minimum, video those sections of storm drain that are part of the regulated MS4. These videos will be used to look at system component integrity, system construction details, maintenance needs and illicit connections to the system.
- ii. *A description or citation of the established ordinance or other regulatory mechanism used to prohibit illicit discharges. If the permittee needs to develop this mechanism, describe the plan and a schedule to do so.*
- a. Chapter 30 – Neighborhood Preservation, see Appendix E.
    - i. Chapter 30-3 – General Requirements.
    - ii. Chapter 30-5 - Creating, causing or maintaining a public nuisance.
  - b. Chapter 45 – Storm Drainage Requirements, see Appendix E.
  - c. Ordinance No. 3976, see Appendix E.
    - i. Chapter 45-8 – Non-stormwater Discharges.
    - ii. City of Chandler Manual on Stormwater Quality Protection.
  - d. Chapter 52 – Water Services, see Appendix E.
    - i. Chapter 52-14 – Restricting water from irrigation ditches and coolers to property of users.
- iii. *A description of enforcement policy and jurisdiction;*

- a. Chapter 30 – Neighborhood Preservation, see Appendix E.
  - i. Chapter 30-6 - Administration and enforcement.
- b. Chapter 45 – Storm Drainage Requirements, see Appendix E.
  - i. Chapter 45-2 Compliance with Storm Drain Regulations.
  - ii. Chapter 26 – Code Enforcement Through Civil Infraction Procedures.
- iv. *A description of the non-stormwater discharges allowed in the small MS4 pursuant to Part V, Section B.3.a.i;*
  - a. See Non-Stormwater Discharge Table, see Section 3.
- v. *A description of the non-stormwater discharges allowed in the small MS4 pursuant to Part V, Section B.3.a.ii;*
  - a. See Non-Stormwater Discharge Table, see Section 3.
- vi. *The methods for informing/training employees about illicit discharges;*
  - a. Employee Training: The City conducts employee training relative to illicit discharges. Topics may include, but are not limited to, Stormwater Management, Pollution Prevention, Hazardous Waste Operations and Emergency Response, Construction Site Inspections, and Illicit Discharge, Detection and Elimination, see Appendix F for the City’s current employee training course(s).
- vii. *The methods for informing the public of hazards associated with illegal discharges and improper disposal of waste;*
  - a. Newsletters: The City distributes newsletters that contain information regarding the disposal of household hazardous wastes; the recycling program and the disposal of oversized and unusual refuse items, see Public Education and Outreach control measure.
  - b. Stormwater Management Brochure: the City shall develop a brochure specifically designed to educate the general public on proper stormwater management. The brochure shall be distributed at public events and in new resident packets. Also, the brochures shall be made available at business, such as hardware stores and pool vendors. The brochures will educate the public on disposing of household hazardous waste, pool discharges, lawn irrigation, landscaping products and the potential effects on the environment, see Public Education and Outreach control measure.
  - c. Stormwater Management Web Page: the web page provides an easy, friendly way to educate the public. At a minimum, information that will be available via the web page shall include similar information that is supplied within the brochures, such as

disposing of household hazardous waste, pool discharges, lawn irrigation, landscaping products and potential effects on the environment. Also, a link will be provided to access the NOI and the SWMP. The web page will be made available on the City's current web site (<http://www.chandleraz.org>), see Public Education and Outreach control measure.

- viii. *A list of measurable goals for the illicit detection and elimination program;*
- a. Stormwater System Map for the MS4:
    - i. Year 1 – Review existing stormwater system maps for correctness and identify where system information needs updating.
    - ii. Year 2 – Collect, as needed, as-built information from municipal, residential and commercial projects in areas of the map that need to be updated.
    - iii. Year 3 through Year 5 – Revise one-third of the storm drain map based on new information and continue to collect as-built information.
  - b. Plan Reviews: Continue City plan review procedures and document type of projects and location/limits of projects that may impact the MS4.
  - c. Spill Prevention and Containment: Document the number of spills that were responded to and the action taken.
  - d. Dry Weather Field Screening: Annually, visually inspect 20% of the City's outfalls that discharge to the MS4.
  - e. Newsletters: Create, publish and distribute two newsletter articles in one calendar year.
  - f. Stormwater Management Brochure:
    - ii. Year 1 – Conduct one school artwork contest.
    - iii. Year 2 – Create brochure based on contest results.
    - iv. Year 3 through Year 5 – Monitor number of brochures taken at events.
  - g. Stormwater Management Web Page:
    - i. Year 1 – Conduct one school artwork contest.
    - ii. Year 2 – Create Stormwater web page based on contest results.
    - iii. Year 3 through Year 5 – Monitor number of visits to the web page.
  - h. Storm Drain Video Inspections:
    - i. Year 2 – Begin video inspections and document results. Any illicit connections will be investigated.

- ii. Year 3 – Continue video inspections and document results. Any illicit connections will be investigated.
  - iii. Year 4 and Year 5 – Video storm drains as issues arise.
- viii. *Dates, in terms of months and years, by which the permittee will achieve specific measurable goals;*
- a. Stormwater System Map for the MS4:
    - i. June 2004 – Review existing stormwater system maps for correctness and identify where system information needs updating. Review of existing stormwater system maps began in March 2003
    - ii. June 2005 – Collect, as needed, as-built information from municipal, residential and commercial projects in areas of the map that need to be updated. Collection of as-built information began in March 2003
    - iii. June 2006 – First one-third of the storm drain map completed based on new information collected to date. Revisions to storm drain map began in February 2005. Revisions of the next one-third of the storm drain map will be completed by June 2007.
  - b. Plan Reviews:
    - i. June 2004 – Continue City plan review procedures and document type of projects and location/limits of projects that may impact the MS4. Plan review was an existing program in March 2003.
  - c. Spill Prevention and Containment:
    - i. June 2004 - Document the number of spills that were responded to and the action taken. Spill Prevention and Containment was an existing program in March 2003.
  - d. Dry Weather Field Screening:
    - i. June 2004 – Annually, visually inspect 20% of the City's outfalls that discharge to the MS4. Dry weather field screening was begun in March 2003.
  - e. Newsletter articles:
    - i. June 2004: Create, publish and distribute two newsletter articles in each calendar year. The first newsletter containing stormwater educational information was published in March 2003.
  - f. Stormwater Management Brochure:
    - i. June 2004 – Conduct one school artwork contest. First annual school artwork contest in June 2004.

- ii. June 2005 – Create brochure based on contest results. 20,000 brochures printed in May 2005.
- iii. June 2006 – Monitor number of brochures taken at events. Distribution of brochures began in May 2005.
- g. Stormwater Management Web Page:
  - i. June 2004 – Conduct one school artwork contest. First annual school artwork contest in June 2004.
  - ii. June 2005 – Create stormwater web page based on contest results. Artwork results displayed on webpage in July 2004
  - iii. June 2006 – Monitor number of visits to the web page.
- h. Storm Drain Video Inspections:
  - i. May 2005: Begin video inspection of regulated MS4.
- ix. *The name(s) and title(s) of the person(s) responsible for implementing and coordinating illicit discharge detection and elimination activities.*
  - a. Dave Verhelst; Stormwater Coordinator
  - b. Jim Weiss; Environmental Management
  - c. Jim Phipps; Public Information Officer
  - d. Steve Heick; Public Works Services Specialist (Code Enforcement)

4. **Construction Site Stormwater Runoff Control.** *The permittee or applicant, as applicable, shall:*

- a. *Develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. If the Department waives requirements for stormwater discharges associated with small construction activity, defined under 40 CFR 122.26(b)(15)(i), the permittee is not required to develop, implement, and/or enforce a program to reduce pollutant discharges from these sites; **See information provided under item e.***
- b. *Using an ordinance or other regulatory mechanism available under the legal authorities of the small MS4, require construction site operators to practice erosion and sediment control and require construction site operators to control waste and properly dispose of wastes, such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality. This ordinance must apply, at a minimum, to those sites described in Part V, Section B.4.a. **See information provided under item e.***
- c. *Review all site plans for those sites described in Part V, Section B.4.a. for potential*

*water quality impacts, including erosion and sediment control, control of other wastes, and any other impacts that must be examined according to the requirements of the law or ordinance of Part V, Section B.4.b. Before ground is broken at the construction site, the small MS4 operator shall review the plans and, verify (in written communication with the construction site operator) that the BMPs for the site are appropriate; See information provided under item e.*

d. *Develop and implement procedures for site inspection and enforcement of control measures for those sites described in Part V, Section B.4.a.; See information provided under item e.*

e. *Include the following information in the SWMP: See following.*

i. *A description or citation of the established ordinance or other regulatory mechanism used to prohibit erosion and ensure proper management of wastes on construction sites per Part V, Section 4.b. If the permittee needs to develop the required regulatory mechanism, describe the plan and a schedule to do so;*

a. Chapter 35 - Land Use and Zoning, see Appendix E.

i. This ordinance requires a Grading & Drainage Permit to be obtained and reviewed by the City for CIP, commercial and subdivision construction projects.

b. Ordinance No. 3976

i. Chapter 45-8 – Non-stormwater Discharges.

ii. City of Chandler Manual on Stormwater Quality Protection.

ii. *A description of the sanctions and enforcement mechanism(s) to ensure compliance;*

a. Chapter 1 - General Provisions, see Appendix E.

i. Chapter 1-8: General penalty; continuing violations section provides the definition of a violation of the City Code and the penalties for violating the City Code.

b. Chapter 45 – Storm Drainage Regulations, see Appendix E.

i. Chapter 45-2 Compliance with Storm Drain Regulations

ii. Chapter 26 – Code Enforcement Through Civil Infraction Procedures.

iii. *A description of the procedures for site inspection and enforcement of control measures, and procedures for site plan reviews;*

- a. **Planning Developmental Review Process:** The City requires all developers for commercial, industrial or residential developments and consultants to submit their development plans, construction drawings, erosion and sediment control plans, and construction specifications to be reviewed by City Departments. The purpose of the review is to ensure that developments and redevelopments are in accordance with the City's land and zoning ordinances, design guidelines and state and local requirements, see Appendix D. Included in the Appendix is a copy of the "Site Development Technical Site Plan Review Checklist " which details what is to be submitted with plans for review.
  - b. **Construction inspection procedures** are industry standard inspection procedures. The City's Construction Inspectors inspect CIP and Non-CIP construction projects for compliance with County Standard Specifications for Public Works Projects, County's Flood Control Drainage Design Manual, Volume III – Erosion Control and City Design Standards. City Construction Inspectors are trained in City record keeping procedures and administrative duties, as well as through industry-specific technical training courses. Site inspections are conducted relative to erosion and sediment controls and controls of construction wastes, for construction activities disturbing one acre or greater. Inspections may be conducted by Off-site Inspectors, Building Inspectors, Stormwater Coordinator or Public Works Specialist. Inspection types may include, but are not limited to, pre-construction, routine, complaint, field observation, post-storm event or follow-up. A violation of Chapter 45 and/or the Manual on Stormwater Quality Protection may lead to penalties outlined in Chapter 26 of City Code.
  - c. **Construction Stormwater Handbook:** City shall develop a comprehensive handbook for stormwater management at construction sites, as funding allows. The handbook, at a minimum, will cover construction site BMPs, sediment control, permit applications, inspections, and non-stormwater management and waste management issues.
  - d. **Grading & Drainage Permit:** The City requires a grading permit that is noted within construction plan sets for any capital improvement construction projects or non-capital improvement projects. The City also requires consultants and developers to review their site design based on the grading and drainage checklist and make the necessary modifications. See Appendix G for a more detailed look at grading and drainage requirements
- iv. Procedures for receipt, acknowledgment and consideration of information submitted by the public,*

- a. Construction Stormwater Handbook: The contractor will sign for the handbook when receiving the Grading and Drainage Permit, which provides a means to document receipt of the handbook.
- v. *A list of measurable goals for the construction site runoff control program;*
  - a. Construction Inspections:
    - i. Year 1 through Year 5: Construction inspectors shall document the sites they have inspected and if there were any infractions per the Grading and Drainage Permit and County and/or City Regulations and Standards.
    - ii. Year 3 through Year 5: The Construction Stormwater Handbook will provide a means of guidance when the handbook is finalized.
  - b. Construction Stormwater Handbook:
    - i. Year 2: Develop handbook.
    - ii. Year 3 through Year 5: Provide handbook to construction contractors.
  - c. Grading and Drainage Permit
    - i. Year 1: Establish procedures for documenting all developers and/or contractors that apply for a Grading & Drainage Permit.
    - ii. Year 2 through Year 5: Document all developers and/or contractors that apply for a Grading & Drainage Permit.
- vi. *Dates, in terms of months and years, by which the permittee will achieve specific measurable goals;*
  - a. Construction Inspections:
    - i. June 2004 - Construction inspectors shall document the sites they have inspected and if there were any infractions per the Grading and Drainage Permit and County and/or City Regulations and Standards. Construction site inspections have been on-going since March 2003.
  - b. Construction Stormwater Handbook:
    - i. June 2005 - Develop handbook. Development of handbook began in August 2003.
    - ii. June 2006 - Provide handbook to construction contractors and document the number of handbooks distributed and who received them through a database. The Unified Development Manual was made available through the City's website in February 2005. It provides a single source for construction site BMPs, sediment control, permit

applications, inspections, and non-stormwater and water management issues.

c. Grading & Drainage Permit:

- i. June 2004: Establish procedures for documenting all developers and/or contractors that apply for a Grading & Drainage Permit. On-going program with procedures in place since March 2003.
- ii. June 2005: Document all developers and/or contractors that apply for a Grading & Drainage Permit. On-going program with procedures in place since March 2003.

vii. *The name(s) and title(s) of the person(s) responsible for overseeing construction site runoff control activities.*

- a. Dave Verhelst; Stormwater Coordinator
- b. Sheina Hughes; Construction Management (Developers – Development Community)
- c. Ray Buglion; Construction Management (CIP Projects)

5. ***Post-Construction Stormwater Management in New Development and Redevelopment.*** *The permittee or applicant, as applicable, shall:*

- a. *Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, and discharge into the small MS4. The program must ensure that controls are in place that would prevent or minimize water quality impacts; See information provided under item e.*
- b. *Develop and implement strategies that include a combination of structural and/or non-structural BMPs appropriate for the community; See information provided under item e.*
- c. *Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under the legal authorities of the small MS4; See information provided under item e.*
- d. *Ensure adequate long-term operation and maintenance of BMPs; See information provided under item e.*
- e. *Include the following information in the SWMP: See following.*
  - ii. *A description of the management practices to reduce post-construction runoff from new development and redevelopment projects within the MS4; address any specific priority areas and tailor to the local community;*

The City of Chandler Public Works Department is responsible for public facilities only, thus does not have the resources or capabilities to perform or

administer a program of scheduled inspections of private facilities. However, the City does inspect private facilities when complaints are received. When defects or maintenance issues are observed the City notifies the property owner to make necessary repairs or maintenance. Should the repairs or maintenance not be completed the City will make necessary repairs and the property owner will be billed for the work.

The City has requirements in-place for long-term operation and maintenance. The City requires one-year warranty inspections as the first step in the long-term operation and maintenance. This inspection is completed prior to the developer or Capital Improvement contractor turning over the system to the property owner. The City inspects to ensure proper operation and no structural defects are present.

Per Code Section 45-2. Compliance with storm drainage regulations.

“All storm drainage facilities built, constructed or installed within the City of Chandler shall be designed, engineered and constructed in accordance with the City of Chandler Technical Design Manual Number 3: Storm Drainage System Design and with the Uniform Drainage Policies and Standards for Maricopa County, Arizona, adopted herein. (Ord. No. 3067, § 3, 11-18-99).”

Technical Design Manual Number 3: Storm Drainage System Design, Section 8 details the maintenance standards for storm drainage facilities within the City. A Copy of this section is provided (Attachment 3). These details and all City design and maintenance manuals are provide on the City’s website as part of the Unified Development Manual. The link to this web address will be provided in the SWMP.

Additionally City Policy P-304 and Streets Standard Operating Procedures (Attachment 3) detail the operation and maintenance of City owned stormwater system. Copies of these documents are included in Appendix I. The following sections give a brief overview of processes used to ensure post-construction operation and maintenance.

- a. Planning Developmental Review Process: The City requires all developers for commercial, industrial or residential developments and consultants to submit their development plans, construction drawings and construction specification to be reviewed by City Departments. The purpose of the review is to ensure that developments and redevelopments are in accordance with the City’s land and zoning ordinances, design guidelines and state and local requirements, see Appendix D.
- b. Property Owner’s Manual: As funding allows, the City shall develop a Property Owner’s Manual that, at a minimum, will provide a means to inform property owners about stormwater management and pollution prevention. The manual will outline

inspection and maintenance requirements for properties, retention basins, catch basins and residential lakes.

- c. One-Year Warranty Inspection: The City requires an inspection after the one-year warranty period has ended on developments and redevelopments. The Streets Department conducts the inspection and the Construction Management Department; Non-CIP Division provides oversight.
- d. Inspection/Complaint Response: The City will document any complaints and the responses to calls received concerning long-term operation and maintenance of facilities. The number of complaints will be reported.

iii. *A description or citation of the established ordinance or other regulatory mechanism used to address post-construction runoff control. If the permittee needs to develop the required regulatory mechanism, describe the plan and a schedule to do so;*

- a. Chapter 45 – Storm Drainage Requirements, see Appendix E.
  - i. Chapter 45-1. Uniform Drainage Policies and Standards adopted. The City requires new developments and redevelopments to retain the 100-year, 2-hour storm events in drainage basins, and the stormwater is to be drained within 36 hours either by pumping or by drywell(s).
- b. Ordinance No. 3976
  - i. Chapter 45-8 Non-stormwater Discharges.
  - ii. City of Chandler Manual on Stormwater Quality Protection.

iv. *A description of the procedure to ensure compliance with local requirements;*

- a. Planning Developmental Review Process: The City requires all developers for commercial, industrial or residential developments and consultants to submit their development plans, construction drawings and construction specifications to be reviewed by City Departments. The purpose of the review is to ensure that developments and redevelopments are in accordance with the City's land and zoning ordinances, design guidelines and state and local requirements.

v. *A description of the education program for developers, architects and the public about project designs that minimize water quality impacts;*

- a. Storm Drainage System Design, Technical Design Manual #3: The City has developed a Technical Design Manual that assists developers, architects, engineers and the public in proper

stormwater design of new developments. The manual outlines the design and policy for hydrology design, street drainage, storm drains, basins, and disposal of stormwater and maintenance standards, See Appendix I.

*vi. An identification of the measurable goals for the post-construction runoff control program;*

a. Planning Developmental Review Process:

i. Year 1 through Year 5: Continue City plan review procedures and document the number, type of projects and location/limits of projects.

b. Property Owner's Manual:

i. Year 2: Develop Manual.

ii. Year 3 through Year 5: Provide manuals to developers, builders, homeowner associations, industries and commercial property owners and document the number of manuals distributed and who received them through a database.

c. Storm Drainage System Design, Technical Design Manual #3:

i. Year 1 through Year 5: Continue to distribute procedures and document number, type of projects and location/limits of projects for which the manual was distributed.

d. One-Year Warranty Inspection:

i. Year 1 – Develop record keeping procedures.

ii. Year 2 through Year 5 – Document all one-year warranty inspections and any Code violations.

e. Inspection/Complaint Response:

i. Year 1 through Year 5 - The City will document any complaints and the responses to call received concerning long-term operation and maintenance of facilities. The number of complaints will be reported.

*vii. Dates, in terms of months and years, by which the permittee will achieve specific measurable goals;*

a. Planning Developmental Review Process:

i. June 2004 - Continue City plan review procedures and document type of projects and location/limits of projects.

b. Property Owner's Manual:

i. June 2005 - Develop Manual.

ii. June 2006: Provide manuals to developers, builders,

homeowner associations and industries and commercial property owners and document the number of manuals distributed and who received them through a database.

- c. Storm Drainage System Design, Technical Design Manual #3:
  - i. June 2004 - Continue to distribute procedures and document number, type of projects and location/limits of projects for which the manual was distributed.
- d. One-Year Warranty Inspection:
  - i. June 2004 – Develop record keeping procedures.
  - ii. June 2005 – Document all one-year warranty inspections and any Code violations.

viii. *The name(s) and title(s) of the person(s) responsible for the development, implementation, and enforcement of post-construction stormwater management.*

- a. Dave Verhelst; Stormwater Coordinator
- b. Charles Coleman, Development Services Manager

6. ***Pollution Prevention/Good Housekeeping for Municipal Operations.*** *The permittee or applicant, as applicable, shall:*

- a. *Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations due to activities, including but not limited to, park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance. The permittee shall address the following topics in the program: **See information provided under item b.***
  - i. *Maintenance activities, maintenance schedules, and long-term inspection procedures for controls to reduce floatables and other pollutants to the small MS4; **See information provided under item b.***
  - ii. *Controls to reduce or eliminate the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance and storage yards, waste transfer stations, fleet or maintenance shops with outdoor storage areas, and salt and sand storage locations and snow disposal areas; **See information provided under item b.***
  - iii. *Procedures to properly dispose of waste removed from the small MS4 and municipal operations, including dredge spoil, accumulated sediments, floatables, and other debris. **See information provided under item b.***
- b. *Include the following information in the SWMP: **See following.***
  - i. *A list of the municipal operations impacted by this operation and maintenance program;*
    - a. Streets Department

- b. Environmental Management
- c. Parks Department
- d. Fire Department
- e. Water Conservation

ii. *A description of the training program for municipal employees;*

- i. **Employee Training:** The City conducts employee training relative to pollution prevention. Topics may include, but are not limited to, Stormwater Management, Pollution Prevention, Hazardous Waste Operations and Emergency Response, Construction Site Inspections, and Illicit Discharge, Detection and Elimination, see Appendix F for the City's current employee training course(s).

iii. *A list of measurable goals for the municipal pollution prevention program;*

a. Source Control

- i. **Street Cleaning** – The measurable goal is to conduct street cleaning twice per year and document.
- ii. **Illegal Dumping** – The measurable goal is to document each illegal dumping call and pick-up. Additionally, based on other BMPs, the City will post signs at detention basins and parks; post a hotline number and storm drain placards at storm drain structures. See the Public Education and Outreach and the Public Participation Control Measure.
- iii. **Cleaning of Catch Basins and Outfalls** - City cleans catch basins and outfalls, as needed, for City-owned basins, catch basins and scuppers that drain to and from the MS4. Waste material removed during street sweeping, catch basin cleaning and basin maintenance is transported to the City Yard for temporary disposal in a waste holding bin. Once material has accumulated, a contractor hauls the waste material to an appropriate licensed landfill for testing and proper disposal. The measurable goal is to document number of catch basins and outfalls cleaned, location and document disposal of materials collected.

b. Materials Management

- i. **Hazardous Material Storage** – The City currently is in compliance with regulatory standards (underground storage regulations), fire code for material storage, materials stored inside or under canopy, secure from rainfall runoff. The City conducts employee training, as discussed within the employee training BMP. The training emphasizes the importance of good housekeeping and the hazardous material storage. The measurable goal is to

document through employee training.

- ii. Spill Prevention and Containment: – Fire Department responds to all calls, the Fire Department then notifies the department managing the affected facility (normally Streets Division). The Streets Division handles the situation with the equipment contained in their maintenance vehicles. Most spills are handled by the Streets Maintenance Crews. If the material is something that they cannot deal with, then they call the Environmental Management Department to manage the incident; the Streets Division staff would support the Environmental Management Department. The measurable goal is to annually document number of spills, spill location, response and actions taken.

c. Employee Training:

- i. The City has an employee-training program. See the Illicit Discharge Detection and Elimination Control Measure for further explanation of the Employee Training Program. The measurable goal is to document employee attendance of employee training per year.

d. Household Hazardous Waste Collection:

- i. The City collects household hazardous waste from residents. During Years 1 through 3 of the SWMP, residential household waste will be collected during two yearly collection events. Beginning in Year 4, residential household waste will be collected and stored at the City's new transfer station/household hazardous waste storage facility.

iv. *Dates, in terms of months and years, by which the permittee will achieve specific measurable goals*

a. Illegal Dumping:

- i. June 2006: post stormwater signage at City-owned basins that drain to and from the MS4. Installation of signs began in September 2005.
- ii. June 2005: post a stormwater pollution hotline number. Hotline setup in November 2004.
- iii. June 2007: Place storm drain placards at storm drain structures. Installation of placards began in March 2005.

b. Street Cleaning:

- i. June 2004: City provides street cleaning, as needed depending on the location and activities. On-going program in place in March 2003.

c. Landscaping and lawn care:

- i. June 2004: The City provides rebate programs for use of desert landscaping and use of an irrigation timer. Documentation will be provided on the number rebate applicants per year. Documentation of program began in March 2003.
  - d. Cleaning of catch basins and outfalls:
    - i. June 2004: City removes trash and debris, as needed, from any and all outfalls structures that drain to City-owned basins the drain to or from the MS4. On-going program in March 2003.
  - e. Hazardous Material Storage:
    - i. June 2005: Begin receiving class rosters from the employee training. On-going program in March 2003.
  - f. Spill Prevention and Containment:
    - i. June 2004: The City has a streets maintenance crew that responds to spills as directed by the Fire Department. Document the calls that are responded to and action taken. On-going program in March 2003.
  - g. Employee Training:
    - i. June 2005: Begin receiving class rosters from the employee training. On-going program in March 2003.
  - h. Household Hazardous Waste Collection:
    - i. March 2003: Begin collection of waste and documentation of amount of waste collected.
    - ii. January 2007: Begin collection of waste at new transfer station/HHW Building and documentation of amount of waste collected.
- v. *The name(s) and title(s) of the person(s) responsible for implementing and coordinating employee training and pollution prevention activities.*
  - a. Dave Verhelst; Stormwater Coordinator
  - b. Rob McLeod; Fire Department
  - c. Ruthann Goemaat; Streets Superintendent
  - d. David McDowell; Parks Department
  - e. Pending; Solid Waste Mgmt. Superintendent

**City of Chandler  
Stormwater Management Program**

<b>Allowable Non-Stormwater Discharges</b>
Discharges from fire hydrant flushing conducted or approved by the City
Run-off from fire fighting activity conducted by the City
Discharges of potable water, including uncontaminated groundwater, or from reclaimed water line flushing conducted or approved by the City
Discharges comprised of air conditioner condensate
Discharges from watering for dust control purposes during construction activity pursuant to an approved dust control plan, unless significant materials or sediment enters City right-of-way or a stormwater collection system
Discharges from non-commercial car washes where only vehicle exteriors are washed with water and biodegradable soaps, unless significant materials or sediment enters City right-of-way or a stormwater collection system
Discharges from external building wash down where biodegradable soaps are used, unless significant materials or sediment enters City right-of-way or a stormwater collection system
Discharges from washing pavement not associated with construction activity where biodegradable soaps are used and any hazardous or toxic materials have been removed, unless significant materials or sediment enters City right-of-way or a stormwater collection system
Discharges from washing pavement or other surfaces associated with construction activity pursuant to an applicable permit where best management practices are utilized to prevent significant materials or sediment from entering City right-of-way or a stormwater collection system
Incidental and non-recurring discharges of irrigation water or discharges associated with landscape irrigation, unless significant materials or sediment enters City right-of-way or a stormwater collection system
Other, similar, discharges expressly approved in writing by the Director of Public Works or designee