



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

City of Chandler

Small Municipal Separate Storm Sewer System Annual Report

July 1, 2007 through June 30, 2008

September 15, 2008



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

September 15, 2008

Arizona Department of Environmental Quality  
Surface Water Section/Stormwater & General Permits Unit (5415A-1)  
1110 West Washington Street  
Phoenix, AZ 85007

RE: City of Chandler Small MS4 Annual Report – July 1, 2007 – June 30, 2008

Please find enclosed one (1) copy of the City of Chandler's Small Municipal Separate Storm Sewer (MS4) Annual Report for the reporting period July 1, 2007 through June 30, 2008. The City of Chandler looks forward to your comments and a continuing effort to address stormwater quality. Should you have questions, please don't hesitate to call me at (480) 782-3503.

Sincerely,

Dave Verhelst  
Stormwater Program Coordinator  
City of Chandler

Cc: R.J. Zeder, Public Works Director

*Mailing Address*  
Mail Stop 909  
PO Box 4008  
Chandler, Arizona 85244-4008

**Public Works Department**  
**Street Division**  
*Telephone* (480) 782-3500  
*Fax* (480) 782-3495  
[www.chandleraz.gov](http://www.chandleraz.gov)

*Location*  
Building C  
975 East Armstrong Way  
Chandler, Arizona 85249

# Small MS4 Annual Report Form

Please refer to the attached instructions as you prepare your annual report.

## A. General Information

Name of MS4: City of Chandler

Contact Name: Dave Verhelst

Telephone Number: (480)782-3503

Email Address: david.verhelst@chandleraz.gov

Annual Report Period:  December 19, 2002 – June 30, 2004

July 1, 2005 – June 30, 2006

July 1, 2004 – June 30, 2005

July 1, 2006 – June 30, 2007

July 1, 2007 – June 30, 2008

July 1, 2008 – June 30, 2009

## B. SWMP Modifications and Additional Information. Attach a brief explanation if you check "yes" to any of the following statements.

- |   |     |                                     |    |                                     |
|---|-----|-------------------------------------|----|-------------------------------------|
| 1. Changes have been made or are proposed to the SWMP since the last annual report, including changes in response to ADEQ's review. | YES | <input checked="" type="checkbox"/> | NO | <input type="checkbox"/>            |
| 2. The MS4 has annexed lands.   | YES | <input checked="" type="checkbox"/> | NO | <input type="checkbox"/>            |
| 3a. The MS4 discharges directly to an impaired water.   | YES | <input type="checkbox"/>            | NO | <input checked="" type="checkbox"/> |
| 3b. A water within 10 miles of the MS4's jurisdiction has been identified as impaired.  | YES | <input type="checkbox"/>            | NO | <input checked="" type="checkbox"/> |
| 4a. The MS4 discharges directly to water for which a TMDL has been established.   | YES | <input type="checkbox"/>            | NO | <input checked="" type="checkbox"/> |
| 4b. A TMDL has been established for a water within 10 miles of the MS4's jurisdiction.  | YES | <input type="checkbox"/>            | NO | <input checked="" type="checkbox"/> |
| 5. The MS4 has conducted analytical monitoring of stormwater quality.   | YES | <input type="checkbox"/>            | NO | <input checked="" type="checkbox"/> |
| 6. The MS4 is relying on another government entity to satisfy some permit obligations.  | YES | <input type="checkbox"/>            | NO | <input checked="" type="checkbox"/> |

## **Addenda**

### **Section B – Part 1 – Changes have been made to the SWMP since the last annual report:**

#### **New Best Management Practices:**

The City has adopted and implemented ordinance 3976, which addresses non-stormwater discharges, adopts by reference the City of Chandler Manual on Stormwater Quality Protection, and reflects amendments to City code for clarification purposes.

#### **Updated/Changed Best Management Practices**

Revisions to the City's SWMP were detailed in the 2008 Storm Water Management Program Update received by ADEQ on May 1, 2008. Revisions included grammatical adjustments, name changes, revisions and additions referencing City code, ordinances, and enforcement, clarification of employee training topics/programs, modifications to plan review and construction inspection procedures, and adjustments to the City's allowable non-stormwater discharges in accordance with adoption of City ordinance 3976.

### **Section B – Part 2 The City Has Annexed Lands**

During the reporting period, the City of Chandler annexed approximately 142.92 acres of land. The majority of this land is undeveloped former agricultural fields, dairy farms, unincorporated parcels, right-of-way, and/or smaller residential properties. Maps have been included detailing the locations that have been annexed. If necessary during and post development, the following BMPs will be implemented in these areas:

- Public Meetings
- Stormwater System Map
- Plan Review
- Spill Prevention and Detection
- Grading and Drainage Permit
- Construction Site Inspections
- Construction Stormwater Handbook
- Property Owner Manual
- Storm Drainage System Technical Design Manual
- One-Year Warranty Inspection
- Street Cleaning
- Illegal Dumping

### FY 2007-2008 ANNEXATIONS

| ORDINANCE NUMBER | ADOPTION DATE | AREA SQFT  | ACRES  | LOCATION   |
|------------------|---------------|------------|--------|--|
| 3933             | 8/9/2007      | 253385.87  | 5.82   | Northwest Corner of Lindsay Road and Chandler Heights Road     |
| 4025             | 3/13/2008     | 1784677.01 | 40.97  | Northeast Corner of Arizona Avenue and Queen Creek Road        |
| 3964             | 12/13/2007    | 1508948.44 | 34.64  | East of the Southeast Corner of Riggs Road and Arizona Avenue  |
| 3856             | 2/14/2008     | 190739.24  | 4.38   | Southeast Corner of Arizona Avenue and Germann Road            |
| 4023             | 3/13/2008     | 111912.21  | 2.57   | Southwest Corner of Willis Road and Hamilton Alignment         |
| 3990             | 4/10/2008     | 413232.58  | 9.49   | Southeast Corner of Cooper Road and Chandler Heights Road      |
| 4037             | 4/24/2008     | 455416.79  | 10.45  | East of the Southeast Corner of Arizona Avenue and Willis Road |
| 4039             | 5/8/2008      | 1507391.80 | 34.60  | Northeast Corner of Arizona Avenue and Riggs Road              |
|                  |               |            | 142.92 |  |

**C. Stormwater Management Program Status.** Provide the status of every BMP and measurable goal in your SWMP as described in the instructions.

**TABLE 1**

| <b>Minimum Control Measure(s)</b> | <b>BMP</b>          | <b>Measurable Goal (steps to measure progress)</b>   | <b>New or Revised</b> | <b>Start Date</b> | <b>Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)</b>  |
|-----------------------------------|---------------------|--|-----------------------|-------------------|--|
| Public Education and Outreach     | Newsletter Articles | <p>2007 Annual Drinking Water Quality Report including information on stormwater runoff and pollution prevention was distributed via mail to approximately 97,334 households in June 2008. CityScope Newsletter with "Only Rain In The Storm Drain" article was distributed via mail to approximately 70,000 households in November 2007. Another 1,000 copies were distributed at various public outlets. Additional CityScope articles relative to pollution prevention were distributed, "Avoid Over-Watering Winter Lawns" (October-November 2007), "Safely Dispose and Recycle Household Hazardous Waste" (February-March 2008), "Water Conservation Program Gets Makeover" and "Spring Cleaning?" (April-May 2008). An article regarding the City's pool drainage requirements was published in the April 2, 2008 Quicklook and distributed to over 1,500 City employees. An article on azcentral.com entitled "City's hazardous-waste site use on the increase" (July 31, 2007) discussed household hazardous waste collection and pollution prevention. Copies are included in Appendix A.</p> |                       | May 2003          | Completed. Newsletter articles such as the City's annual drinking water quality report and other City sponsored newsletters will continue and will be distributed to residents by bulk mail or in utility bills and to City employees. |

TABLE 1 (continued)

| Minimum Control Measure(s)            | BMP                     | Measurable Goal (steps to measure progress)   | New or Revised | Start Date   | Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)  |
|---------------------------------------|-------------------------|---|----------------|--------------|---|
| Public Education and Outreach         | Storm Water Brochure    | Brochures are included in new resident packets, at City kiosk at Chandler Fashion Square Mall and handed out at City events, various neighborhood meetings, HOA board meetings and special events. Distributed 627 brochures during last reporting period. Copy of brochure included in Appendix B.               |                | August 2003  | Completed. Distribution of brochures at City locations, events and meetings will continue. Distribution will be tracked during the next reporting period.                   |
| Public Education / Public Involvement | Storm Water Webpage     | Developed webpage on City website. 2,532 visits to the webpage were reported. Copies of webpage content included in Appendix C.   |                | August 2003  | Completed. Website will be periodically updated with new information. Site visits will continue to be tracked during the next reporting period.                             |
| Public Education                      | Storm Water Signage     | 20 signs purchased. Posted signs at Detroit and Nevada, Evergreen and Mesquite, and Hoopes Park during reporting period.  |                | January 2004 | Completed. Signs will be produced and installed in City retention basins when appropriate. Installation and location will be tracked during the next reporting period.      |
| Public Education / Public Involvement | Storm Drain Placards    | 6,000 cast aluminum placards were purchased. 206 placards were installed during reporting period.   |                | July 2003    | Completed. Installation and/or replacement of placards on storm drain inlets will continue and will be tracked during the next reporting period.                            |
| Public Education                      | Landscape and Lawn Care | Assist in the management of irrigation runoff. 295 low water use conversions and 85 irrigation timer rebates.   |                | March 2003   | Completed. Conversions and timer rebates will continue as funding allows. Conversions and rebates will be tracked during the next reporting period.                         |
| Public Education / Public Involvement | Conservation Calendar   | Held 4 <sup>th</sup> grade Environmental Art Contest. Created calendar and poster using art. 1,094 entries were received. 8,000 – 2008 calendars and 500 posters were distributed. Drawings are displayed on the City's waste and recycling trucks and posted at City Library's. Calendar included in Appendix D. |                | August 2003  | Completed. The conservation calendar will continue and will be distributed to schools and City events. Art contest and calendar production will continue as funding allows. |
| Public Education / Public Involvement | Classroom Presentations | No invites from teachers during this reporting period.  |                | May 2004     | Completed. Classroom presentations will continue to be available and encouraged.  |

TABLE 1 (continued)

| Minimum Control Measure(s)            | BMP                               | Measurable Goal (steps to measure progress)   | New or Revised | Start Date    | Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)   |
|---------------------------------------|-----------------------------------|---|----------------|---------------|--|
| Public Education / Public Involvement | Hamilton High School Science Fair | Approximately 5,000 fair attendees. Discussed storm water pollution prevention and related information through use of STORM display boards and other information. Distributed 137 rain gauges, 166 magnetic clips, 137 brochures, 216 wristbands, 151 key chains, and 30 EPA "Take the Stormwater Runoff Challenge" crossword placemats.                              |                | February 2004 | Completed. The City will participate in the next Hamilton High Science Fair in February 2009. Distribution and tracking of attendees and program promotional items will be tracked during the next reporting period. |
| Public Education                      | STORM Membership                  | STORM website (www.azstorm.org) with stormwater related information. Display boards illustrating the difference between sanitary and storm sewers and pollution prevention are utilized at public events. Radio public service announcements and development and distribution of promotional items were completed. The STORM Annual Report is included in Appendix E. |                | March 2003    | Completed. The City will continue yearly membership.   |
| Public Education                      | Rain gauges                       | 267 rain gauges with "Please...only rain in the storm drain", city website address and contact information were distributed at City sponsored events. These events included Environmental Art Contest award ceremony, Citizen's Academy, Hamilton Science Fair, City events and meetings.   |                | April 2005    | Completed. Distribution of rain gauges will continue as funding allows. Distribution will be tracked during next reporting period  |

TABLE 1 (continued)

| Minimum Control Measure(s)  | BMP                                  | Measurable Goal (steps to measure progress)   | New or Revised | Start Date    | Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)   |
|---|--------------------------------------|---|----------------|---------------|--|
| Public Education  | Public Works @ Work, City cable show | A combination storm water pollution prevention, household hazardous waste, and recycling video segment aired 5 times per week for two months or approximately 40 times. A stormwater message was repeatedly aired on the Channel 11 bulletin board between video programming. The message aired over 1,000 times. Copies of video and message included in Appendix F. |                | March 2005    | Completed. Video segments and messages are updated and will be aired. Number of airings will be tracked during the next reporting period.      |
| Public Participation  | Public Meetings                      | 9 public meetings were attended by 227 individuals. Meeting dates, projects and attendance are included in Appendix G.  |                | June 2003     | Completed. Public meetings associated with Capital Improvement Projects will continue and will be documented during the next reporting period. |
| Public Participation/Illicit Discharge Detection and Elimination                    | Storm Water Pollution Hotline        | Phone number identified on City website and information distributed that residents can call with storm water related issues or concerns. Approximately 25 calls were received.  |                | November 2004 | Completed. The City will continue to track calls during the next reporting period.   |
| Illicit Discharge Detection and Elimination   | Storm Water System Map               | Collect as-built information on storm drain system, identify new system components  |                | March 2003    | Completed. The City will continue to collect data and update data from as-built information, site inspections, etc.                            |
| Illicit Discharge Detection and Elimination   | Storm Drain Video                    | Video storm drains for illicit connections and infrastructure condition. 43,916 feet of storm drain video inspected.  |                | May 2005      | Completed. The City will continue to utilize video services to inspect storm drains, connections and laterals when necessary.                  |
| Illicit Discharge Detection and Elimination/Post-Construction Stormwater Management | Plan Review                          | Plan reviews are completed to catch any illicit connections from wastewater discharge into the stormwater system.   |                | March 2003    | Completed. The City will continue plan review for any illicit connections from wastewater discharge into the stormwater system.                |

TABLE 1 (continued)

| Minimum Control Measure(s)   | BMP                              | Measurable Goal (steps to measure progress)   | New or Revised | Start Date | Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)                                    |
|--|----------------------------------|---|----------------|------------|---|
| Illicit Discharge Detection and Elimination/Pollution Prevention Good Housekeeping | Spill Prevention and Containment | Prevention/containment of debris, materials and spills potentially entering the storm drain system. A total of 285 incidents/spills were responded to and resolved. Summaries of the spills and incidents responded to and spill response form are included in Appendix H.  |                | March 2003 | Completed. The City will continue to report incidents/spills responded to during the next reporting period.                 |
| Illicit Discharge Detection and Elimination  | Dry Weather Field Screening      | Four discharge points were inspected. Arrowhead and Denver Basins were inspected weekly and material observed and amount removed was noted in Appendix O. Inspection forms are included in Appendix I.  |                | March 2003 | Completed. The City will continue field screening inspections and report material removed during the next reporting period. |
| Construction Site Runoff Control   | Grading and Drainage Permits     | A grading and drainage permit is required for new projects. These detail the City's requirements for runoff control. 50 permits were issued during the reporting period. A list of the Grading and Drainage Permits Issued is included in Appendix J.   |                | March 2003 | Completed. The number of permits issued will be tracked during the next reporting period.                                   |
| Construction Site Runoff Control   | Construction Site Inspections    | Sites are inspected for infractions to the Grading and Drainage Permit, County and/or City regulations and Standards. 66 final inspections were completed. 28 stormwater pollution prevention inspections were completed. A copy of the final inspection list and stormwater pollution prevention inspections are included in Appendix K. |                | March 2003 | Completed. The number of inspections will be tracked during the next reporting period.                                      |

**TABLE 1 (continued)**

| <b>Minimum Control Measure(s)</b>          | <b>BMP</b>                                    | <b>Measurable Goal (steps to measure progress)</b>  | <b>New or Revised</b> | <b>Start Date</b> | <b>Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)</b>   |
|--|---|---|-----------------------|-------------------|---|
| Construction Site Runoff Control           | Construction Storm Water Handbook             | City of Chandler Unified Development Manual – Available through City's website. 5,244 visits to the webpage were reported. Provides a single source for construction site BMPs, sediment control, permit applications, inspections, and non-stormwater and water management issues. |                       | August 2003       | Completed February 2005   |
| Post Construction Storm Water Management   | Property Owner Manual                         | Property Owner's Manual provides a means to inform property owners about stormwater management, pollution prevention and maintenance requirements. Copy of Manual included in Appendix L.   |                       | November 2004     | Completed February 2005. Manual will be updated when necessary. The manual is distributed to HOA and private property owners.             |
| Post Construction Storm Water Management   | Storm Drainage System Technical Design Manual | The manual outlines the design and policy for hydrology design, street drainage, storm drains, basins, and disposal of storm water and maintenance standards. Available as part of Unified Development Manual.  |                       | March 2003        | Completed. Manual is reviewed and updated as needed.  |
| Post Construction Storm Water Management   | One-year Warranty Finals                      | A one-year warranty inspection is completed for developments and redevelopments to ensure that structures are constructed and operating properly. 53 one-year warranty inspections were completed. A copy of the one-year warranty List is included in Appendix K.                  |                       | March 2003        | Completed. The number of inspections will be tracked during the next reporting period   |
| Pollution Prevention and Good Housekeeping | Street Cleaning                               | 65,383 total miles of streets were swept with 2,192 tons of material removed.   |                       | March 2003        | Completed. The City will continue street sweeping and will report miles and tonnage of material removed during the next reporting period. |
| Pollution Prevention and Good Housekeeping | Illegal Dumping                               | 318 illegal dumping calls were received and abated. Summary Report Included in Appendix M.  |                       | March 2003        | Completed. Number of calls responded to and abated will be tracked during the next reporting period.                                      |

TABLE 1 (continued)

| Minimum Control Measure(s)                 | BMP               | Measurable Goal (steps to measure progress)   | New or Revised | Start Date | Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)                      |
|--|-------------------|---|----------------|------------|---|
| Pollution Prevention and Good Housekeeping | Employee Training | 31 Streets Division employees attended Hazardous Spills Response training, 10 Planning and Development employees attended Stormwater Pollution Prevention/Erosion and Sediment Control Plan Review training, 17 Public Works employees attended Stormwater Pollution Prevention/Erosion and Sediment Control Site Inspection training and 19 Streets Division employees attended Basic Dust Control Training on April 29, 2008. Copies of rosters included in Appendix N. |                | March 2003 | Completed. Employee training will continue and will be tracked and reported during the next reporting period. |

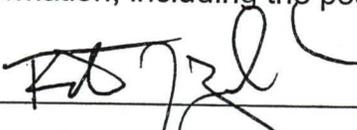
TABLE 1 (continued)

| Minimum Control Measure(s)                 | BMP                                | Measurable Goal (steps to measure progress)  | New or Revised | Start Date | Implementation Status/<br>Frequency/<br>Achievement Date<br>(completed, in progress, not started)                                  |
|--|------------------------------------|--|----------------|------------|--|
| Pollution Prevention and Good Housekeeping | Cleaning Catch Basins and Outfalls | Approximately 3,662 catch basins, scuppers and inlets inspected. 324 catch basins and laterals cleaned with 175 yards of material removed. Arrowhead and Denver Basin Pump Stations were inspected weekly. 1,150 scuppers, spillways, inlets and outlets were cleaned with 93,920 pounds of material removed. A Summary of work completed is Included in Appendix O. |                | March 2003 | Completed. The number of inspections, structures maintained and material removed will be tracked during the next reporting period. |
| Pollution Prevention and Good Housekeeping | Hazardous Material Storage         | 90 employees received training during 8 hour HAZWOPR refresher.  |                | March 2003 | Completed. The City will continue tracking HAZWOPR training.   |

Note: If you have developed a stormwater ordinance during the last reporting period, include a description or citation of the ordinance, or simply attach a copy of the ordinance.

**D. 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 

Date 9-17-08

Name (printed) Robert J. Zedler, Jr.

Title Public Works Director