



City of Farmington NPDES Phase II MS4 Annual Report

Reporting Period: July 1, 2015 to June 30, 2016



October 1, 2016

**City of Farmington
Public Works Department
800 Municipal Drive
Farmington, New Mexico 87401**

EXECUTIVE SUMMARY

The National Pollutant Discharge Elimination System (NPDES) Phase II rule, which was promulgated on December 8, 1999, regulated small Municipal Separate Storm Sewer Systems (MS4s) serving a population of less than 100,000 people in urbanized areas. The final rule requires that all MS4s located within urbanized areas as defined by the Bureau of the Census automatically comply with the Phase II Stormwater regulations by developing and implementing a Stormwater Management Program. The Program must reduce the discharge of pollutants to the Maximum Extent Practicable (MEP), protect water quality, and satisfy the appropriate water quality requirements of the Clean Water Act (CWA). The Program also requires the development of a Stormwater Management Plan (SWMP) Plan that is comprised of the following six (6) minimum control measures:

1. Public Education and Outreach on Stormwater Impacts,
2. Public Participation/Involvement,
3. Illicit Discharge Detection and Elimination,
4. Construction Site Stormwater Runoff Control,
5. Post-Construction Stormwater Management in New Development and Redevelopment, and
6. Pollution Prevention/Good Housekeeping for Municipal Operations.

A significant portion of the City of Farmington, New Mexico, met the definition of an urbanized area in the 2000 Census (<http://www.census.gov>). As a result, the City of Farmington (COF) is required to meet the Phase II Stormwater regulations. The 1999 NPDES Phase II rule required that the City of Farmington develop a SWMP and submit a draft Notice of Intent (NOI) to the United States Environmental Protection Agency (USEPA) by March 10, 2003.

The City of Farmington submitted a draft NOI to apply for coverage under the General Permit for Discharges from Small MS4s (Permit No. NMR040000). The original COF SWMP was developed and subsequently approved by Farmington City Council in March 2003.

The Final NPDES Phase II rule was signed and issued on September 29, 2006, and the permit became effective on January 1, 2007 and expired on June 30, 2012. As municipalities are currently awaiting the new NPDES permit, the current permit has been extended in accordance to the MS4 General Permit No. NMR040000 Section 6.3, until such time as the new permit is available. During February and March 2007, the City of Farmington re-evaluated and updated the SWMP. The plan will once again be re-evaluated and updated when the new permit is released. A draft of the new permit is currently available on the USEPA Region 6's website (<http://www.epa.gov/region6/water/npdes/sw/sms4/index.htm>). The USEPA is currently working on addressing comments and finalizing the new permit, which is expected to be issued in the fall of 2016, but as of the writing of this report, no new permit has been released. The City of Farmington has been in communication with the USEPA and surrounding communities in regards to the upcoming new permit. Upon finalization of the new permit, permittees will have 90 days to submit a NOI to be covered under the new permit, or 180 days if working cooperatively with surrounding communities. During the time frame that the NOI, for the new permit, is under review, the City of Farmington will continue to comply with the current permit. Planned actions listed in this annual report for the next reporting period (2016-2017) will be in accordance to the current permit. Planned actions for the next reporting period (2016-2017) are subject to change upon acceptance under the new permit, once it has been finalized.

The permit requires that the City of Farmington submit a MS4 Annual Report for the previous reporting period (July 1st through June 30th) by October 1st of each year for the life of the permit (2008 to 2012, or until the issuance of a new permit and acceptance under that new permit). The annual report includes the following:

- The status of compliance with permit conditions, an assessment of the appropriateness of the identified best management practices, progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and the measurable goals for each of the minimum control measures;
- Results of information collected and analyzed, if any, during the reporting period, including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP;
- A summary of the stormwater activities the City of Farmington plans to undertake during the next reporting cycle (including an implementation schedule);
- Proposed changes to the SWMP, including changes to any Best Management Practices (BMPs) or any identified measurable goals that apply to the program elements;
- Description and schedule for implementation of additional BMPs that may be necessary, based on new information or monitoring results, to ensure compliance with applicable Total Maximum Daily Loads (TMDL);
- Notice if the City of Farmington is relying on another government entity to satisfy some of the permit obligations; and
- A brief summary of any issues raised by the public on the draft Annual Report and any proposed changes to the SWMP, along with the City of Farmington's responses to the public comments.

The permit requires a public comment period for at least thirty (30) days prior to the submission of the report. The City of Farmington provided a review and comment opportunity. Public notices for the review and comment period were published in the Farmington Daily Times on Sunday, August 7th, and Wednesday, August 10th (**Figure A-1, Appendix A**). The City of Farmington received no comments from the public in regards to the public notices for the current MS4 Annual Report. The final MS4 Annual Report was submitted to the following authorities:

U.S. EPA, Region 6
Compliance Assurance and Enforcement Division
Water Enforcement Branch (6EN-WC)
1445 Ross Avenue
Dallas, TX 75202-2733

Program Manager
Point Source Regulations Section
Surface Water Quality Bureau
New Mexico Environment Department
P.O. Box 5469
Santa Fe, NM 87502

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LIST OF ACRONYMS

AES	Animas Environmental Services, LLC
AWP	Animas Watershed Partnership
BMP	Best Management Practice
CGP	Construction General Permit
COD	Chemical Oxygen Demand
COF	City of Farmington
CWA	Clean Water Act
DO	Dissolved Oxygen
FY	Fiscal Year (City of Farmington's fiscal year is July 1 st – June 30 th .)
IDDE	Illicit Discharge Detection and Elimination
GIS	Geographical Information System
MEP	Maximum Extent Practicable
MOC	City of Farmington's Municipal Operations Center
MS4	Municipal Separate Storm Sewer System
MSGP	Multi-Sector General Permit for Industrial Activities
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NMSPE	New Mexico National Society of Professional Engineers
PRCA	City of Farmington Parks, Recreation, and Cultural Affairs
SJWG	San Juan Watershed Group
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
TDS	Total Dissolved Solids
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
USEPA	United States Environmental Protection Agency

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MS4 ANNUAL REPORT

A. PERMITTEE INFORMATION

Permit Number: NMR040000

Permittee: City of Farmington
Mailing Address: 800 Municipal Drive
City, State and Zip Code: Farmington, NM 87401
Phone Number: (505) 599-1102

Have any areas been added to the MS4 due to annexation or other legal means? No annexations took place during this reporting period.

The current City of Farmington map is provided in *Figure 1*.

B. REPORTING PERIOD July 1, 2015 to June 30, 2016

C. PROGRAM AREAS

Program area updates during this reporting period for the City of Farmington's SWMP are provided in the following attached sections:

- Section 1 – Public Education and Outreach
- Section 2 – Public Participation/Involvement
- Section 3 – Illicit Discharge Detection and Elimination
- Section 4 – Construction Site Stormwater Runoff Control
- Section 5 – Post-Construction Stormwater Management in New Development and Redevelopment
- Section 6 – Pollution Prevention/Good Housekeeping for Municipal Operations

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 of Permittee (legally responsible person)

9-30-16

Date Signed

David Sypher, P.E., Director, Public Works, City of Farmington

Name & Titled (printed)



Prepared By

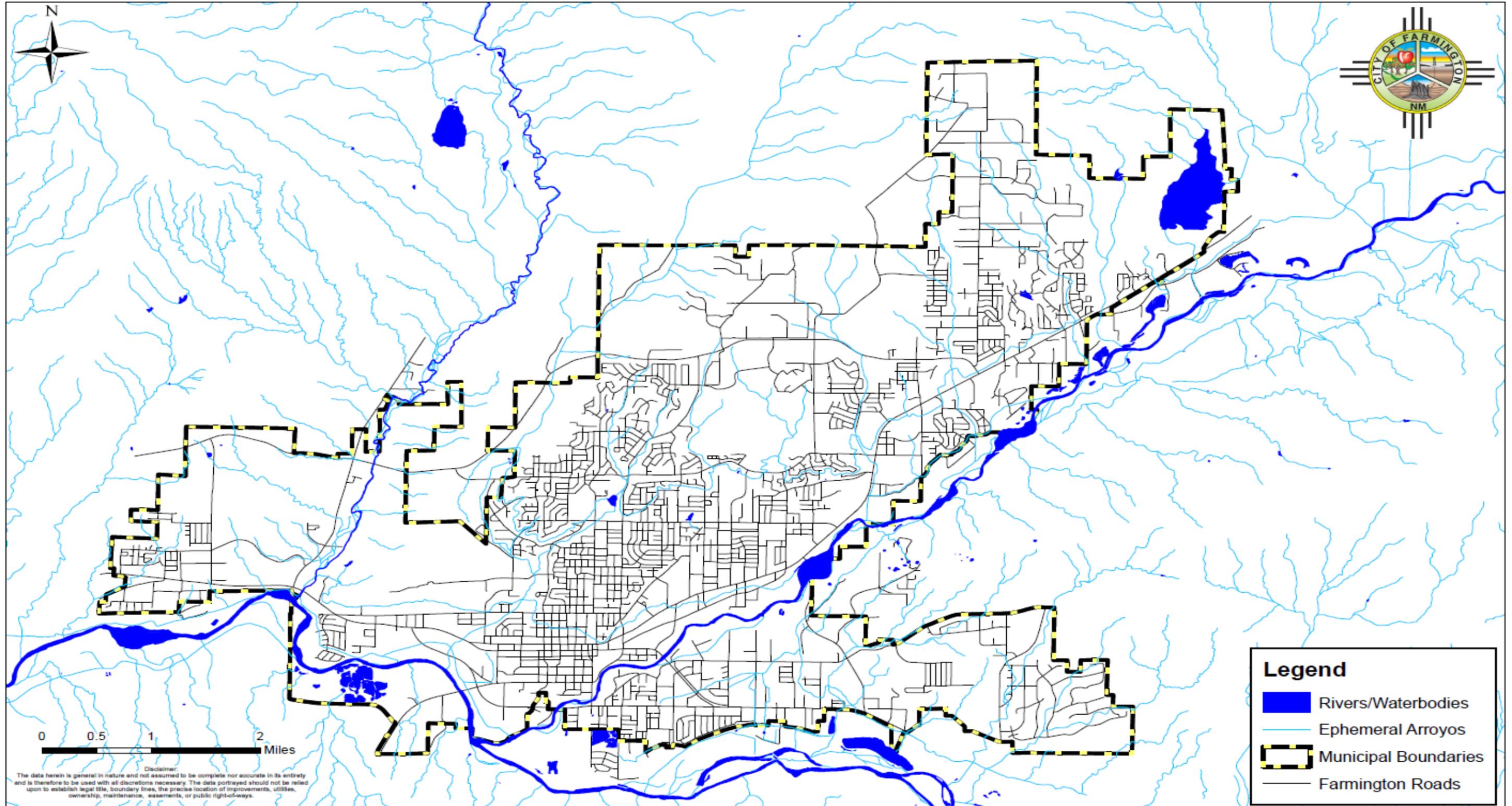
9-30-16

Date Signed

Toni Sitta, EIT, Associate Project Engineer, Public Works, City of Farmington

Name & Titled (printed)

Figure 1: Current Extents of the City of Farmington, NM



1. PUBLIC EDUCATION AND OUTREACH

1.1. *Implementation Status*

The City of Farmington's SWMP contains all the measurable goals for the Public Education and Outreach program that were planned during the five-year permit period (2007 through 2012). However, the focus of this MS4's Annual Report is the status of those goals planned during this reporting period (July 1, 2015 to June 30, 2016), a summary of goals planned for the next reporting period (July 1, 2016 to June 30, 2017), and any changes proposed to the goals in the SWMP. **Table I-1** summarizes the status of the Public Education and Outreach goals planned during this reporting period as well as the status on any goals where work has already begun in preparation for future deliverables.

1.2. *Overall Compliance with Permit Conditions*

The City of Farmington worked to complete the goals planned during this reporting period for Public Education and Outreach. Educational information and booths were offered to the residential community and construction industry.

The City of Farmington's website is actively reviewed to ensure the stormwater information provided is accurate and up to date. The Industrial Information link, under the Stormwater Management section of the website, was updated so that the public would be aware that the USEPA had issued a new Multi-Sector General Permit (MSGP) on June 4, 2015. Information about USEPA's Draft 2017 Construction General Permit (CGP) was also included on the website and information was provided to the public at the City of Farmington's Building Permit and Inspection Counter (<http://www.fmtn.org/index.aspx?nid=306>). Additional information can be found in section 1.3.3 of this report.

The City of Farmington continues its active participation and partnerships with groups in the region and is always interested in partnerships with new groups and organizations. Employees attended regular meetings held by the Animas Watershed Partnership (AWP) and San Juan Watershed Group (SJWG). Additional information can be found in **Section 1.3.5** of this report.

Public Meetings and Comment Periods

The public comment period on the MS4 report was held from August 7th through September 7th, 2016 and two (2) notices were included in the Farmington Daily Times on Sunday, August 7th and Wednesday, August 10th. A copy of the *Draft City of Farmington NPDES Phase II MS4 Annual Report* was made available at the City of Farmington's Building Permit and Inspections Desk.

A public meeting was not held in this reporting year. As is consistent with the NPDES permit requirements, there has been no significant interest in public comment to justify a public meeting. A public meeting will be held in the future when there is a significant interest from the public during the commenting period or in any time during the following year regarding the SWMP, MS4 report, or other stormwater quality issues. The last stormwater public meeting held, in November of 2009, had one (1) attendee despite radio announcements, multiple postings in the Farmington Daily Times, and numerous flyers.

The following sections provide information collected and analyzed during this reporting period.

1.3. Results of Information Collected and Analyzed During the Reporting Period

The following sections provide information collected and analyzed during this reporting period. Some historical information has been left in from previous reports.

1.3.1. Stormwater Training and Outreach – Residential Focus

Residential Training Workshops

No residential training workshops were held this reporting cycle.

Residential Promotions

The City of Farmington promoted several stormwater educational activities during this reporting period. Promotions are summarized below and examples are provided in *Appendix B*.

- **Farmington Clean & Beautiful** – The Adopt a Spot and Dumpster Weekend programs were organized to reach out to citizens to keep the community clean; see *Section 2.3.2* for more information.
- **City Buses.** The Red Apple Transit, a public transportation system, has routes to the City of Aztec, City of Bloomfield and Town of Kirtland. Two (2) of the nine (9) buses have had placards on the back that remind the community that stormwater is not treated and to keep pollutants out of the storm drains.
- **Brochures.** A variety of brochures are made readily available and cover the following topics: preventing stormwater runoff, stormwater quality, and low impact development. These brochures are available at the City of Farmington Building Inspection Counter and are handed out during educational events such as the Home Show Expo. The Preventing Stormwater Runoff brochure is also available at the City of Farmington Stormwater Management website.
- **Presentations.** The MS4 Coordinator gave a presentation on the City of Farmington’s MS4 program at the AWP Public Forum on March 3, 2016, at the San Juan College.
- **Press Release** – Press releases were held for the Farmington Clean and Beautiful program and Dumpster Weekend.
- **Demonstration Projects.** No new additional demonstration projects were added this cycle. In the last several years demonstration projects were completed for xeriscape pond design and permeable concrete; see previous reports for more in depth discussions and photos. The City of Farmington continues to maintain and conduct educational programs about xeriscaping at the Riverside Nature Center in the Animas Park.
- **Informational Booths.** The City of Farmington participated in booths throughout the reporting year.
 - The water fair has not been held since 2011 due to lack of participations from booth presenters. Communication will be continued with the SJWG, who sponsored the event in the past. The City of Farmington will participate in any future water fairs.
 - The City of Farmington once again participated in the Home Show Expo in March of 2016. This will be further addressed in the following *Section 1.3.2 Stormwater Training and Outreach – Construction Focus*, though the event does provide residential information as well.

1.3.2. Stormwater Training and Outreach – Construction Focus

Construction-related Training Workshops

The City of Farmington co-sponsored the *Stormwater Best Management Practices (BMPs) Course for Compliance Personnel, Engineers, Construction Managers and Superintendents, Project Managers and Planners*. The course was presented by Altitude Training Associates, LLC, on April 22, 2016. Course flyers were handed out at the City of Farmington’s Building Permit desk, at the Home Show Expo, through email to known contractors, and by Animas Environmental. There was a total of 34 builders, developers, engineers, and government and industry personnel, representing 16 different organizations in attendance for this course.

Promotional Materials and Activities

The City of Farmington promoted several stormwater educational activities during this reporting period. Promotions are summarized below and examples are provided in *Appendix B*.

- **Technical Specifications.** The City of Farmington’s Public Works Department continues to discuss and review BMPs in the *City of Farmington’s Technical Specifications & Construction Standards*. The standards are posted on the website (<http://www.fmtn.org/index.aspx?nid=491>) and were made available at the Building Permit Counter.
- **Brochures.** The City of Farmington has placed BMP information posters on walls near the Building Permit and Inspection counter and made the following brochure available:
 - *How Do I Get Stormwater Permit Coverage for My Construction Site? A Construction Site Operator’s Guide to EPA’s Stormwater Permit Program*, USEPA brochure (USEPA 833-F-04-002, Revised: September 2007).
 - Information about the draft CGP was also made available to the public at the Building Permit and Inspection counter.
- **Informational Booths.** The City of Farmington hosted a booth on March 4th and March 5th of 2016, at the San Juan County Home Builders Association’s 21st Annual Home Improvement & Building Expo. The three-day event attracted local developers, builders, contractors, vendors, and residents interested in home improvements. The booth contained stormwater educational information for the residential community and the construction industry.

The booth’s focus covered a range of information. There were brochures on xeriscape, rain garden, rain barrels, construction BMP’s and water quality issuers. The MS4 coordinator was also available at the booth to answer any questions in regards to these topics. A picture of the booth is shown in *Figure 1-1*. Some of these brochures can be found in *Appendix B*.

Figure 2-1: City of Farmington's Booth at the San Juan County Homebuilders Association's 2016 Annual Home Improvement & Building Expo.



1.3.3. City of Farmington Website

The City of Farmington continues to update and provide information on its stormwater website. The draft report for the 2015-2016 reporting period was made available during the months of August and September. A direct link to the USEPA's Stormwater Pollution Prevention Plan (SWPPP) guide is also available along with other USEPA stormwater informational links.

<http://www.fmtn.org/index.aspx?nid=306>

The site includes the most current MS4 Annual Report, SWMP, residential information, US EPA construction BMP links, SWPPP links, industrial links, informational brochures and guidance, and who to contact for stormwater related questions. At the end of the comment period, the final 2015-2016 report was made available; see *Appendix B-6* for the most current site image at the time of this report submittal.

During previous periods, the site has been used to announce public meetings and was used to announce stormwater related updates and/or issues. Events have been promoted on the Stormwater Management page along with comment forms.

1.3.4. Initiate Partnerships with Interested Groups and Organizations

The City of Farmington continues to actively participate with two (2) local watershed planning groups in the area; the AWP and the SJWG. Participation is also on-going with the San Juan County Home Builders Association.

City of Farmington staff members regularly attended the AWP meetings and participated on AWP committees throughout the year. Staff not only participated in AWP meetings but also serves in committee positions and continues to stay involved with the SJWG as well as attend meetings.

The City of Farmington signed a 40 year contract with the Lower Valley Water and Sanitation District to treat the district waste water pumped to the City of Farmington's existing collection system. The Lower Valley Water and Sanitation District serves portions of Town of Kirtland. The implementation is expected to move many Town of Kirtland residents from septic systems to sewer connections. The City of Farmington does not collect water quality information from the Town of Kirtland area, as this is beyond jurisdictional boundaries, however, this contract is expected to assist in decreasing the E. Coli levels within the San Juan River affected by this area.

1.4. Activities Planned for the Next Reporting Cycle

In the next reporting period, the City of Farmington will continue to participate with local watershed groups and to attend events best suited towards educating the public about stormwater quality.

The City of Farmington will focus on expanding partnerships, providing educational sessions for COF employees, and improving educational information for construction and post-construction BMPs. A summary of the planned goals and activities for the next reporting period is contained in *Table 1-1*.

1.5. Proposed Changes

A summary of the Public Education and Outreach goals are summarized in *Table 1-1*. There are no proposed changes from the last report.

1.6. Permit Obligations

The City of Farmington does not rely on another government entity to submit information necessary to satisfy permit obligations; however, it does cooperate with other local organizations to achieve some SWMP goals. For example, the City of Farmington works with San Juan College, New Mexico Department of Transportation, San Juan County, the City of Aztec, and the City of Bloomfield to best utilize local programs and resources.

1.7. Inspections and Formal Enforcement Actions

No inspections or formal enforcement actions were performed for the Public Education and Outreach Program during the reporting period.

1.8. Public Access, Review, and Comment Provisions

Under the permit, the MS4 Annual Report is due October 1st of each year for the previous reporting period. The permit also requires a public comment period for at least thirty (30) days prior to the submission of the annual report. The City of Farmington met these requirements as described in the Public Meetings and Comment Periods paragraph of *Section 1.3.1*.

Table 1-1 Public Education and Outreach Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Targeted Audience	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #1 – Annually				
1. Annual Water Fair – Teach, develop, and distribute additional informational materials about protection of rivers and lakes and water conservation.	Water/Wastewater Admin. Paul Montoia	Children and Youth	Annually	2007-2012 Plus additional Permit Years of Administrative Continuation (NPDES MS4 Permit Section 6.3)
<p>Information from prior years- The COF has hosted a total of four (4) booths at the water fair during permit term years 1-3. Preparation was conducted to host four (4) booths for the 2011 water fair, however, due to lack of participation, the water fair was canceled.</p> <p>Year 9 Progress and Year 10 Plans <u>Year 9-</u> The water fair has not been held since the 2011 event due to lack of public interest and participation. <u>Year 10</u> – The COF will participate in the water fair each year it is held.</p>		<p>Proposed Changes No proposed changes. The COF plans to participate in the Annual Water Fair each year it is held.</p>		
GOAL #2 – Year 2 of Permit Term				
2. Partnerships – Initiate partnerships with interested groups and organizations:	<p>Irrigation Ditch Boards City Engineering</p> <p>Metropolitan Planning Organization (MPO) - Planning Division (Duane Wakan)</p> <p>NMSPE - Public Works (Toni Sitta and Paul Montoia)</p> <p>River Reach - Parks, Recreation, and Cultural Affairs (Mary Gardocki)</p> <p>SJWG - Water/Wastewater Admin. (Paul Montoia)</p> <p>San Juan College, City of Aztec, and San Juan County - Public Works (Toni Sitta)</p> <p>AWP - Water/Wastewater Admin. (Paul Montoia)</p> <p>San Juan County Homebuilders – Planning Division (Derrick Childers and Nica Westerling)</p>	<p>Agricultural</p> <p>Transportation</p> <p>Engineers</p> <p>Recreational Users</p> <p>Environmental Organizations</p> <p>Adjacent MS4s</p> <p>Environmental Organizations</p> <p>Construction Contractors</p>	December	2008

Table 1-1 Public Education and Outreach Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Targeted Audience	Month in SWMP ¹	Year of Permit in SWMP ¹
<p>Information from prior years- COF staff has initiated partnerships with interested groups and organizations, such as the SJWG, AWP, Irrigation Ditch Boards, MPO, River Reach Foundation, San Juan County Home Builders Association, and adjacent MS4 permittees.</p> <p>Year 9 Progress and Year 10 Plans <u>Year 9</u> – COF staff members attended SJWG, AWP, and San Juan County Home Builders Association meetings, communicate with Irrigation Ditch Boards, work with the Farmington MPO, the River Reach Foundation, and adjacent MS4 permittees. <u>Year 10</u> – Continue to work with the above mentioned groups and look for new partnerships.</p>		<p>Proposed Changes No proposed changes.</p> <p>Goal of initiating partnerships was met by December of 2008. The COF continues to work and partnership with interested groups and organizations. Additionally cooperative efforts are being initialized with adjacent MS4 permittees.</p>		
<p>GOAL #3 – Year 1 of Permit Term</p>				
<p>3. Library of BMPs - available at the COF Building Permit Counter and online at COF's web site.</p>	<p>Public Works</p>	<p>Developers Builders General Public</p>	<p>September</p>	<p>2007</p>
<p>Information from prior years – The Library of BMP's has been implemented since before year 1 of the current permit.</p> <p>Year 9 Progress and Year 10 Plans <u>Year 9</u> – Reviewed and update website as needed. The most up to date information is present at this time with links for stormwater information and BMP's. <u>Year 10</u> – Will continue to review the COF's Library of BMP's, update as needed, and make them available to the public.</p>		<p>Proposed Changes No proposed changes from last report.</p>		
<p>GOAL #4 – Year 1 of Permit Term</p>				
<p>4. NPDES Phase II Training – COF Government - to include COF Council and relevant departments.</p>	<p>Public Works City Engineer/MS4 Personnel</p>	<p>COF Employees</p>	<p>November</p>	<p>2007</p>
<p>Information from prior years – Training of Staff and COF Government was post-poned until Year 6 of the permit. Training materials were provided to staff in year 6 of the permit.</p> <p>Year 9 Progress and Year 10 Plans <u>Year 9</u> – The COF continued to provide Public Works staff with new training materials as needed. <u>Year 10</u> – Training material will be supplied to COF Government, to include COF Council and relevant departments.</p>		<p>Proposed Changes No proposed changes.</p>		

Table 1-1 Public Education and Outreach Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Targeted Audience	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #5 – Year 1 of the Permit Term				
<p><i>5. NPDES Phase II Training – Construction Activities – to focus on erosion control and BMPs associated with construction activities. Course to be offered in conjunction with San Juan College and taught by Scott Olson.</i></p>	<p>Public Works City Engineer/MS4 Personnel</p>	<p>Developers Builders COF Employees</p>	<p>May</p>	<p>2008</p>
<p><i>Information from prior years</i> – A stormwater management erosion and sediment control class was offered at San Juan College in April of 2007 (Year 1) and May of 2008 (Year 2). The 2007 class targeted construction activities in the oil and gas industry, while the 2008 class targeted the general construction industry.</p> <p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – The COF co-sponsored with Animas Environmental Services, LLC, a construction BMP course held at the COF Civic Center in Year 9 of the permit. <u>Year 10</u> – Plan to continue to support and partner with San Juan College or other cooperative entities to hold trainings as requested by the industry.</p>		<p><i>Proposed Changes</i> No proposed changes.</p>		
GOAL #6 – Year 2 of the Permit Term				
<p><i>6. NPDES Phase II Training – Industrial Activities – to focus on BMPs, stormwater runoff, and illicit discharge or connections to COF sewer or storm drains. NOTE: To be conducted after MSGP for industrial activities is published.</i></p>	<p>Public Works: Water/Wastewater Admin. Ruben Salcido MS4 Coordinator/Project Engineer Toni Sitta</p>	<p>Industry</p>	<p>November</p>	<p>2008</p>
<p><i>Information from prior years</i> – Annual trainings were held for COF employees beginning in year 4 of the permit term in regards to spill prevention. Those employees working within industrial sites will continue training as outlined in their MSGP.</p> <p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Annual trainings are held for COF employees regarding accidental spill prevention through the Safety Department. <u>Year 10</u> – Those employees working within industrial sites will continue training as outlined in their MSGP. See the Power Plant and Airport MSGP annual reports. Please contact Britt Chesnut with the City Power Plant or Mike Lewis at the Airport for more information.</p>		<p><i>Proposed Changes</i> No proposed changes</p>		

Table 1-1 Public Education and Outreach Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Targeted Audience	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #7 – Year 2 of the Permit Term				
<p><i>7. NPDES Phase II Training – Residential – to focus on educating public about xeriscaping, proper fertilization, rainwater harvesting, and minimizing irrigation runoff.</i></p>	<p>Parks, Recreation, and Cultural Affairs Donna Thatcher</p>	<p>General Public (Residential Homeowners)</p>	<p>May and/or September</p>	<p>2008</p>
<p>Information from prior years – In Year 1 of the Permit Term, San Juan College’s Community Learning Center offered several classes to local area residents related to these topics. Community volunteers also made additions to the COF’s xeriscape demonstration garden. The COF provided xeriscape and stormwater management information to residents and construction professionals at public meetings, the Home Show Booth, and the Earth Day Booth.</p> <p>Year 9 Progress and Year 10 Plans <u>Year 9</u> – The COF staff attended the Home Show Expo with brochures related to stormwater information. Information is available at the COF counter and website. The COF’s Parks, Recreation, and Cultural Affairs Department sponsors multiple public informational courses to include xeriscape design, river and wetland health, as well as a Master Gardener that has worked with schools and children. The Annual Water Fair was cancelled this year by the sponsor as it has been since 2011. <u>Year 10</u> – Plan on continuing to offer stormwater management information to local residents and businesses. Will continue to attend events that promote clean stormwater and minimizing runoff. Will continue to coordinate with Parks, Recreation, and Cultural Affairs to promote stormwater quality and management educational materials to the public. Will begin to work cooperatively with neighboring MS4’s at community events, such as the San Juan County Fair, to promote stormwater quality awareness.</p>		<p>Proposed Changes No proposed changes.</p>		

Table 1-1 Public Education and Outreach Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Targeted Audience	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #8 – Annually				
<i>8. Utility bill information sheets or brochures on stormwater and protection of surface water.</i>	Public Works City Engineer/MS4 Personnel	General Public	Annually	2007 – 2012 Plus additional Permit Years of Administrative Continuation (NPDES MS4 Permit Section 6.3)
<p><i>Year 9 Progress and Year 10 Plans</i></p> <p><u>Year 9</u> – Sent out a stormwater information brochure as well as brochures for the Dumpster Weekend and Farmington Clean and Beautiful programs (<i>Appendix B</i>). The stormwater brochure was updated to include a crossword puzzle to promote the reading of the information within the brochure.</p> <p><u>Year 10</u> – Will mail a stormwater brochure with a utility bill each year.</p>		<p><i>Proposed Changes</i></p> <p>No proposed changes.</p>		

¹COF's SWMP

2. PUBLIC INVOLVEMENT/PARTICIPATION

2.1. Implementation Status

Table 2-3 contains the status of the Public Involvement and Participation goals planned during this reporting period as well as the status on any goals where work has already begun in preparation for future deliverables.

2.2. Overall Compliance with Permit Conditions

The City of Farmington worked to complete all the planned goals during this reporting period for the Public Involvement and Participation program area. There are several programs that invite community participation, and many of these programs improve stormwater management by reducing the amounts of waste that might otherwise end up in the stormwater sewer system if not disposed of properly. These programs were offered during this reporting period, and many local residents participated.

The code compliance hotline continues to be used by residents and code compliance officers recorded and investigated complaints this period which included illicit discharge reporting.

A comment period for residents to provide input on the MS4 Annual Report was provided prior to submitting the MS4 annual report. There has not been a significant public interest in regards to the MS4 annual report, so therefore no public meetings were held this reporting year.

2.3. Results of Information Collected and Analyzed During the Reporting Period

The following sections provide information collected and analyzed during this reporting period. Some historical information has been left in from earlier reports.

2.3.1. Code Compliance Hot Line

The City of Farmington has code compliance officers and a code compliance hotline to record and investigate illicit discharge complaints. During this reporting period, a total of 16 stormwater related complaints were received from July 1, 2015 to June 30, 2016. Each illicit discharge was investigated and resolved. More detailed results are provided in *Section 3, Illicit Discharge Detection and Elimination*.

2.3.2. Farmington Clean & Beautiful

Volunteers from various civic groups, schools, and scout groups participated in the Farmington Clean & Beautiful Adopt a Spot Program. During this reporting period, there were 40 events held with a total of 501 volunteers who collected 12,681 bags of trash.

Additionally, this reporting cycle, the Farmington Clean & Beautiful Program held a refrigerator recycling day during the Non-Hazardous Waste Program day. A total of 106 refrigerators were collected and disposed of properly.

2.3.3. Household Non-Hazardous Waste Program

The Farmington Parks, Recreation, and Cultural Affairs Department coordinated two (2) Dumpster Weekend events in which volunteers collected and properly disposed of household non-hazardous

waste. There were 501 total volunteers that aided in the Clean and Beautiful programs and waste collection. The collection results are summarized in *Table 2-1*.

Table 2-1 Household Non-Hazardous Wastes Collected

<i>Year</i>	<i>Total Waste from Dumpsters (tons)</i>	<i>Fridges</i>	<i>Metal Waste (tons)</i>	<i>Electronics (tons)</i>	<i>Other Recycled (tons)</i>
2015-2016	126.81	106	509	14.49	7.95

Yard waste collected was recycled to create compost. The compost was then used for city parks and was also made available to the public.

2.3.4. Household Hazardous Waste Program

The Water/Wastewater Department of the City of Farmington and San Juan County held household hazardous waste collection events in October of 2015 and April of 2016. Residents brought in old batteries, household paints and chemicals, etc. for proper disposal.

The proper disposal of these materials is crucial for the cleanliness of our streams and rivers. Batteries, chemicals, oils, and other hazardous and non-hazardous materials disposed of during these events contain: lead, nickel, nitrates, chlorites, alkaline, lithium diazinon, and cadmium, just to name a few. Collection results are summarized in *Table 2-2*.

Table 2-2 Household Hazardous Wastes Collected

<i>Date</i>	<i>Collection Site</i>	<i>Recycled (pounds)</i>	<i>Energy Recovery (pounds)</i>	<i>Incineration (pounds)</i>	<i>Landfill (pounds)</i>	<i>TOTAL (pounds)</i>
Fall 2015	COF	1,042	21,099	2,508	8,763	33,412
	San Juan County					
<i>Event Total</i>						
Spring 2016	COF	691	24,013	2,847	7,903	35,454
	San Juan County					
<i>Event Total</i>						

2.3.5. Xeriscape Demonstration Garden Improvements

There were no additional xeriscape demonstration projects this year.

In 2008 – 2009, a xeriscape demonstration project was completed at Farmington’s Riverside Nature Center along the Animas River in Animas Park. The nature center holds numerous educational programs; tours of the nature center, trails and gardens; and an annual volunteer training program that includes xeriscape gardening. The xeriscape gardens are open to the public year round.

In 2009 - 2010, a xeriscape park/pond was completed at the Sycamore Park; refer to the City of Farmington NPDES Phase II MS4 Annual Report for the 2009-2010 reporting period.

2.3.6. Regional Forums on Climate Change and Water

The City of Farmington did not participate in any regional forums on climate change and water this reporting period. However, COF personnel periodically attend webinar sessions in regards to climate change and water quality.

2.3.7. Recycling Program

The City of Farmington continues its residential curbside recycling program. At the request of residents, waste management provides a recycling bin that is collected every other week.

2.3.8. Storm Drain Labeling

No additional labeling was completed this reporting year. In the past years, coordination with the Boy Scouts was established for the purpose of labeling many of the storm inlets throughout the community. Storm drain labeling will continue with scouting participation as needed.

2.3.9. City of Farmington Website

The City of Farmington continues to update the stormwater website to ensure the most relevant and up to date information is present. The website can be found at the following web address:

<http://www.fmtn.org/index.aspx?NID=306>

The site includes the most current MS4 Annual Report, SWMP, residential information, construction BMP links, SWPPP links, industrial links, and who to contact for stormwater related questions. (See *Section 1.3.3* for additional detail and *Appendix B-6* for the most current website image)

2.4. Activities Planned for the Next Reporting Cycle

In the next reporting period, the City of Farmington will continue to offer similar local participation events to collect and properly dispose of wastes. They will continue to address reported code violations. It should be noted that all new City of Farmington inlets are installed with a pre-stamped no dumping label. A summary of the planned goals and activities for the next reporting period is contained in *Table 2-3*.

2.5. Proposed Changes

There are no proposed changes from last reporting period.

2.6. Permit Obligations

The City of Farmington does not rely on another government entity to submit information necessary to satisfy permit obligations; however, the City of Farmington does cooperate with other local organizations to achieve some SWMP goals. For example, the City of Farmington works with Waste Management and San Juan County to best utilize local programs and resources.

2.7. Inspections and Formal Enforcement Actions

Code compliance complaints were each investigated to determine if code violations existed. Violators were given 24 hours to satisfactorily address any issues. In each case, issues were resolved within the 24-hour period, so further enforcement or legal action was not pursued. The development of an official ordinance that specifically prohibits discharges into the storm drainage system and outlines penalties will allow for the enforcement of these violations.

Table 2-3 Public Involvement/Participation Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Targeted Audience	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #1 – Ongoing				
<i>1. Code Compliance Hot Line for reporting stormwater complaints or reports of illicit discharges.</i>	Code Compliance	General Public	Ongoing	2007 – 2012 Plus additional Permit Years of Administrative Continuation (NPDES MS4 Permit Section 6.3)
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Monitored and addressed 16 code compliance calls received from the public and municipal employees. Code compliance complaints are also accepted through the COF’s online Request Tracker. Results are summarized in <i>Section 3, Illicit Discharge Detection and Elimination</i>. <u>Year 10</u> – Continue logging and responding to calls.</p>		<p><i>Proposed Changes</i> No proposed changes.</p>		
GOAL #2 – Annually				
<i>2. Coordinate with Farmington Clean & Beautiful to continue Adopt a Spot cleanup.</i>	Debra Homer Parks & Recreation	Civic group volunteers; students; scout groups	May & September	2007 – 2012 Plus additional Permit Years of Administrative Continuation (NPDES MS4 Permit Section 6.3)
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Volunteers participated in the Adopt a Highway cleanup activities to collect and properly dispose of litter. <u>Year 10</u> – Continue support for the Farmington Clean and Beautiful programs.</p>		<p><i>Proposed Changes</i> No proposed changes.</p>		
GOAL #3 – Annually				
<i>3. Coordinate, implement, and track volume of waste disposed of through the Household Non-Hazardous Waste Programs.</i>	Debra Homer Parks & Recreation	General Public	April & October	2007 – 2012 Plus additional Permit Years of Administrative Continuation (NPDES MS4 Permit Section 6.3)
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Held Dumpster Weekend collections in September of 2015 and May of 2016. Tracked data on waste collected. <u>Year 10</u> – Continue to offer Dumpster Weekend collections and track data.</p>		<p><i>Proposed Changes</i> No proposed changes.</p>		
GOAL #4 – Annually				
<i>4. Coordinate, implement, and track volume of waste disposed of through the Household Hazardous Waste Programs.</i>	Ruben Salcido Water/Wastewater Admin.	General Public	Annually	2007 – 2012 Plus additional Permit Years of Administrative Continuation (NPDES MS4 Permit Section 6.3)
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Held collection events in September of 2015 and May of 2016. <u>Year 10</u> – Continue to offer household hazardous waste collection events.</p>		<p><i>Proposed Changes</i> No proposed changes.</p>		

Table 2-3 Public Involvement/Participation Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Targeted Audience	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #5 – Annually				
<p><i>5. Hold annual public meeting to solicit feedback on the SWMP. Personnel from Farmington’s Public Works, Planning and Zoning, Parks, Recreation, and Cultural Affairs, Water Wastewater departments to be present.</i></p>	Public Works	General Public COF Departments	December	2007 – 2012 Plus additional Permit Years of Administrative Continuation (NPDES MS4 Permit Section 6.3)
<p><i>Information from prior years</i> – Held public meetings in Year 1, Year 2, and Year 3 and noticed a declining public interest. Year 3 only had one (1) public attendee.</p> <p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – No public meeting was held in this reporting period. Public notices were submitted in the local paper. Public interest has not shown significant interest to warrant a meeting. <u>Year 10</u> – Will continue to seek input from the public and upon greater interest will schedule a public meeting.</p>		<p><i>Proposed Changes</i> No Changes.</p>		
GOAL #6 – Year 2 of the Permit Term				
<p><i>6. Continue storm drain labeling to raise awareness that water or materials entering storm drains ultimately discharges to the San Juan, Animas and La Plata Rivers.</i></p>	Public Works: Toni Sitta MS4 Coordinator/Project Engineer	Civic group volunteers; students; scout groups	December	2008
<p><i>Information on prior years</i> – In Year 1 of the permit term, two (2) Eagle Scout volunteers labeled several storm drains. In addition, storm drain labeling was added to the COF’s Technical Specifications & Construction Standards finalized on May 6, 2008. In Years 3 and 4, several hundred storm drains were labeled by Scout volunteers under the COF’s Supervision.</p> <p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – No further labeling was completed this reporting period. <u>Year 10</u> – Plan to label storm drains as the master drainage map is updated. Will coordinate with scout groups and other volunteers on an as need basis.</p>		<p><i>Proposed Changes</i> No proposed changes.</p>		

Table 2-3 Public Involvement/Participation Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Targeted Audience	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #7 – Year 1 of the Permit				
7. <i>Farmington web page – to include posting the most recent SWMP, NOI, useful links, BMP library, and a feedback/contact link.</i>	Information Technology Public Works	General Public	September	2007
<p><i>Information on prior years</i> – A stormwater section was added to the City’s Webpage in Year 1 of the permit.</p> <p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Continued to keep information updated. Last year’s MS4 report was made available along with helpful information and useful links; see <i>Section 1.3.3</i> <u>Year 10</u> – Will continue to review stormwater information on the COF’s website. Will update and revise the site as necessary.</p>		<p><i>Proposed Changes</i> No proposed changes.</p>		

¹COF’s SWMP

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION

3.1. *Implementation Status*

Table 3-1 summarizes the status of the Illicit Discharge Detection and Elimination (IDDE) program goals planned during this reporting period as well as the status on any goals where work has already begun in preparation for future deliverables.

3.2. *Overall Compliance with Permit Conditions*

The measurable goals for the IDDE program focuses on locating problem areas, finding sources of the problems, removing or correcting illicit connections, and documenting actions taken.

The City of Farmington continued dry weather inspections during this reporting year in an attempt to track possible problem areas. The City of Farmington has a contract with an environmental firm to conduct dry weather inspections and collect samples, if necessary. Wet weather sampling events are also conducted. Three (3) dry weather inspection events and three (3) wet weather sampling events were conducted within this reporting period. These inspection and sampling events were conducted in September, October, and November of 2015 and March, April, and June of 2016. Weather patterns and storm events in the desert southwest do not consistently occur over the entire municipality. Stormwater sampling was conducted during qualifying events when possible. Sampling during evening storm events is not conducted, for safety purposes, due to low visibility and flash flooding. Due to the time of day and maximum holding procedures, E. Coli testing was only conducted on two of the sites during this reporting period, because of the time of day and maximum holding times.

The City of Farmington has coordinated with Animas Environmental Services, LLC to install automatic sampling collectors to aid in collection for rainfall events that occur during hours when sampling cannot be manually collected. However, E. Coli maximum holding times still apply.

3.3. *Results of Information Collected and Analyzed During the Reporting Period*

Results of information collected and analyzed during the reporting period for the IDDE program area are summarized in the following sections.

Regional Discharge Impacting Local MS4 Water Quality

Gold King Mine Spill – On Wednesday, August 5, 2015, the Gold King Mine, located in San Juan County, above Silverton, Colorado, experienced a breach in their contamination dam, triggering an initial release of approximately three (3) million gallons of water containing contaminated sediments into Cement Creek, a tributary to the Animas River. This release entered the Animas River in Colorado, crossed the Colorado/New Mexico Stateline and converged with the San Juan River below the Animas/San Juan River confluences. The USEPA, New Mexico Environmental Department, and locally impacted communities are monitoring contaminants from this release. The Gold King Mine release has impacted the Animas River water quality within the Farmington Urbanized Area. The USEPA takes responsibility for the Gold King Mine Release and is committed to continue working hand-in-hand with the impacted local governments, states, and tribes (<https://www.epa.gov/goldkingmine>).

3.3.1. Stormwater Outfall Sampling

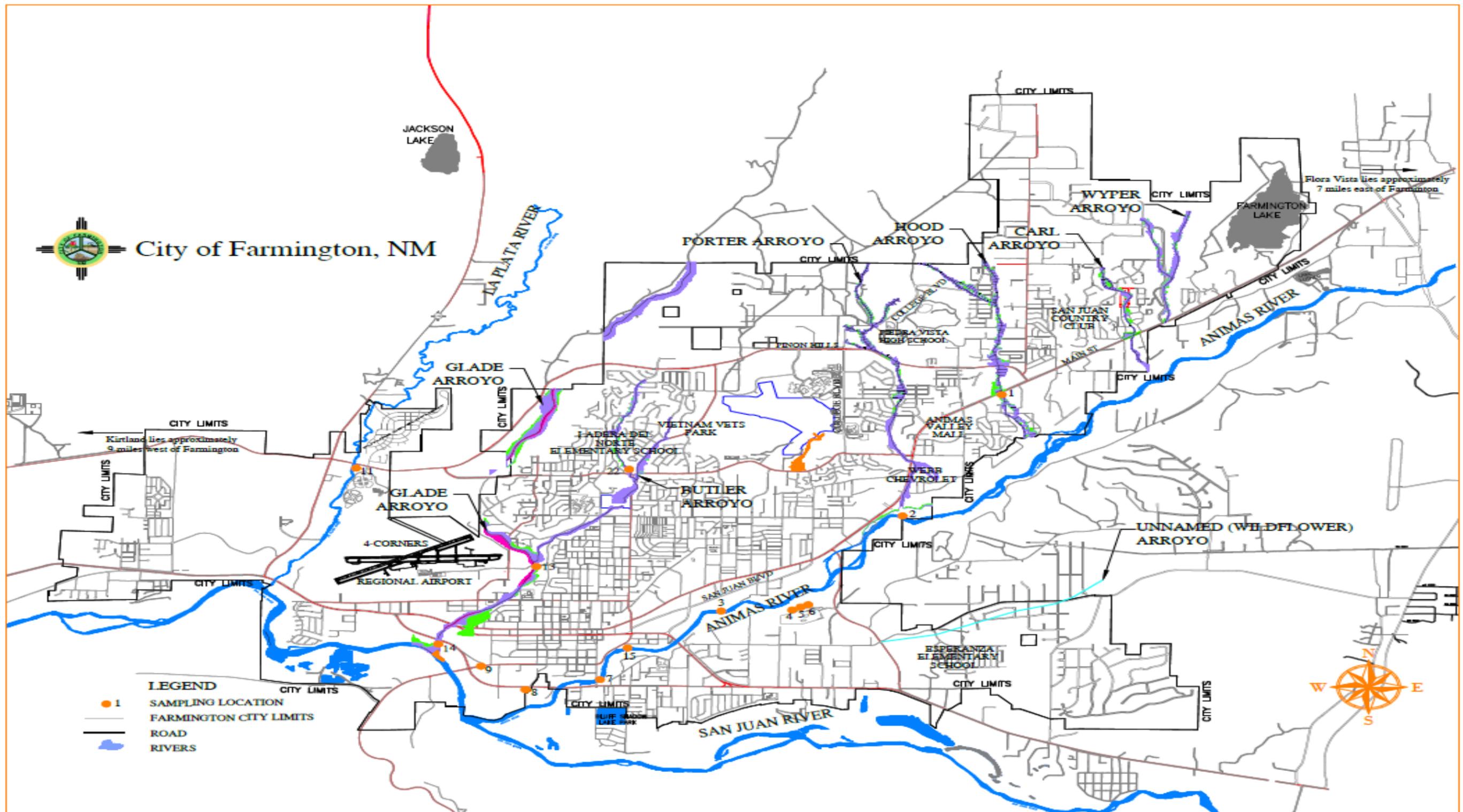
During the reporting period (2015-2016), AES has purchased automatic samplers that can be installed in manholes and inlets and collect samples for rain events that fall overnight (see **Figure 2** for map with corresponding numbered locations):

1. Arroyo West of Lowe's Parking Lot (Hood Arroyo) – *Wet weather sampling/Dry weather inspections*
2. El Paso/Middle Fork Square (Porter Arroyo) – *Dry weather inspections*
3. Berg Park Location – *Dry weather inspections*
4. Municipal Operations Center (MOC) Sewer Outfall #1 – *Wet weather sampling/Dry weather inspections*
5. MOC Sewer Outfall #2 – *Wet weather sampling/Dry weather inspections*
6. MOC Sewer Outfall #3 – *No Longer Sampled*
7. Murray Drive Bridge Settling Pond – *No Longer Sampled*
8. South Side Lift Station #2 – *No Longer Sampled*
9. Cannery Court Location – *No Longer Sampled*
10. Intersection of Gooding and Riverview – *No Longer Sampled*
11. City Sports Complex Baseball Fields on Pinon Hills (Inlet of 30-inch North HDPE Pipe) – *Wet weather sampling/Dry weather inspections*
12. City Sports Complex Baseball Fields on Pinon Hills (Outlet of 30-inch South HDPE Pipe) – *No Longer Sampled*
13. Glade Arroyo Culvert on South Side of Navajo Street – *Wet weather sampling/Dry weather inspections*
14. South of Murray (Sweetland) – Glade Discharge – *Dry weather inspections*
15. **South Butler** – *Wet weather sampling/Dry weather inspections*
16. Airport Detention Pond – Tested as a possible source for contaminants found in Farmington Glade. – *No Longer Sampled*
17. Brookside/Auburn & Boyd - Tested as a possible source for contaminants found in Farmington Glade. – *Dry weather inspections*
18. Carwash at Dustin and 20th – *No Longer Sampled*
19. Vine East of Butler – Dry Weather test of continuously running water as a possible source for fecal contaminants found in South Butler Outfall. – *No Longer Sampled*
20. Vine at Irrigation (manhole) - Dry Weather test of continuously running water as a possible source for fecal contaminants found in South Butler Outfall. – *No Longer Sampled*
21. Pinon/Cedar (manhole) - Dry Weather test of continuously running water as a possible source for fecal contaminants found in South Butler Outfall. – *No Longer Sampled*
22. Civitan Pond Outlet – One time dry weather sampling on running water to isolate E. Coli problems that have persisted in the Glade Arroyo. – *Wet weather sampling/Dry weather inspections*

Outfall discharge monitoring and isolation of apparent issues is on-going. Sample Location 22 continues to be monitored at the inlet to the City Reservoir in the Civitan Golf Course. This site was added to address concerns with sampling results that indicated moderately low pH values within the surface water. Upstream investigation is ongoing in two branches of the stream. A source has not been determined for the low levels of pH in this area; however, groundwater is speculated to be the source of the low pH values. Details of this investigation and sampling results can be found in the 2014-2015 MS4 Annual Report.

The sampling frequency of each site is contracted out to be on a semi-annual basis. As discussed, because of factors such as time of day, day of the week, holding times for certain parameters, and extreme variability in rainfall events in arid climates, samples were able to be collected this cycle in October and November of 2015 and April of 2016. Three (3) of the sites now have automatic samplers installed. Automatic samplers allow for AES to collect samples the following day should rainfall occur at night. Three (3) of the samples collected were tested for E. Coli. The holding time for E. Coli is four (4) hours and cannot be kept overnight for testing the following day. Local analytical laboratories have business hours between 8 am to 5 pm, Monday thru Friday.

Figure 3 - Stormwater Sampling Locations



3.3.1.1. Baseline Sampling Event – February 2007

The following information in *Subsection 3.3.1.1* regarding the baseline sampling and commencement of the annual sampling has been left in this year's report for background informational purposes.

Baseline sampling was conducted by AES at representative stormwater outfall locations throughout the City of Farmington in February 2007. The purpose of the sampling was to assist in locating problem areas and to establish a baseline. Stormwater samples were measured in the field for pH, temperature, dissolved oxygen (DO), and specific conductivity. Laboratory samples were also collected and analyzed for Chemical Oxygen Demand (COD), Total Suspended Solids (TSS), Oil and Grease, and Metals (aluminum, arsenic, cadmium, copper, iron, lead, nickel, and zinc).

Stormwater analytical results from sampling conducted during February 2007 showed concentrations to be below USEPA stormwater benchmarks, with the following exceptions.

- Two (2) samples (MOC Sewer Outfall #1 and MOC Sewer Outfall #2) collected from Farmington's Municipal Operations Center (MOC) showed elevated pH readings, specific conductivity, and COD, with specific conductivity in MOC Sewer Outfall #1 at 13.88 mS/cm, which was approximately one order of magnitude higher than other samples collected. Note that specific conductivity is reflective of Total Dissolved Solids (TDS) and may reflect an impact from materials stored at the MOC (such as magnesium chloride). The MOC Sewer Outfall #1 also had COD concentrations of 193 mg/L, which were above the USEPA general stormwater benchmark of 120 mg/L. The pH readings from both MOC Sewer Outfall #1 and MOC Sewer Outfall #2 were slightly elevated, with 9.13 and 9.62, respectively.
- Elevated specific conductance levels were also detected at several sampling locations, including El Paso/Middle Fork Square, Berg Park, Murray Bridge Settling Pond, South Side Lift Station #2, and Cannery Court; see *Section 3.3.1, Stormwater Outfall Sampling* and *Figure 2* for sampling locations.

It should be note that elevated specific conductance levels are typical in the arid Southwest.

3.3.1.2. Stormwater Sampling – Year 9

As discussed, AES has installed three (3) auto samplers to collect stormwater samples during the hours in which a manual collection cannot be conducted. Samples are collected the following day after a storm event.

For a review and discussion of previous outfall rainfall event sampling, please refer to prior annual reports. The entire city's stormwater sampling has been tabulated and can be found in *Appendix C*. A digital copy of dry weather sampling can be found in the CD included with this report.

In years past, stormwater flow was measured, along with rainfall data, pH, temperature, DO, and specific conductivity. Laboratory analyses included oil and grease, TSS, COD, aluminum, arsenic, cadmium, copper, iron, lead, nickel and zinc, Fecal, E. Coli, and nutrients (including nitrate/nitrite, total nitrogen (TKN), ammonia, and phosphorus). All sampling was conducted in accordance with *Standard Operating Procedures for Sample Collection and Handling* (Surface Water Quality Bureau, NMED, June 2004). Note that the hold time for fecal coliform is four (4) hours, and any stormwater sampling conducted in the evenings or on weekends may preclude sample analyses for fecal coliform. Sample parameters, appropriate USEPA methods, and general USEPA stormwater benchmark values are noted in *Table 3-1*.

Table 3-1 Sampling Parameters, Methods, and General Benchmarks

<i>Sample Parameter</i>	<i>USEPA Method</i>	<i>General USEPA Stormwater Benchmark Values[†]</i>
Flow	Field measurement	Not Applicable
pH	USEPA 150.1	6.0 - 9.0
Temperature	USEPA 170.1	Not Established
Dissolved Oxygen	USEPA 360.1	Not Established
Specific Conductivity	USEPA 160.1	<0.2 mS/cm*
Oil and Grease	USEPA 1664	<15 mg/L
Chemical Oxygen Demand (COD)	USEPA 410.4	<120 mg/L
Aluminum	USEPA 6020	<0.75 mg/L
Arsenic	USEPA 6020	<0.16854 mg/L
Cadmium	USEPA 6020	<0.0159 mg/L
Copper	USEPA 6020	<0.0636 mg/L
Iron	USEPA 6020	<1 mg/L
Lead	USEPA 6020	<0.0816
Nickel	USEPA 6020	<1.417
Zinc	USEPA 6020	<0.117
Fecal Coliform (E. coli)	USEPA 1603 (filter membrane) or SM 9223.B (Colilert)	Not Established
Nutrients (Nitrate/Nitrite, Total Kjeldahl Nitrogen (TKN), Ammonia, Phosphorus)	Nitrate - USEPA 353.2, 354.1; Nitrite – USEPA 353.2; 354.1; TKN - USEPA 351.2 or 351.3; Ammonia - USEPA 350.3, 350.2, 350.1; Phosphorus - USEPA 365.4 or SM 4500-P	Not Established
Total Suspended Solids (TSS)	USEPA 160.2	<100 mg/L

[†]USEPA benchmark values assist in evaluating stormwater impacts; however, they are not enforceable standards.

*USEPA benchmark value for specific conductivity is not typical for the San Juan Basin area.

3.3.1.3. Evaluation of Sample Results

Sampling History

Analytical results for the 2015 – 2016 reporting year have been tabulated in *Appendix C*. Please see the prior year’s report for a more detailed account of exact results for outfalls.

The elevated constituents found during sampling events have been discussed in prior reports. Please see those findings. Note that benchmark values are not enforceable standards; rather, they are values to assist in evaluation of stormwater impacts.

In analyzing the sampling results in prior years, it has been found that results at the majority of sites are inconsistent on COD, TSS, E. Coli, and Fecal. Results at one time of year might point to an elevated concentration of E. Coli, but then months later show no trace of the contaminant, or significantly lower results. This may point to a one time dumping/discharge of pollutants.

Farmington is a very arid climate, averaging between eight (8) to nine (9) inches of rain a year. When a sample is collected, it may be the first significant rainfall event to have produced runoff in months, depending on the year. Pollutants in arroyos, roads, or resulting from illegal dumping have remained in place and collected for long periods before runoff can produce the required flow to wash them to an outlet. This results in a higher concentration in dry arid climates when compared with regions where rainfall is regular.

The City has investigated upstream from areas that have shown elevated results in E. Coli. In the Glade arroyo, for example, personnel have walked the arroyo in search of suspicious connections but, as of now, sources of illicit discharge have not been discovered. The city continues to sample and search for sources to account for the high contaminant levels.

Outfalls 1, 2, 3, 9, 13, and 14 have all had some spikes in E. Coli at one sample or another. None of the outfalls have been completely consistent. The City has investigated upstream of these outfalls and performed additional dry weather sampling in some cases to attempt to isolate the problem. Dry weather sampling on irrigation water has not resulted in the discovery of any contaminant contribution, except in the case of the Glade Arroyo. The city has noted high amounts of TSS in some of the dry weather sampling and suds in the water. AES, a consultant for the city, is using automatic samplers in several upstream locations from outlets in hopes of isolating potential sources.

During the 2014-2015 reporting period, Outfall 22 contained a grainy, white precipitate in the Butler Arroyo to the north of Civitan Pond. AES conducted investigation sampling of the water, soil, and white substance from March 2014 through May 2015. The results of the findings are in AES's report *Water Quality pH Survey at Civitan Park, 2014-2015, 30th and Butler to Ladera Del Norte Elementary School, Farmington, New Mexico*, dated June 22, 2015. This area is still being monitored by the City of Farmington, however, the source of this phenomenon has not been identified. Sampling results and investigation activities can be found in the 2014-2015 MS4 Annual Report.

The Code Compliance Hotline remains one of the most valuable tools the City has in locating pollutant sources. The City has learned, through investigative processes that sewage problems can often be ongoing and ignored by the property owners. Until these issues are reported by the public or by staff, many of the residents let sewage problems persist. Public educational materials are an important BMP for addressing this issue and is covered in **Section 1, Public Education and Outreach**, of this report. As problems are continually located and reported, these areas will be monitored for improvement.

Current Reporting Period

Three (3) wet weather sampling events were conducted during the 2015 – 2016 MS4 permit year. The wet weather samples were collected on October 20, 2015, November 4, 2015, and April 15, 2016. The sampling events were conducted at the following outfalls: Outfall 1 – Arroyo West of Lowe's Parking Lot, Outfall 4 – MOC 1, Outfall 5 – MOC - 2, Outfall 11 – City Sports Complex BB Fields (Inlet), Outfall 13 – Glade Arroyo Culvert, Outfall 15 – South Butler, and Outfall 22 – Civitan Pond Inlet.

Metals

All seven (7) sampling locations resulted in elevated levels of Aluminum, Iron, Zinc, and TSS. This data is consistent with prior permit years. Metal concentrations above natural background levels in urban stormwater are often associated with automobile-related sources such as roads and parking lots and from building materials exposed to rain. Treated wood and tires are also common sources of metals in residential and commercial areas. Industrial areas may be “hot spots” for certain metals, depending on the industrial process and materials management practices. Other sources may include soil erosion, household chemicals, and pesticides (International Stormwater BMP Database, 2011).

Iron and Aluminum are abundant in the earth's crust and are often associated with naturally occurring soil and geologic conditions. High concentrations of these metals may be exacerbated where erosion is occurring in a watershed or within a stream channel (International Stormwater BMP Database, 2011).

Zinc is considered a key metal of interest in urban street runoff. Additionally, urbanized areas, especially industrial areas, may still have galvanized metal roofs that can be a significant source of zinc in urban runoff. Other galvanized metal surfaces common in the urban environment include ductwork heating/ventilation/air-conditioning (HVAC) equipment, ventilation fans, turbines, pipes, fencing, and guardrails (International Stormwater BMP Database, 2011).

Chemical Oxygen Demand (COD)

Outfalls 1 and 15 resulted in elevated COD levels in October and April. The COD levels decreased from the June 2015 sampling event in Outfall 15 and increased slightly since the June 2015 sampling event in Outfall 1.

Specific Conductance

Outfalls 4, 5 and 22 resulted in elevated Specific Conductance levels in November. Specific Conductance has been a constituent that has periodically been elevated in past sampling events.

E. Coli

Outfall 5 resulted in elevated E. Coli levels in November. There are no septic systems in this area and no sewer system leaks detected. This outfall is located below the Municipal Operations Center and near the Riverside Nature Center. Deer and other wildlife are common throughout this area. Numerous deer droppings were noted at this site and the E. Coli results are suspected to be ruminant in nature. If additional E. Coli readings are detected, a speciation breakdown may be needed to determine the cause of E. Coli levels at this outlet; however, this detection does appear to be a one time detection.

Oil and Grease

Outfall 15 resulted in an elevated Oil and Grease level in April. This elevated level of Oil and Grease seems to be an isolated event from this outfall location. The outfall location is within an industrial area of the city. No sources were located and this release appears to be an isolated, one-time event.

pH

Outfall 22 resulted in a low pH reading of 5.1. This outfall has continued to have issues with pH levels. In the prior 2014-2015 MS4 annual report, it was mentioned that the source appears to be coming from groundwater and not a direct result of stormwater runoff. No other sources of contaminants were noted. The presence of a white flocculate appears to be seasonal in nature. The City of Farmington is keeping an eye on this area.

Action Plans

The City of Farmington is in the process of renovating the Municipal Operations Center, which began in May of 2015 and will continue throughout 2016. Surface water runoff quality was considered in the design of this project. A small stormwater settling pond is being added to the northeast corner of the MOC to allow for the removal of sediments, which are thought to be associated with some of the metal contaminants discovered in the outfall samples. Additionally, the pavement and concrete areas within much of the MOC are in poor condition making housekeeping practices, including parking lot sweeping activities, impractical. Replacing the asphalt and concrete areas, with new surfaces, will greatly enhance the effect of housekeeping practices.

Since the baseline sampling event in February 2007, the City of Farmington has swept the paved surfaces at the MOC each year (see Table 6-2). In addition, based on the first year sampling results and evaluation, the City of Farmington plans to continue to take the following actions:

- A. Monitor sampling results and revise sampling and dry weather inspection locations accordingly. After evaluation, if sampling values are found to be consistently above benchmark values, sampling will be strategically revised to locate the source of the problem.
- B. Continue with dry weather inspections at representative sampling locations. If flowing water is observed during a dry weather inspection, collect a sample for analysis of fecal coliform.
- C. Continue with the evaluation of MOC operations, good housekeeping measures, and site structural BMPs;
- D. Gather more data about irrigation ditches and ditch returns; and
- E. Continue working with the San Juan Watershed Group to find opportunities to locate and solve stormwater quality issues.

3.3.2. Dry Weather Outfall Inspections

Dry weather inspections were conducted and documented in September of 2015 and March and June of 2016. Inspection reports are on file at the City of Farmington and can be viewed upon request. Dry weather sampling will be continued at representative outfalls during the next reporting period to help identify potential illicit discharges.

The dry weather sampling helps with identifying possible sources of contamination in several ways. For one, it is an excellent way in which to find illicit connections when running water is observed. When there is no running water, inspectors look for other signs such as standing water, or the color or odor in the area.

Rust is commonly found on deteriorating metal culverts in outfall locations. The City of Farmington no longer installs metal culverts, and has replaced many corrugated metal pipes (CMPs) with high-density polyethylene (HDPE) pipes over the last decade. High alkalinity in the region's soils makes metal piping a poor design choice in most cases. The City of Farmington continues to replace CMP pipes with concrete or HDPE piping on an as needed basis.

The City of Farmington’s Street Division of the Public Works Department has constructed storage facilities to house old transformers, equipment, and road salt for ice removal; see *Section 6* for more information. This is part of a continued effort to lower contaminants from municipal operations.

3.3.3. Camera Inspection and Cleaning Program

In January of 2008, the City of Farmington contracted with a third party to implement a camera inspection and cleaning program. The total length inspected (no cleaning required) and pipe cleaned during this reporting period is shown in *Table 3-2*.

Table 3-2 Camera Inspection and Cleaning (July 2015 – June 2016)

<i>Sewer Type</i>	<i>Video Inspection feet (miles)</i>	<i>Cleaning feet (miles)</i>
Storm Sewer	462.8 ft. (0.09 mi.)	1,460 ft. (0.28 mi.)
Sanitary Sewer	192,801.68 ft. (36.52 mi.)	230,995.8 ft. (43.75 mi.)
Total	193,264.48 ft. (36.61 mi.)	232,455.8 ft. (44.03 mi.)

3.3.4. Illicit Discharge Ordinance

The City of Farmington has worked to revise the Illicit Discharge Ordinance following the USEPA’s suggested models. The new ordinance has still not undergone evaluation by Council for approval. The new ordinance is expected to be approved and in place during the next reporting year, pending the issuance of the new permit.

3.3.5. Storm Drain System Map and Master Drainage Study

The City of Farmington has hired HDR Engineering, Inc. to develop a master drainage study. The project includes development of a field-verified and updated storm drain map and geographic information system (GIS) database as well as hydraulic modeling and analyses of the storm drainage collection system. HDR Engineering, Inc. analyzed nine (9) watersheds and completed a storm drain system evaluation. Analysis included modeling existing and future hydrologic conditions in the watersheds, performing a hydraulic analysis for nine (9) open channel watercourses to determine the capacity of the crossing structures, completed modeling for 14 of 50 existing storm drainage systems and performed a hydraulic capacity analysis for the 25-year storm event. The analysis was used to propose improvements to the storm drainage systems with an estimated construction cost.

The Master Drainage Report proposed an increase in pipe sizing and did not evaluate the system for constructability, utility conflicts, cover and other associated costs, taking these items into account would nearly double the costs of proposed construction and upgrades. Therefore, it was determined that alternatives, utilizing detention ponds, to 12 specific areas of drainage concern would be required. Smith Engineering Company completed the Master Drainage Alternatives Phase 2. The project includes hydraulic modeling in each of the 12 areas and recommends construction of detention ponds and upsizing of existing storm drain piping. This report includes conceptual drawings and construction costs for each of the preferred options, taking into account utility conflicts, cover and constructability.

3.3.6. Code Compliance Hotline

The City has Code Compliance Officers and a Code Compliance Hotline to record and investigate illicit discharge complaints. During this reporting period, sixteen (16) complaints were received in

regards to illicit discharges. All 16 complaints were investigated. Eleven (11) of the complaints regarded sewage leaks/discharges. Two (2) of the 11 sewage complaints were considered unsubstantiated, as waste or waste products were not confirmed at the site. Of the 16 illicit discharge complaints, only three (3) of the discharges actually made it to a storm drain. All affected storm drains were cleaned and impacted soils were treated. The types of complaints received during each month are summarized in **Table 3-3**. Each complaint was investigated. Each illicit discharge was resolved.

Table 3-3 Illicit Discharge Complaints Investigated (July 2015 - June 2016)

Description	2014-2015
Sanitary Sewer Leak	11
Irrigation Ditch Overflow	0
Septic System Leak	0
Restaurant Grease Leak/Dumping	0
Gray Water Leak	0
Oil Dumping/Spill	1
Other Dumping/Spill	4
Total Illicit Discharges	16

The City of Farmington continues to find and address serious septic leak issues. While these are clearly not desired, the City of Farmington is pleased to be slowly finding and correcting many of these serious surface water issues that plague our streams and rivers. As was discussed in past reports, immediate impacts have been seen. One of these issues solved was upstream of Sampling Site 1. This is believed to have helped substantially with the lowering of E. Coli. Sampling collected before the leak was fixed in September 2010 showed much higher presence of E. Coli than those collected in the Spring of 2011.

Once any leak is reported, immediate action is conducted to block off any surface flow and ensure that contaminants do not reach any storm system, natural or man-made. The resident is then given 24 hours to correct the situation. The site is properly cleaned and wastes disposed of. In the case that contaminants have reached the storm system, the violator is cited and made responsible for cleanup. In cases of emergency, the City of Farmington will clean up the contaminants immediately and charge the violator for the work performed.

3.4. Activities Planned for the Next Reporting Cycle

In the next reporting period, the City of Farmington plans to continue to perform stormwater and dry weather sampling at the representative outfall locations. The new auto samplers installed by AES should aid significantly in obtaining samples from storms that occur over night. The sample results will be evaluated in an effort to identify and address illicit discharges. The City of Farmington staff will recommend passing the new illicit discharge ordinance this year and continue to camera and clean storm drains. The Master Drainage study has been completed and a summary of the planned goals and activities for the next reporting period is contained in **Table 3-4**.

3.5. Proposed Changes

Proposed changes to the IDDE program goals are provided in *Table 3-4*. The only changes made have been to the timeline and are predominantly budget dependent. The City of Farmington has obtained the final Master Drainage Study, and is also working to finalize the adoption of new ordinances.

3.6. Permit Obligations

The City of Farmington does not rely on another government entity to satisfy permit obligations.

3.7. Inspections and Formal Enforcement Actions

The code compliance team inspected 16 complaints of illicit discharge reports. Fourteen (14) of the complaints were substantiated. Each substantiated complaint was addressed and resolved.

Table 3-4 Illicit Discharge Detection and Elimination Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Month in SWMP ¹	Year of Permit in SWMP ¹
Goal #1 – Year 1 and 2 of the Permit Term and Semi-Annually Thereafter			
<i>1. Continue to sample representative outfall locations. Change stormwater sampling frequency to semi-annual collection.</i>	Public Works to Implement: COF Personnel or Qualified Contractor May Conduct Sampling.	Jan-Mar Apr-Jun July-Sept Oct-Dec	2007 2008
<p><i>Information from prior years</i> – Stormwater sampling has occurred since Year 1 of the permit. Sampling frequency depends on storm occurrences. All sampling results are documented and discussed in previous years reports.</p> <p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Outfall sampling has continued to be conducted on at least a semi-annual basis. <u>Year 10</u> – Continue to collect and analyze samples at representative outfalls semi-annually.</p>	<i>Proposed Changes</i> None		
Goal #2– Year 1 of Permit Term to be continued Annually			
<i>2. Implement camera inspection program where 1/5th of the storm drains are inspected via camera each year.</i>	Public Works Water/Wastewater Admin	June	2008
<p><i>Information from prior years</i> – In January of 2008, the COF contracted with a third party to implement a camera inspection and cleaning program. Storm drain inspection and cleaning have been conducted annually, thereafter.</p> <p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Continue camera inspection and cleaning program; see <i>Table 3-2</i>. Many arroyos, culverts and storm pipes were cleaned of debris/sediment following storm events. <u>Year 10</u> – Continue the camera inspection and cleaning program.</p>	<i>Proposed Changes</i> None		

Description of Goal	Department/Personnel Responsible for Implementation	Month in SWMP ¹	Year of Permit in SWMP ¹
Goal #3 – Year 1 & 2 of the Permit, Quarterly (continued semi-annually after)			
3. Start conducting quarterly dry weather outfall inspections on routine basis. Sample locations to include outfall locations at rivers and major arroyos.	Public Works to Implement: COF Personnel or Qualified Constructor May Conduct Sampling	Jan-Mar Apr-Jun July-Sept Oct-Dec	2007 2008
<p>Information from prior years – A qualified contractor has conducted dry weather inspections since Year 1 of the permit term.</p> <p>Year 9 Progress and Year 10 Plans <u>Year 9</u> – A qualified contractor performed dry weather inspections. Results are discussed above in Section 3. <u>Year 10</u> – Continue to perform dry weather inspections at representative outfalls semi-annually.</p>	<p>Proposed Changes None</p>		
Goal #4 – Year 7 of the Permit			
4. Review existing ordinances to ensure that they effectively prohibit illicit discharges or dumping. Ensure that appropriate enforcement mechanisms are in place.	Public Works	December	2008
<p>Year 9 Progress and Year 10 Plans <u>Year 9</u> – New revisions have been proposed. Waiting for legal review and COF Council approval. <u>Year 10</u> – Will recommend revisions be approved and implemented.</p>	<p>Proposed Changes The COF plans to have the revisions reviewed by Council this reporting period or when the new permit is issued, whichever is later.</p>		
Goal #5 – Year 3 of the Permit			
5. Incorporate stormwater collection map into GIS.	Information Technology GIS Division	December	2009
<p>Information from prior years – Year 1 contracted with an engineering firm to prepare a Master Drainage Study for the COF and provide a field-verified GIS map of the storm drain system. The full study and GIS map was completed in Year 7 of the Permit Year.</p> <p>Year 9 Progress and Year 10 Plans <u>Year 9</u> – Analysis and mapping is complete. A new GIS employee has been hired for the Public Works department. The GIS employee will assist in updating the GIS stormwater collection map on an as needed basis. <u>Year 10</u> – Analysis and mapping is complete. Map will be continually updated as needed.</p>	<p>Proposed Changes None</p>		

Description of Goal	Department/Personnel Responsible for Implementation	Month in SWMP ¹	Year of Permit in SWMP ¹
Goal #6– Year 4 of the Permit			
<i>6. Develop budget and timeline for implementation of structural BMPs relating to illicit discharge/ connection. To be developed within 18 months after completion of Master Drainage Study.</i>	Public Works	July	2010
<i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Started working towards budget and timeline during this period. <u>Year 10</u> – Will complete timeline and budget within the next 6 months.	<i>Proposed Changes</i> Yes. Timeline for completion changed to next permit term.		
Goal #7 – Year 2 of the Permit			
<i>7. Develop partnership effort with local irrigation ditch boards.</i>	Public Works City Engineering	December	2008
<i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Continued to work with irrigation companies and make irrigation flyers available. <u>Year 10</u> – Will continue to work with irrigation companies and make irrigation flyers available.	<i>Proposed Changes</i> No proposed changes.		
Goal #8– Year 2 and 4 of the Permit (Propose rescheduling to Years 3 & 5)			
<i>8a. Identify or track industrial facilities within the COF (by business licensing or other means) which are required to have Industrial Multi-Sector General Permits (MSGP) for the NPDES Program.</i>	Business Licenses to identify facilities;	December	2008
<i>8b. Once identified, develop a protocol for inspecting and certifying that no illicit connections to sanitary or storm sewer are present.</i>	Water/Wastewater Admin to develop protocol of inspection and certification that no illicit connections are present.	December	2010
<i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – No work completed in this goal. <u>Year 10</u> – No work will be completed in this goal.	<i>Proposed Changes</i> The responsibility of tracking and inspecting the MSGP is that of the NMED Surface Water Quality Bureau. NMED Contact: Rich Powell		
Goal #9 - Annually			
<i>9. Continue public outreach and educational efforts to keep public employees, businesses, and general public informed about hazards and impacts of illegal discharges and improper waste disposal.</i>	Public Works	Varies	2007-2012 Plus additional Permit Years of Administrative Continuation (NPDES MS4 Permit Section 6.3)
<i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> –Reviewed public education and outreach efforts to make sure goals are still appropriate and we are reaching the targeted audiences; refer to <i>Sections 1 and 2</i> . <u>Year 10</u> – Review the public education and outreach efforts to ensure goals are still appropriate reaching the targeted audiences.	<i>Proposed Changes</i> None		

4. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

4.1. Implementation Status

Table 4-1 summarizes the status of the Construction Site Stormwater Runoff Control goals planned during this reporting period as well as the status on any goals where work has already begun in preparation for future deliverables.

4.2. Overall Compliance with Permit Conditions

The measurable goals for the Construction Site Stormwater Runoff Control program evaluate and revise staffing needs, ordinances, and processes as necessary to consider and address stormwater concerns throughout the construction process. Goals also include education and outreach activities to help inform and prepare contractors; see *Table 4-1*.

The City of Farmington has a part-time MS4 coordinator and a drainage engineer on staff. Current staff is made aware of stormwater quality issues and also work to inform contractors in the area.

4.3. Results of Information Collected and Analyzed During the Reporting Period

The following sections provide information collected and analyzed during this reporting period.

4.3.1. Erosion and Sediment Control Ordinance

Revisions to the new grading and illicit discharge ordinance have been proposed in an effort to further minimize erosion on construction sites, to improve water quality and to fulfill MS4 construction program requirements. The ordinance was in the review/approval process when this report was written.

4.3.2. Stormwater Construction-related Training for City Staff

In 2009, the construction stormwater trainings were held per the SWMP goals; please see the City of Farmington NPDES Phase II MS4 Annual Report for the permit period of July 1, 2008 to June 30, 2009 for more information.

In 2012, the Home Builders held training through Workforce Solutions. The training was held again in March of 2013 and covered SWPPP, inspection practices, BMP's, etc.

In 2013, the City of Farmington sponsored a Stormwater Training course along with San Juan County, the City of Aztec, and AES for the construction industry. It was held at San Juan College and was well attended by City staff and the private industry.

In 2016, the City of Farmington and AES co-sponsored the *Stormwater Best Management Practices Course (BMPs) for Compliance Personnel, Engineers, Construction Managers and Superintendents, Project Managers and Planners*. The class was taught by Altitude Training Associates, LLC at the Farmington Civic Center at 200 West Arrington Street, Farmington, New Mexico. The class covered the following topics: Regulatory requirements in New Mexico, Erosion Process and Objectives for Erosion Control, BMPs for Erosion Control, BMPs for Site Control, BMPs for Sediment Control, and

Site Controls and Housekeeping Practices. Registration data showed that a total of 34 builders, developers, engineers, and government and industry personnel attended the course.

The City of Farmington continues to train engineers and inspectors in the importance of construction stormwater BMP's. The MS4 coordinator continues to participate in web trainings hosted by the USEPA and pass this information on to engineering and inspection staff. The City of Farmington sent the MS4 coordinator to the 17th Annual EPA Region 6 Stormwater Conference in 2015 and plans to send the MS4 coordinator to the 18th Annual EPA Region 6 Stormwater Conference to be held in 2016.

4.3.3. Stormwater Program Staffing

Toni Sitta, an engineer employed by the City of Farmington, has been the part-time MS4 coordinator since December 2014.

4.3.4. Stormwater Construction Guidance

The City of Farmington provided the following construction BMP guidance during this reporting period:

- **BMP Guidance.** The City of Farmington's website is frequently reviewed to ensure the most current information. This section continues to be updated and contains information on the SWMP as well as links to the USEPA's National Menu of BMPs and SWPPP guidance. <http://www.fmtn.org/index.aspx?nid=306> . Best Management Practices guidance posters can also be located on the walls near the Building Inspection counters.
- **Technical Specifications.** The construction standards were reviewed for relevant information in 2013. No significant changes were made to the BMP and erosion control section. The guide is posted on the City of Farmington's website (<http://www.fmtn.org/index.aspx?nid=491>) and was made available at the Building Permit and Inspection Counter.
- **Brochures.** The City of Farmington continues to make the following brochures available on the internet and at the Building Inspection Counter upon request:
 - *Builder's Stormwater Quick Reference Guide.* This brochure was developed in March of 2008 by the City of Farmington and targets the construction industry and provides information on stormwater permit requirements, BMPs, SWPPPs, the difference between erosion control and sediment control, and helpful BMP and SWPPP resources. (Brochure is contained in **Appendix B.**)
 - *How Do I get Stormwater Permit Coverage for My Construction Site? A Construction Site Operator's Guide to EPA's Stormwater Permit Program,* USEPA brochure (USEPA 833-F-04-002, Sept 2007).
 - *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices.* USEPA Fact Sheet and Questions and Answers (USEPA 841-F-07-006, December 2007)
 - *Clean Water Starts with Me!! Understanding Stormwater and How it Can Affect Your Money, Safety, Health, and the Environment.* This brochure was developed by the City of Farmington and targets the general public. It provides information on the effects of toxic chemicals being dumped into storm drainage systems, arroyos, or the Rivers and how it can be prevented. The title of brochure was changed and a crossword puzzle added to encourage the reading of the material in 2016.
 - **Professional Guidance.** The City of Farmington's Engineering Department is always ready to assist contractors in the guidance of construction BMP's. The engineering department frequently fields calls from contractors for SWPPP guidance.

- **Staff** – Staff is always prepared to aid contractors with SWPPP direction and questions regarding the NOI process. Staff also helps contractor with appropriate BMP information.

4.3.5. Stormwater Construction Education & Outreach

The City of Farmington promoted several stormwater educational activities during this reporting period. Promotions are summarized below.

- **Informational Booths.** The City of Farmington hosted a booth on March 4th and 5th of 2016, at the San Juan County Home Builders Association’s 21st Annual Home Improvement & Building Expo. The two-day event attracted local developers, builders, contractors, vendors, and residents interested in home improvements. The booth contained stormwater educational information for the residential community and the construction industry.
- **Educational Materials.** The City of Farmington provided BMP guidance and technical specifications as well as informational brochures.
- **Professional Associations.**
 - NMSPE - City of Farmington staff members actively participate with the local NMSPE chapter, which meets monthly with an invited speaker. The group often finds lectures with interests in water quality and erosion control.

4.4. Activities Planned for the Next Reporting Cycle

The City of Farmington will continue to review BMPs and training opportunities to determine if additional training or BMP updates are needed. The stormwater activities planned for the next reporting cycle are summarized in *Table 4-1*.

4.5. Proposed Changes

There are no proposed changes from last report; see *Table 4-1*.

4.6. Permit Obligations

The City of Farmington does not rely on another government entity to submit information necessary to satisfy permit obligations; however, the City of Farmington does cooperate with other local organizations to achieve some SWMP goals. For example, the City of Farmington works with the San Juan Homebuilders Association and San Juan College to provide information and updates to local builders and developers.

4.7. Inspections and Formal Enforcement Actions

Under the City of Farmington’s current grading ordinance, plan reviews are required for sites that disturb two (2) or more acres. During construction, builders and developers are required to keep drainage onsite. If a drainage issue arises, building or construction inspectors and engineering staff review the issue and determine the appropriate resolution. If the issue is not resolved, City Inspectors can stop construction at the site until the issues are resolved.

The City of Farmington is currently revising the existing grading ordinance and creating a stormwater protection ordinance. The new grading ordinance will require constructors, builders and developers

to submit plan reviews for sites that disturb one or more acres, similar to USEPA requirements for land disturbance. The new Stormwater Protection ordinance will protect and enhance the water quality of watercourses and water bodies in a manner consistent with the Federal CWA.

The Construction Site Stormwater Runoff Control program is developing. It focuses on updating ordinances, training staff, acquiring resources, and educating local developers and builders.

Table 4-1 Construction Site Stormwater Runoff Control Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #1 – Year 2 of the Permit			
<i>1. Review and amend existing grading ordinance to address erosion control and other BMPs at construction sites greater than or equal to 1 acre.</i>	Public Works MS4 Personnel COF Legal Department	December	2008
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – New ordinance has been reviewed and revised, but not adopted yet. It was planned to adopt them in late 2015 or early 2016. <u>Year 10</u> – The new ordinances are still in review and plan to be adopted after the new permit goes into effect. The COF will continue to monitor grading practices and ensure preliminary measures are in place. Adoption of a new grading and stormwater protection ordinance will occur after the new permit goes into effect.</p>	<p><i>Proposed Changes</i> No proposed changes.</p>		
GOAL #2 – Annually			
<i>2. Conduct annual internal training of COF staff regarding stormwater permitting requirements for construction activities – to include training of Public Works which includes Construction Inspection, COF Engineering, and Streets; Parks, Recreation, and Cultural Affairs (PRCA).</i>	Public Works MS4 Personnel Construction Inspection Personnel	December	2007 – 2012 Plus additional Permit Years of Administrative Continuation (NPDES MS4 Permit Section 6.3)
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> –MS4 Coordinator participated in training webcasts through the EPA and the MS4 conference. A Stormwater BMP Course for Construction Sites was held during this year. <u>Year 10</u> – Continue to integrate stormwater training into the routine training schedule for all regular COF employees. MS4 coordinator plans on attending MS4 conference in 2016.</p>	<p><i>Proposed Changes</i> No proposed changes.</p>		
GOAL #3 – Year 2 of the Permit			
<i>3. Develop budget for hiring additional personnel to conduct inspection and enforcement of construction site activities and applicable BMPs.</i>	Public Works	December	2008
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> –MS4 Coordinator and drainage engineer was hired in 2014. <u>Year 10</u> – New and existing staff will review proposed and installed BMP’s as time permits.</p>	<p><i>Proposed Changes</i> No proposed changes.</p>		

Table 4-1 Construction Site Stormwater Runoff Control Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #4 – Year 1 of the Permit			
<p><i>4. Make available a guide of BMPs of construction site controls. Guide may be available for purchase from the COF or downloading off the web site by contractors and developers.</i></p>	Public Works COF Engineering	December	2007
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – BMP information and other stormwater information continues to be made available at the Building Inspection Counter and at the online address: http://www.fmtn.org/index.aspx?nid=306 <u>Year 10</u> – Review the stormwater information on the COF’s website to ensure information is relevant to stormwater goals. Revise site as new projects are constructed.</p>	<p><i>Proposed Changes</i> No proposed changes.</p>		
GOAL #5 – Year 4 of the Permit			
<p><i>5. Hire/Subcontract a Certified Construction Site Erosion Control Inspector to conduct construction site inspections.</i></p>	Public Works COF Engineering	December	2010
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – No hiring of new personnel for construction site erosion control inspector. Budget constraints will not allow for hiring currently. Existing staff reviewed proposed and installed BMP’s as time permitted. <u>Year 10</u> – Evaluate staffing requirements as ordinance revisions are recommended. Existing staff will attend classes or conferences regarding construction site inspections for Erosion Control and obtain certification.</p>	<p><i>Proposed Changes</i> Evaluate staffing needs.</p>		

Table 4-1 Construction Site Stormwater Runoff Control Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #6 – Annually			
<p><i>6. Conduct outreach and education to contractors, homebuilders, developers, and engineers about the new requirements.</i></p>	<p>Construction Inspection Personnel; Public Works COF Engineering or MS4 Personnel</p>	<p>Ongoing</p>	<p>2007 – 2012 Plus additional Permit Years of Administrative Continuation (NPDES MS4 Permit Section 6.3)</p>
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Staffed an informational booth at the San Juan County Builders Association’s Home Improvement and Building Expo in March 2016. Also provided stormwater construction brochures, recommended BMP specifications and resources for homebuilders and residents. Attended NSPE meetings for water issues. MS4 coordinator and other engineers are always available at the COF’s permitting counter to answer questions and offer guidance. <u>Year 10</u> – Explore opportunities to reach out to contractors. Continue to offer brochures and be available at the permitting counter to offer help and advice.</p>	<p><i>Proposed Changes</i> No proposed changes.</p>		

¹COF’s SWMP

5. POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

5.1. *Implementation Status*

Table 5-1 summarizes the status of the Post-Construction Stormwater Management in New Development and Redevelopment goals planned during this reporting period as well as the status on any goals where work has already begun in preparation for future deliverables.

5.2. *Overall Compliance with Permit Conditions*

The measurable goals for the Post-Construction Stormwater Management in New Development and Redevelopment program evaluate and revise staffing needs, ordinances, and processes as necessary to consider and address stormwater concerns after construction is complete. Goals also include education and outreach activities to help inform and prepare contractors.

5.3. *Results of Information Collected and Analyzed During the Reporting Period*

The following sections provide information collected and analyzed during this reporting period.

5.3.1. **Post-Construction Stormwater Runoff Control Ordinance**

The City of Farmington will work to revise post BMP language in the ordinances.

5.3.2. **Stormwater Program Staffing**

A part-time MS4 Coordinator was hired in June of 2014 to take the lead on the SWMP and implement the measurable goals.

5.3.3. **Stormwater Construction Guidance**

The City of Farmington provided the following construction BMP guidance during this reporting period:

- **BMP Guidance.** In December of 2007, a new area was created on the City of Farmington's website for stormwater information. That website is reviewed annually to ensure the most relevant and up to date information is available. The site contains information on the SWMP as well as links to the USEPA's National Menu of BMPs and SWPPP guidance. The stormwater site is located at the following link: <http://www.fmtn.org/index.aspx?nid=306>
- **Technical Specifications.** The City of Farmington Public Works Department continues to ensure the technical specifications contain effective BMP standards. The guide is posted on the website and was made available at the Building Permit Counter. Online address: <http://www.fmtn.org/index.aspx?nid=491>
- **Brochures.** The Building Permit Counter is used to post BMP information. The City of Farmington has also made the following brochures available at the Community Development and Building Permit counters when information is requested and this information is available on the stormwater site:

- *Builder's Stormwater Quick Reference Guide.* This brochure was developed in March of 2008 by the City of Farmington and targets the construction industry and provides information on stormwater permit requirements, BMPs, SWPPPs, the difference between erosion control and sediment control, and helpful BMP and SWPPP resources. (Brochure is contained in **Appendix B**)
- *Does Your Construction Site Need a Stormwater Permit? A Construction Site Operator's Guide to EPA's Stormwater Permit Program,* USEPA brochure (EPA 833-F-04-002, February 2004).
- *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices.* USEPA Fact Sheet and Questions and Answers (EPA 841-F-07-006, December 2007)
- *Clean Water Starts with Me!! Understanding Stormwater and How it Can Affect Your Money, Safety, Health, and the Environment.* This brochure was developed by the City of Farmington and targets the general public. It provides information on the effects of toxic chemicals being dumped into storm drainage systems, arroyos, or the Rivers and how it can be prevented. The title of brochure was changed and a crossword puzzle added to encourage the reading of the material in 2016.

5.3.4. Stormwater Construction Education & Outreach

The City of Farmington promoted several stormwater educational activities during this reporting period. Promotions are summarized below.

- **Informational Booths.** The City of Farmington hosted a booth on March 4th, and 5th of 2016, at the San Juan County Home Builders Association's 21st Annual Home Improvement & Building Expo. The two-day event attracted local developers, builders, contractors, vendors, and residents interested in home improvements. The booth contained stormwater educational information for the residential community and the construction industry.
- **Educational Materials.** The City of Farmington provided BMP guidance and technical specifications as well as informational brochures. See preceding section Stormwater Construction Guidance for more detail.
- **Professional Associations.**
 - NMSPE - City of Farmington staff members actively participate with the local NMSPE chapter, which meets monthly with an invited speaker. The NMSPE chapter invites speakers whose topics are stormwater related.
- **Helpline** – The City of Farmington's Engineering Department is always ready to assist contractors in the guidance of construction BMP's. The engineering department frequently fields calls from contractors/builders for SWPPP guidance.

5.3.5. Master Drainage Study

The City of Farmington had hired HDR Engineering, Inc. to develop a master drainage study. The work included development of a field-verified and updated storm drain map and GIS database as well as hydraulic modeling and analyses of the storm drainage collection system. HDR analyzed nine watersheds and completed a storm drain system evaluation. Analysis included modeling existing and future hydrologic conditions in the watersheds, performing a hydraulic analysis for nine (9) open channel watercourses to determine the capacity of the crossing structures, completed modeling for 14 of 50 existing storm drainage systems and performed a hydraulic capacity analysis for the 25-year

storm event. The analysis was used to propose improvements to the storm drainage systems with an estimated construction cost.

5.4. Activities Planned for the Next Reporting Cycle

In the next reporting period, the City of Farmington will continue work on reviewing and updating existing ordinances to ensure they comply with MS4 requirements. The review of BMPs and training opportunities will also be continued to determine if additional training or BMP updates are needed. Engineering staff will continue to review plans and give input with developers and builders about post BMP requirements and needs. The stormwater activities planned for the next reporting period are summarized in *Table 5-1*.

5.5. Proposed Changes

The proposed changes for the Post-Construction Stormwater Management in New Development and Redevelopment goals are summarized in *Table 5-1*. The post BMP map/guide is being re-designed and will be reposted to the web when it is complete.

5.6. Permit Obligations

The City of Farmington does not rely on another government entity to submit information necessary to satisfy permit obligations; however, the City of Farmington does cooperate with other local organizations to achieve some SWMP goals. For example, the City of Farmington works with the San Juan Homebuilders Association and San Juan College to provide information and updates to local builders and developers.

5.7. Inspections and Formal Enforcement Actions

Under the current plan review process, plan reviews are required for sites that disturb two (2) or more acres and developers are required to build post-construction controls that maintain historic drainage levels.

The existing grading ordinance is currently being revised and a stormwater protection ordinance is being drafted. The new grading ordinance will require constructors, builders and developers to submit plan reviews for sites that disturb one (1) or more acres, similar to USEPA requirements for land disturbance. The new stormwater protection ordinance will protect and enhance the water quality of the watercourses and water bodies in a manner consistent with the Federal CWA.

The Post-Construction Stormwater Management in New Development and Redevelopment program is progressing and still developing. It focuses on updating ordinances, training staff, acquiring resources, and educating local developers and builders.

Table 5-1 Post-Construction Stormwater Management in New Development and Redevelopment Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #1 – Year 2 of the Permit			
<p><i>1. Develop an ordinance addressing post-construction stormwater runoff control of construction sites greater than or equal to 1 acre.</i></p>	<p>Public Works COF Engineering; COF Legal Department</p>	<p>December</p>	<p>2008</p>
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – The grading ordinance was modified and is waiting on final review and adoption. <u>Year 10</u> – Plan to adopt revised grading ordinance.</p>	<p><i>Proposed Changes</i> The revised grading ordinance and new stormwater protection ordinance is currently in review. After review, ordinance will go to council for formal approval and adoption.</p>		
GOAL #2 – Year 2 of the Permit			
<p><i>2. Develop a map/guide to existing successful post-construction stormwater controls within the municipality.</i></p>	<p>Public Works COF Engineering; Construction Inspection Personnel</p>	<p>December</p>	<p>2008</p>
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – A map has been created but is currently being revised before reposting to the web. The COF purchased new licensing with ARCGIS and plans to use templates to upload this map to the COF Website. <u>Year 10</u> – Will recreate map using ARCGIS and post to web. Will continue to add to map as good BMP examples are used around town.</p>	<p><i>Proposed Changes</i> No proposed changes.</p>		
GOAL #3 – Year 1 of the Permit			
<p><i>3. Make available a guide of Best Management Practices (BMPs) of structural and non-structural post-construction site controls.</i></p>	<p>Public Works COF Engineering</p>	<p>September</p>	<p>2007</p>
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u>– Reviewed the stormwater information on the COF’s website to ensure information is relevant to stormwater goals. <u>Year 10</u> – Continue to review the stormwater information on the COF’s website to ensure information is relevant to stormwater goals. Revise site as needed.</p>	<p><i>Proposed Changes</i> No proposed changes</p>		

Table 5-1 Post-Construction Stormwater Management in New Development and Redevelopment Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #4 – Year 2 of the Permit			
<p><i>4. Hire/Subcontract with a Certified Construction Site Stormwater Inspector to conduct post-construction inspections.</i></p>	<p>Public Works COF Engineering</p>	<p>December</p>	<p>2008</p>
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – COF funding is still not adequate for hiring new personnel. <u>Year 10</u> – Evaluate staffing requirements as ordinance revisions are recommended.</p>	<p><i>Proposed Changes</i> No proposed changes.</p>		
GOAL #5 – Annually			
<p><i>5. Conduct outreach and education to contractors, homebuilders, developers, and engineers about the new post construction requirements.</i></p>	<p>Construction Inspection Personnel; Public Works COF Engineering</p>	<p>Ongoing</p>	<p>2007 – 2012 Plus additional Permit Years of Administrative Continuation (NPDES MS4 Permit Section 6.3)</p>
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Staffed an informational booth at the San Juan County Builders Association’s Home Improvement and Building Expo. Provided stormwater construction brochures, BMP specifications and resources. Staff is available to interact with public. Posters demonstrating good BMP practices and information are posted near the Building Permit Counter. <u>Year 10</u> – Search for ways to communicate with builders. Explore partnership opportunities to learn how to better target each audience and provide useful and desirable information.</p>	<p><i>Proposed Changes</i> No proposed changes.</p>		
GOAL #6 – Year 2 of the Permit			
<p><i>6. Begin work on a Master Drainage Study.</i></p>	<p>Public Works COF Engineering</p>	<p>December</p>	<p>2008</p>
<p><i>Information for prior years</i> – Master Drainage Study began in Year 1 of the Permit Term and was finalized in Year 7. <i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – The study is complete. <u>Year 10</u> – Study is complete.</p>	<p><i>Proposed Changes</i> No proposed changes.</p>		

Table 5-1 Post-Construction Stormwater Management in New Development and Redevelopment Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #7 – Year 4 of the Permit			
<i>7. Identify potential retrofit of existing structural controls for enhanced pollutant removal within 18 months after completion of the Master Drainage Study.</i>	Public Works COF Engineering	July	2010
<p><i>Year 9 Progress and Year 10 Plans</i></p> <p><u>Year 9</u> – Master Drainage Study is complete.</p> <p><u>Year 10</u> – Identify retrofits of existing structural controls and develop schedule to implement.</p>	<p><i>Proposed Changes</i></p> <p>No proposed changes.</p>		

¹COF's SWMP

6. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

6.1. Implementation Status

Table 6-2 contains the status of the Pollution Prevention/Good Housekeeping for Municipal Operations Program goals planned during 2016 as well as the status on any goals where work has already begun in preparation for future deliverables.

6.2. Overall Compliance with Permit Conditions

The measurable goals for the Pollution Prevention/Good Housekeeping for Municipal Operations program area include maintenance activities to keep stormwater drain inlets and lines free of debris and reduce dust generation from unpaved roads. Goals also focus attention on the MOC to identify pollution prevention and education opportunities that will improve the quality of stormwater leaving the facility.

6.3. Results of Information Collected and Analyzed During the Reporting Period

The following sections provide information collected during this reporting period.

6.3.1. Street Sweeping

The City of Farmington's Streets Department sweeps paved city surfaces and properly disposes of collected debris. The sweeping program is fairly consistent and is not expected to deviate much from year to year. Roughly 18,700 miles of paved surface was swept during this reporting period. The total mileage swept includes regular sweeping at municipal parking lots, as shown in *Table 6-1*

Table 6-1 Street Sweeping at Municipal Parking Lots

City Parking Lots	Number of Times Swept During Reporting Period
City Hall and City Annex	12 times
City Police Department	12 times
City Courthouse	12 times
Downtown City Parking Lots	12 times
<i>MOC Parking Lots</i>	12 times

The table shows the routine sweeping that occurs once a month. Along with those sweepings, emergency sweepings were also performed over many streets within the municipality. In August 2010, wide spread flooding occurred over much of the city depositing sand and debris over streets and roads. City of Farmington workers spent weeks cleaning and sweeping a good majority of many of the municipal streets and weeks cleaning out many of the arroyos after the flood.

6.3.2. Storm Drain Cleaning

In January of 2008, the City of Farmington contracted with a third party to implement a video inspection and cleaning program. The total length of main lines inspected and cleaned is provided in *Section 3 Illicit Discharge Detection and Elimination*.

The City of Farmington's Street Crew also inspects the storm drains and crossings every spring and fall. Drains and inlets are cleaned as needed. A pro-active approach is taken to the cleaning of arroyos for the safe passage of water. The City of Farmington has worked closely with the Army Corps of Engineers and FEMA to clean all arroyos and crossings since flooding in 2010 that deposited large amounts of sediment in drainage ways.

6.3.3. Dust Abatement Applications to Unpaved Roads

Dust abatement applications were applied as needed to major unpaved roads within the municipal limits. There are approximately 32 miles of unpaved roads in Farmington. During the reporting period, there were approximately five (5) applications for each unpaved road.

6.3.4. Municipal Operations Center Sampling and Operations Review

The review from previous reports has been left in for historical information. New comments have been added at the end of this *Section 6.3.4*.

Operations at the City of Farmington's MOC are covered under the City of Farmington's SWMP per the MS4 permit requirements. Baseline samples collected at MOC outfalls in February 2007 indicated elevated concentrations of specific conductivity and COD. (Sampling results are discussed in *Section 3 Illicit Discharge Detection and Elimination* and provided in *Appendix C*.) As a result, the City of Farmington began to review MOC operations and structural BMPs.

The City of Farmington conducted an onsite visit at the MOC in February of 2007 to view operations areas and identify housekeeping improvements. Based on the visit, improvement opportunities were identified, and the following actions were taken:

- Swept paved surfaces and continued sweeping throughout the reporting period,
- Cleaned up and organized material storage areas,
- Removed trash from the yard and storm drain outlet areas, and
- Relocated several items to covered storage areas.

Sampling results from MOC outfalls in August of 2007 showed improvements in specific conductance and COD but showed slightly elevated concentrations of Aluminum and TSS. Two (2) more site visits were conducted on November 2, 2007 and January 16, 2008. The team reviewed onsite stormwater controls and discussed improvements for a planned parking lot upgrade project at the MOC. Approximately 1,660 feet of storm drain lines at the MOC were inspected via video camera in January and February 2008. Improvements were then added to the design package for the MOC parking lot upgrade project, which will be completed incrementally over the next few years as budget is available. The MOC parking lot redesign will improve overall site drainage, inlet designs, and add a berm or curb and gutter around the facility's perimeter as a secondary control for stormwater management.

Focus will continue to be on the importance of good housekeeping at the MOC. The results show improvements are taking place and the practices and goals set forth within the SWMP are having a positive effect.

The construction of a salt storage facility at the MOC was completed during the fall of 2014. The storage facility is expected to further decrease potential pollution. The facility allows for stocking of materials, road salt and sand to insure they do not become contaminants at the MOC.

Final construction and design plans were submitted to the City of Farmington in May of 2016 to repave the MOC. Construction plans include revising the surface runoff from the MOC using valley gutters, storm pipes, and a small detention pond. The first phase of construction began on May 23, 2016 and is expected to continue throughout the 2016-2017 MS4 permit period. The completion of this project will improve the Housekeeping Practices at the MOC.

These improvements hope to make the MOC a cleaner environment and aid with maintaining clean stormwater from the site.

6.3.5. Stormwater Training for Municipal Employees

The environmental coordinator for the MOC facilities coordinates annual training to employees concerning spills, cleaning, storing chemical, etc. New training material has also been purchased to share with MOC employees.

The MS4 coordinator attends the Annual USEPA Region 6 MS4 Conference each year, as well as attending webinar sessions, such as the International Erosion Control Association Spring 2016 Stormwater Solutions Virtual Expo.

6.4. Activities Planned for the Next Reporting Cycle

In the next reporting period, outfall sampling and the implementation of current BMPs, such as dust abatement and drain cleaning activities will occur. In addition, focus will be on modifying operational procedures and providing stormwater training in municipal operations areas.

6.5. Proposed Changes

Proposed changes to this program area are summarized in *Table 6-2*.

6.6. Permit Obligations

The City of Farmington does not rely on another government entity to satisfy permit obligations.

6.7. Inspections and Formal Enforcement Actions

Three (3) site visits were conducted at the MOC. The first site visit was performed in February 2007; the second was performed in November of 2007; and the third was performed in January of 2008. City of Farmington staff oversee the MOC and maintains stormwater sampling from MOC outlets. Collected information aids in decisions such as the storage facility construction and salt dome.

The City of Farmington's Four Corners Regional Airport and the Bluffview Power Plant review and maintain their own MSGP permit and requirements and are at this time working to meet goals. They perform annual training on accidental spills and prevention among other employee outreach. Additional inspections and reviews will be conducted at other City of Farmington facilities covered under the MS4 permit to identify pollution prevention and good housekeeping opportunities.

Table 6-2 Pollution Prevention/Good Housekeeping Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #1 – Year 2 of the Permit			
<p><i>1. Develop written protocols for existing street sweeping and drain inlet cleaning programs. Continue these programs.</i></p>	<p>Ruben Salcido Water/Wastewater Admin.; Jim Couch Streets</p>	<p>December</p>	<p>2008</p>
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u>– Performed street sweeping and drain inlet inspection regularly. Cleaning drains was performed as needed. Did not complete a written protocol. <u>Year 10</u>– Will develop a written protocol for inlet cleaning.</p>	<p><i>Proposed Changes</i> No proposed changes.</p>		
GOAL #2 – Annually			
<p><i>2. Continue storm drain cleaning program, with a percentage of storm drains cleaned each year. Include summary of efforts within Annual Report.</i></p>	<p>Ruben Salcido Water/Wastewater Admin.</p>	<p>Ongoing</p>	<p>2007 – 2012 Plus additional Permit Years of Administrative Continuation (NPDES MS4 Permit Section 6.3)</p>
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Continued the camera inspection and cleaning program. <u>Year 10</u> – Continue the camera inspection and cleaning program as needed.</p>	<p><i>Proposed Changes</i> No proposed changes</p>		
GOAL #3 – Annually			
<p><i>3. Continue dust abatement on non-paved roads on an as-needed basis.</i></p>	<p>Jim Couch Streets</p>	<p>Ongoing</p>	<p>2007 – 2012 Plus additional Permit Years of Administrative Continuation (NPDES MS4 Permit Section 6.3)</p>
<p><i>Year 9 Progress and Year 10 Plans</i> <u>Year 9</u> – Dust abatement solution was applied to unpaved roads approximately five separate times during the year. There are approximately 32 miles of unpaved roads within the COF. <u>Year 10</u> – Continue to apply dust abatement as necessary.</p>	<p><i>Proposed Changes</i> No proposed changes.</p>		

Table 6-2 Pollution Prevention/Good Housekeeping Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #4 – Year 1 of the Permit			
<p><i>4. Review and modify good housekeeping and structural Best Management Practices (BMPs) for the Municipal Operations Center (MOC). Review personnel training content and protocol.</i></p>	<p>Britt Chesnut Environmental Coordinator</p>	<p>December</p>	<p>2007</p>
<p>Year 9 - Continued to evaluate MOC sampling results. Repaving and resurfacing construction began at the MOC in May of 2016. The resurfacing of the MOC will improve housekeeping practices and stormwater runoff quality. Stormwater quality from the outfall at the MOC was also addressed. See section 6.3.4.</p> <p>Year 10– Continue to evaluate MOC sampling results and explore opportunities to improve good housekeeping procedures, employee training, and structural BMPs in an effort to improve water quality.</p>		<p>Proposed Changes Will continue to review MOC operations, training, and structural BMPs annually to determine if modifications or improvements are needed.</p>	
GOAL #5 – Year 1 and 2 of the Permit Quarterly (Semi-Annually Thereafter)			
<p><i>5. Continue to conduct quarterly stormwater sampling at MOC outfalls for 2 years (then re-evaluate). Include results in Annual Report.</i></p>	<p>Public Works MS4 Personnel or Contractor</p>	<p>Jan–Mar Apr–Jun Jul–Sep Oct–Dec</p>	<p>2007 2008</p>
<p>Year 9 Progress and Year 10 Plans Year 9 –AES continues to collect and analyze samples from outfalls. See section 3 for details. Year 10– Continue to collect and analyze samples.</p>		<p>Proposed Changes No – as discussed in 2008-2009 report, sampling has continued past the initial two (2) years and is now collected semiannually with some areas of concern collected more frequently. See Section 3.</p>	

Table 6-2 Pollution Prevention/Good Housekeeping Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #6 – Year 3 of the Permit			
<p><i>6. Ensure airport continues coverage under new for Industrial Activities MSGP when re-issued.</i></p>	<p>General Services Airport Manager (Mike Lewis)</p>	<p><i>To Be Determined</i> (when MSGP is finalized)</p>	<p>2007</p>
<p>A new MSGP permit became effective on June 4, 2015, where NOI's were due by September 02, 2015, unless otherwise notified by the USEPA of an extension.</p> <p><i>Year 9 Progress</i> Year 9 – The airport is under active coverage in the new MSGP. The airport's NPDES # is NMR053137, NOI submitted September 01, 2015, permit effective October 1, 2015 through June 03, 2020.</p>	<p>Proposed Changes No proposed changes.</p>		
GOAL #7 – Year 4 of the Permit			
<p><i>7. Ensure power plants continue coverage under new MSGP when re-issued.</i></p>	<p>COF Electric Utility Britt Chestnut</p>	<p><i>To Be Determined</i> (when MSGP is finalized)</p>	<p>2007</p>
<p><i>Year 9 Progress</i> Year 9 – Changes were made to the operations of the COF's Animas Power plant. The Animas Power plant no longer qualifies as needing coverage under the MSGP. A Notice of Termination (NOT) was submitted to the USEPA NPDES Program and a confirmation of NOT letter was received by the COF, dated March 26, 2015. The COF's Bluffview Power Plant is under active coverage in the new MSGP with an NPDES # of NMR053052, NOI Submitted August 26, 2015, permit effective September 25, 2015 through June 30, 2020.</p>	<p>Proposed Changes No proposed changes.</p>		

Table 6-2 Pollution Prevention/Good Housekeeping Program Area Status for Year 9, Planned Activities for Year 10, and Proposed Goal Changes

Description of Goal	Department/Personnel Responsible for Implementation	Month in SWMP ¹	Year of Permit in SWMP ¹
GOAL #8 – Year 6 of the Permit			
8. <i>Obtain coverage for recycling center when new MSGP re-issued.</i>	Ruben Salcido Water/Wastewater Admin. Or Waste Management (depends on lease contract)	<i>To Be Determined</i> (when MSGP is finalized)	2007
<p><i>Year 9 Progress</i> Year 9 – Existing facility was replaced by a privately held Recycling facility. The COF is no longer responsible for the MSGP at the recycling center.</p>	<p>Proposed Changes No proposed changes.</p>		
GOAL #9 – Year 2 of the Permit			
9. <i>Re-evaluate and modify (if necessary) routine training program for COF personnel on pollution prevention and good housekeeping.</i>	Ryan Briggs Safety and Environmental Manager	December	2008
<p><i>Year 9 Progress and Year 10 Plans</i> Year 9 – Training is held annually for MOC facilities and MS4 coordinator. Year 10 – A training plan is being implemented by the safety and environmental manager and MS4 coordinator to incorporate pollution prevention and good housekeeping in orientation training, as well as annual training thereafter.</p>	<p>Proposed Changes Will continue to work to get funding of stormwater training for all COF employees.</p>		

¹COF's SWMP

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APPENDIX A PUBLISHED LEGAL NOTICES AND ANNOUNCEMENTS

Appendix A contains notices and flyers used to announce public meetings and comment periods.

Figure A-1 shows the notice that was published in the Farmington Daily Times in the legal section on Sunday, August 7th and Wednesday, August 10th of 2016.

Figure A-1. August 2016 Notice Published in the Farmington Daily Times.

AFFIDAVIT OF PUBLICATION

Ad No. 72978

**STATE OF NEW MEXICO
County of San Juan:**

SAMMY LOPEZ, being duly sworn says: That he IS the PUBLISHER of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meaning of Chapter 167 of the 1957 Session Laws of the State of New Mexico for publication and appeared in the Internet at The Daily Times web site on the following day(s):

Sunday, August 7, 2016
Wednesday, August 10, 2016

And the cost of the publication is \$62.38



ON 8/15/16 SAMMY LOPEZ appeared before me, whom I know personally to be the person who signed the above document.

(s) Kristine Sellers



COPY OF PUBLICATION

**PUBLIC NOTICE OF
Draft MS4
ANNUAL REPORT**
The City of Farmington announces the availability of the Draft MS4 Annual Report for the City's Stormwater Management Program, which is required by the U.S. EPA National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) under Permit No. NMRC0000C. The report is available for public review and comment at the City of Farmington website: fitts2/fmtn.org/mis22, 580A MID-305. Please provide any comments before September 10, 2016, to Toni Sitra, City of Farmington, 800 Municipal Drive, Farmington, NM 87401, 505-699-1399.
Legal No. 72978 published in The Daily Times on August 7 & 10, 2016.

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APPENDIX B

EXAMPLE EDUCATIONAL PROMOTIONS

Appendix B contains examples of educational promotions used in the stormwater program.

Residential Promotions

Figures B-1 through B-5 provide examples of residential promotions (B-5 contains both residential and construction information).

Figure B-1. *Clean Water Starts with Me!!* Brochure. Tri-fold – Utility Flyer Mailing

What is Stormwater?

Stormwater is water from precipitation that flows across the ground and pavement when it rains or when snow and ice melt. The water seeps into the ground or drains into what we call storm sewers. These are the drains you see at street corners or at low points on the sides of streets. Collectively the draining water is called stormwater runoff.

How do I have an impact on Stormwater Quality? What can I do about it?

Lawn Care

Problem: Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams. In addition, yard clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams.

Solutions:

- ◊ Don't overwater your lawn. Consider using a soaker hose instead of a sprinkler.
- ◊ Use pesticides and fertilizers sparingly. When used is necessary, use these chemicals in the recommended amounts. Use organic mulch or safer pest control methods whenever possible.
- ◊ Compost or mulch yard waste. Don't leave it in the street or sweep it into storm drains, arroyos, or streams.
- ◊ Cover piles of dirt or mulch being used in landscaping projects.

Septic Systems

Problem: Leaking and poorly maintained septic systems release nutrients and pathogens (bacteria and viruses) that can be picked up by stormwater and discharged into nearby waterbodies. Pathogens can cause public health problems and environmental concerns.

Solutions:

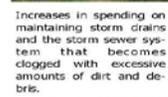
- ◊ Inspect your system every 3 years and pump your tank as necessary. (every 3 to 5 years).
- ◊ Don't dispose of household hazardous waste in sinks or toilets.

What Happens When it Rains?

Rain is an important part of nature's water cycle, but there are times it can do more damage than good. Problems related to stormwater can include:



Flooding caused by too much stormwater over hardened surfaces such as roads and parking lots. Instead of soaking into the ground.



Increases in spending on maintaining storm drains and the storm sewer system that becomes clogged with excessive amounts of dirt and debris.



Closed recreational areas due to high levels of bacteria carried by stormwater that make contact with our waters unsafe.



More expensive treatment technologies to remove harmful pollutants carried by stormwater into our drinking water supplies.



Decreased wildlife populations because stormwater carries sediment and pollutants into our rivers.



We can help rain restore its good reputation while protecting our health and environment while saving money for ourselves and our community. Keep reading to find out how....

City of Farmington
Public Works Department
800 Municipal Drive
Farmington, NM 87401
Phone: (505) 599-1062
Fax: (505) 599-1299
http://www.fmrn.org



For more information on water quality, floods, flood-proofing, and recycling, pamphlets are available at the Chamber of Commerce, 100 West Broadway, the Farmington Public Library, 2101 Farmington Ave., or the Public Works Department, 800 Municipal Drive. The Recycling Center is located at 101 South Spruce Street. Also Visit <http://www.epa.gov/nps>.

Clean Water Starts with Me!!



Understanding Stormwater and How it Can Affect Your Money, Safety, Health, and the Environment

PRINTED ON RECYCLED PAPER

Stormwater Crossword Puzzle

Test Your Knowledge!!!
(Answers on Back)

Down

1. TRAILING WATER BEHIND TO THEIR REARLS WHAT MAY HAVE POLLUTED THE WATER UPSTREAM.
2. SURFACES THAT DO NOT ALLOW RAINWATER TO SOAK IN ARE _____.
3. PESTICIDE POLLUTION MIGHT BE DUE TO _____ NEIGHBORING A WATERBODY.
5. FOAM IN WATER CAN BE NATURAL OR THE RESULT OF _____.
9. _____ NEVER BELONGS IN A WATERBODY.
12. WHEN IT RAINS, IT _____.
13. COLORFUL REFLECTIONS IN WATER AREA A SIGN OF _____.

Across

4. TREES AND VEGETATION PROVIDE _____ FROM POLLUTANTS.
6. _____ CAN CLOG STORM DRAINS AND REDUCE STORM SYSTEM FUNCTIONALITY.
7. PRECIPITATION THAT FLOWS ACROSS THE GROUND AND PAVEMENT HEED IT NAME.
8. _____ CAN BE A MAJOR SOURCE OF BACTERIA IN LOCAL WATERS. (2 WORDS)
10. SEPTIC SYSTEMS SHOULD BE INSPECTED EVERY _____ YEARS.
11. DON'T LEAVE THIS IN THE STREET OR SWEEP INTO STORM DRAINS, ARROYOS, OR SEARAYS. (2 WORDS)
14. A SYMBOLIC _____ MAY INDICATE SEWAGE POLLUTION.

How do I have an impact on Stormwater Quality? What can I do about it? (Cont..)

Sanitary Sewer Systems

Problem: Lateral lines that connect each home and business to the sanitary sewer system sometimes leak, releasing potentially toxic bacteria to the environment and potentially into the storm sewer system.

Solutions:

- ◊ Promptly fix any sewage leaks from the home or business.
- ◊ Promptly report sewage leaks to City of Farmington Code Compliance or the Public Works Department.

Auto Care

Problem: Washing your car and degreasing auto parts at home can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a waterbody.

Solutions:

- ◊ Use a commercial car wash that treats or recycles its wastewater, or wash your car on your yard so the water infiltrates into the ground.
- ◊ Repair leaks and dispose of used auto fluids and batteries at designated drop-off or recycling locations.

Pet Waste

Problem: Pet waste can be a major source of bacteria and excess nutrients in local waters.

Solutions:

- ◊ When walking your pet, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.

Recycle or properly dispose of household products that contain chemicals, such as insecticides, pesticides, paint, solvents, and used motor oil and other auto fluids. Don't pour them onto the ground or into storm drains!!

Figure B-2. Household Hazardous Waste Collection Day Flyer.



HOUSEHOLD HAZARDOUS WASTE COLLECTION DAY

SATURDAY
October 17, 2015
9:00 a.m. - 1:00 p.m.

**FREE! TO ALL SAN JUAN
COUNTY RESIDENTS ONLY!**
(No Commercial Hazardous Waste Please!)

Two Sites:

San Juan County Facility

Administration Parking Lot
100 South Oliver Drive
Aztec, NM

American Home Plaza

Alley
1001 West Broadway,
Farmington NM

DO YOU HAVE OLD PAINT, MOTOR OIL, WEED KILLERS AND OTHER HAZARDOUS ITEMS THAT YOU WANT TO GET RID OF?

WE CAN ACCEPT:

Antifreeze, auto fluids, gas, brake fluid, motor oil, batteries, dry cleaning fluid, glue, household cleaners, fertilizer, insecticides, weed killers, aerosols, paints, stains, artist paints & cleaners, chemistry sets, wood paint, enamel paints, varnishes and light bulbs.

WE CANNOT ACCEPT:

Biomedical or radioactive wastes, explosives, compressed gases, 55 gal. drums, business generated wastes, yard waste, ammunition or industrial waste, appliances (refrigerators), tires, E-waste (computers, cell phones, etc) - see Farmington Clean & Beautiful (599-1426) for information on disposal of E-waste. Trailers longer than 16 Feet long.

For More Information, Please Call:

325-6741 or 544-1284
Mon-Fri. 8:00am - 4:00pm.

NOTE: Paint in liquid form is considered a Household Hazardous Waste. Paint in dried-out solid form is NOT a Hazardous Waste and can be thrown out in the trash.

Figure B-3. Xeriscape and Water Conservation Brochures.

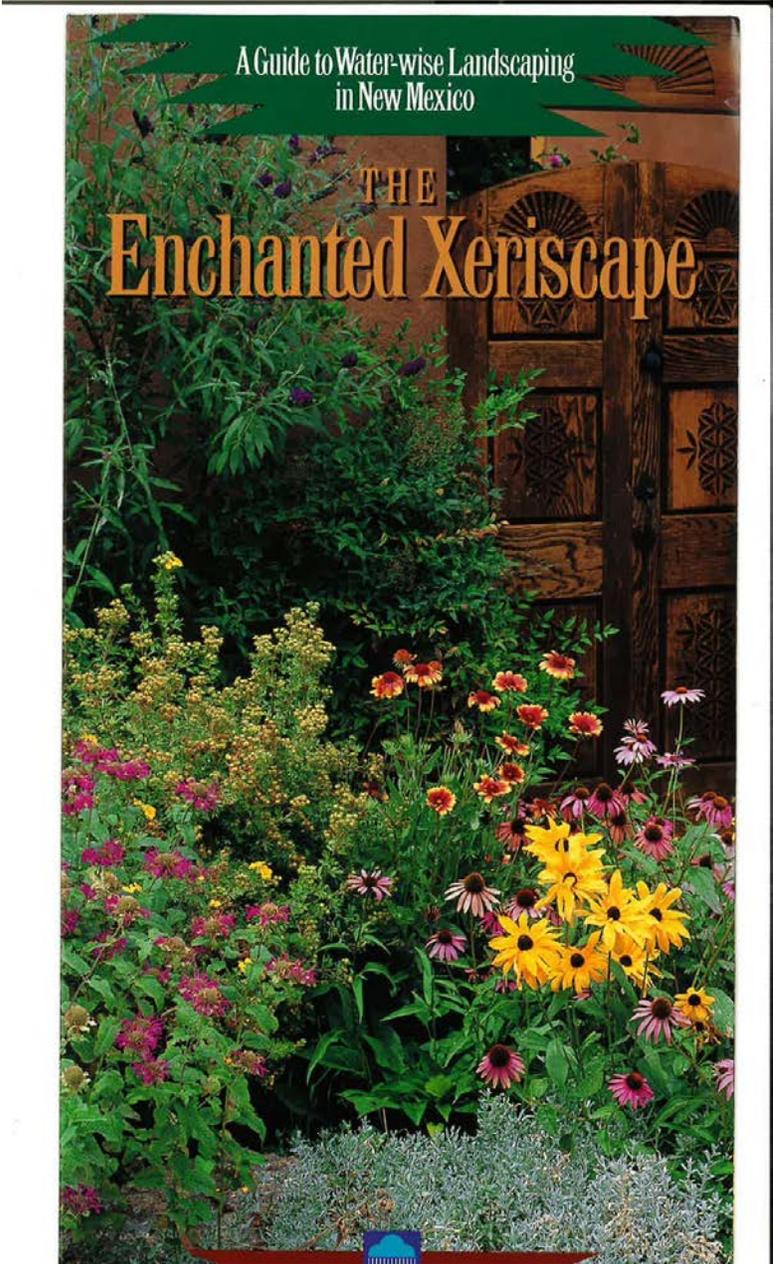


Figure B-4. Stormwater Promotions on City Buses.

Red Apple Transit Buses



Stormwater Bus Posters

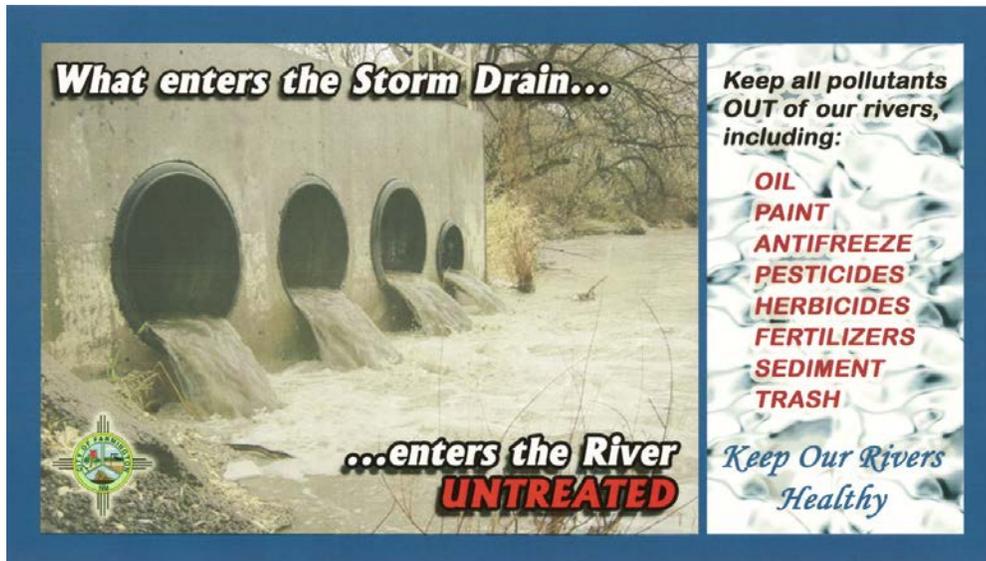
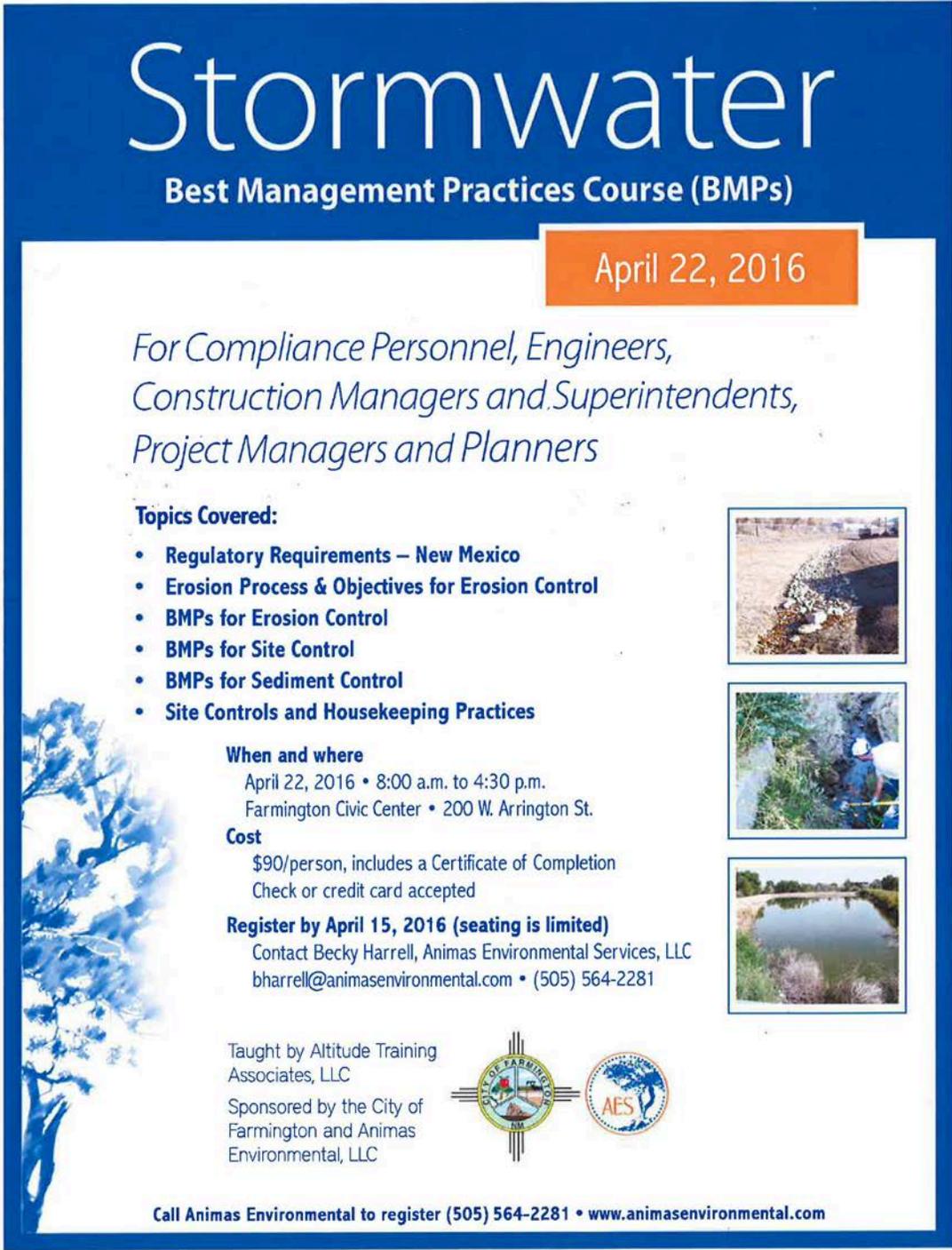


Figure B-5. Stormwater Best Management Practices Course (BMPs) Flyer



The flyer features a dark blue header with the title 'Stormwater Best Management Practices Course (BMPs)' in white. Below the header, an orange box contains the date 'April 22, 2016'. The target audience is listed in italics: 'For Compliance Personnel, Engineers, Construction Managers and Superintendents, Project Managers and Planners'. A list of topics covered includes regulatory requirements, erosion control, site control, sediment control, and housekeeping practices. The event details specify the date, time, location, and cost. Registration information is provided, including a deadline and contact details. Logos for the City of Farmington and Animas Environmental Services (AES) are shown at the bottom, along with the text 'Taught by Altitude Training Associates, LLC' and 'Sponsored by the City of Farmington and Animas Environmental, LLC'. Three small images on the right side of the flyer show: 1) a construction site with a sediment trap, 2) a worker in a hard hat and safety vest working in a trench, and 3) a pond with a grassy bank.

Stormwater

Best Management Practices Course (BMPs)

April 22, 2016

*For Compliance Personnel, Engineers,
Construction Managers and Superintendents,
Project Managers and Planners*

Topics Covered:

- Regulatory Requirements – New Mexico
- Erosion Process & Objectives for Erosion Control
- BMPs for Erosion Control
- BMPs for Site Control
- BMPs for Sediment Control
- Site Controls and Housekeeping Practices

When and where
April 22, 2016 • 8:00 a.m. to 4:30 p.m.
Farmington Civic Center • 200 W. Arrington St.

Cost
\$90/person, includes a Certificate of Completion
Check or credit card accepted

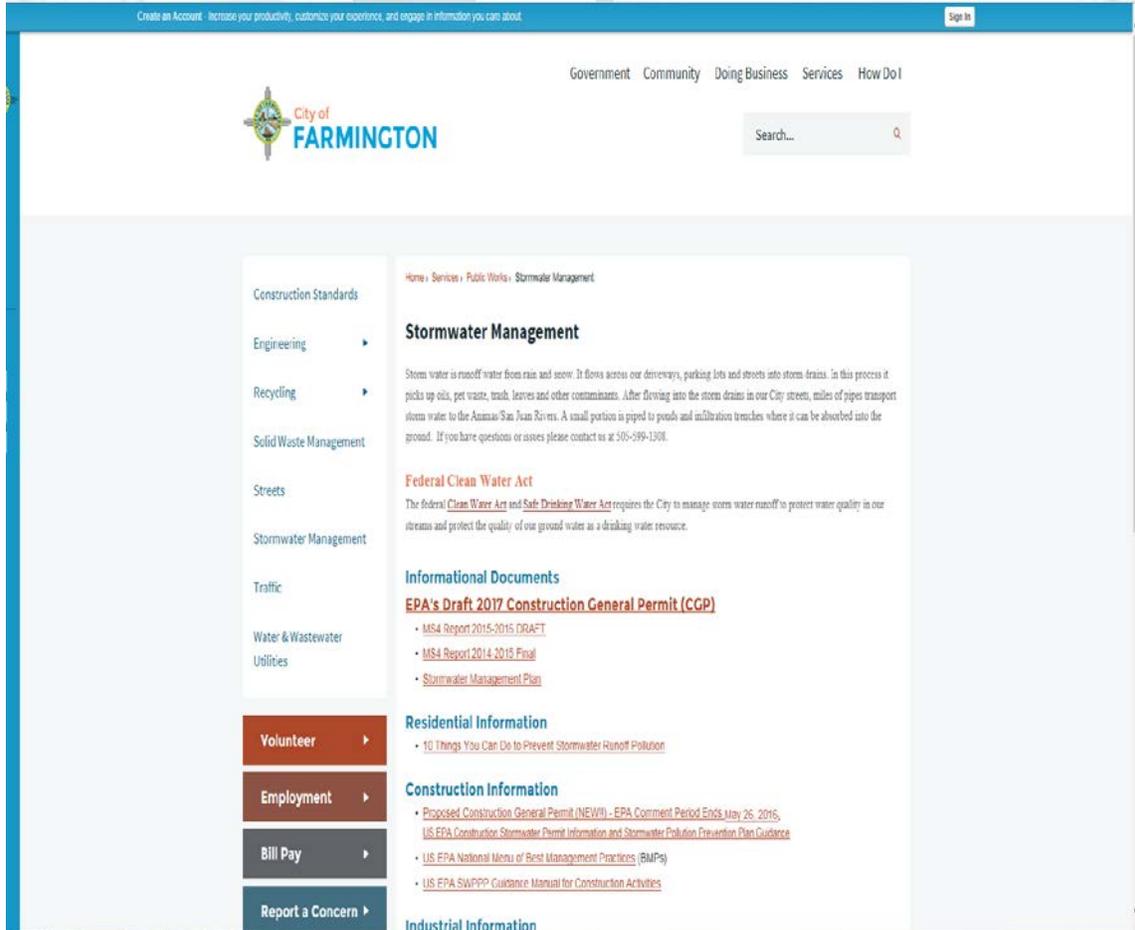
Register by April 15, 2016 (seating is limited)
Contact Becky Harrell, Animas Environmental Services, LLC
bharrell@animasenvironmental.com • (505) 564-2281

Taught by Altitude Training Associates, LLC
Sponsored by the City of Farmington and Animas Environmental, LLC

Call Animas Environmental to register (505) 564-2281 • www.animasenvironmental.com

Figure B-6. City of Farmington Stormwater Website.

Address: <http://www.fmtn.org/index.aspx?NID=306>



Construction-Related Promotions

Figures B-6 through B-8 provide examples of construction-related promotions.

Figure B-7. City of Farmington's Website with Technical Specifications and Recommended BMPs.

Address: <http://fmtn.org/index.aspx?nid=491>

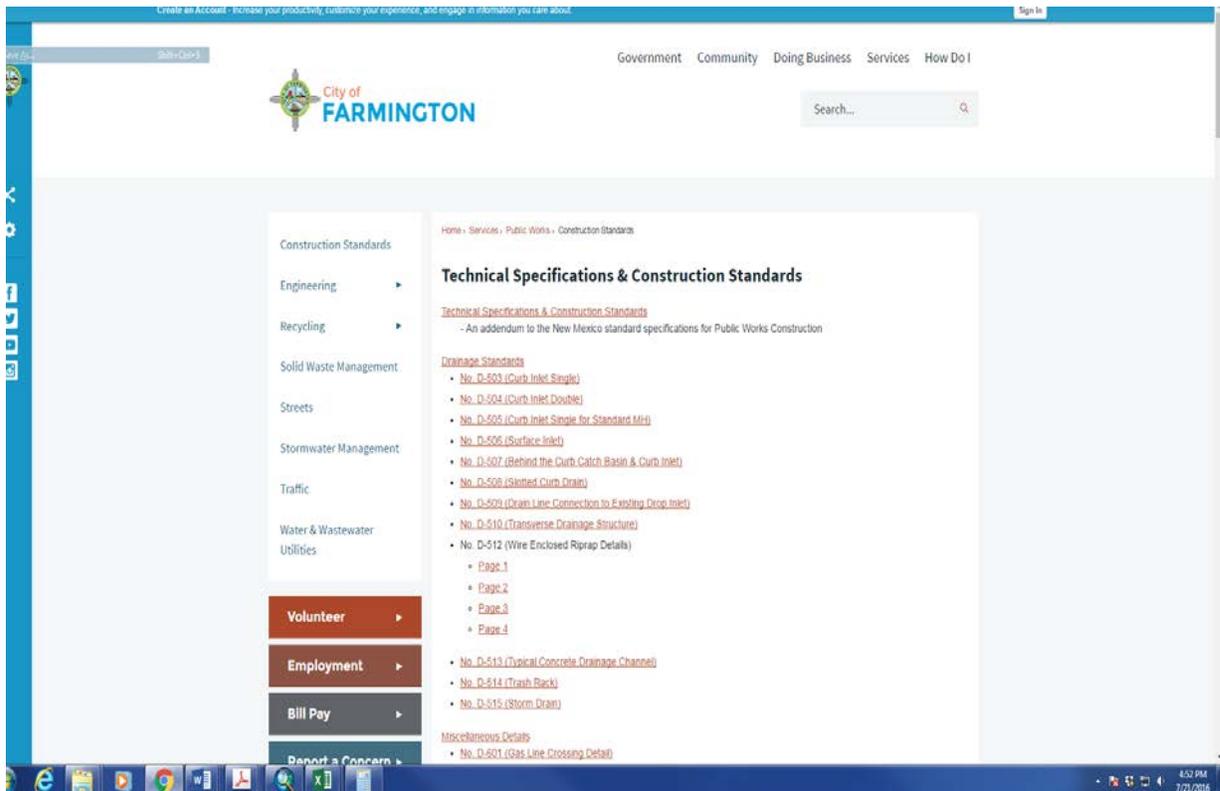


Figure B-8. Builder's Stormwater Quick Reference Guide Brochure. Front (Tri-fold)



STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A SWPPP is a written document for a specific construction site that:

- Identifies potential sources of stormwater pollution at the construction site;
- Describes practices to reduce pollutants in stormwater discharges from the construction site; and
- Identifies procedures the operator will implement to comply with the terms and conditions of the construction general permit.

SWPPP Objectives

1. Stabilize the site as soon as possible.
2. Protect slopes and channels.
3. Reduce impervious surfaces and promote infiltration.
4. Control the perimeter of your site.
5. Protect receiving waters adjacent to your site.
6. Follow pollution prevention measures.
7. Minimize the area and duration of exposed soils.

SWPPP Resources

In May 2007, the USEPA released *Developing Your Stormwater Pollution Prevention Plan A Guide for Construction Sites* (EPA 833-R-060-04)



<http://cfpub.epa.gov/npdes/stormwater/swppp.cfm>

Clean Water is Everybody's Business



**City of Farmington
Public Works Department**
800 Municipal Drive
Farmington, NM 87401
Phone: (505) 599-1335
Fax: (505) 599-1299
<http://www.fmtn.org>



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Form more information, visit:
<http://www.fmtn.org>
<http://www.epa.gov/npdes/stormwater>
<http://www.epa.gov/nps>
<http://www.epa.gov/Region6/6wa/npdes/sw/construction/index.htm>

Builder's Stormwater Quick Reference Guide

Sponsored by the City of Farmington




The purpose of this brochure is to provide information to builders and developers about stormwater permit requirements.



PRINTED ON RECYCLED PAPER

Back (Tri-fold)



STORMWATER PERMIT REQUIREMENTS

Construction site operators engaged in clearing, grading, and excavating activities (including construction-related activities such as stockpiles, borrow areas, concrete truck washouts, fueling areas, material storage areas, and equipment storage areas) that **disturb one acre or more, or sites less than one acre that are located in a larger common plan of development or sale** must obtain coverage under a National Pollutant Discharge and Elimination System (NPDES) permit for their stormwater discharges.

In New Mexico, the United States Environmental Protection Agency (USEPA) is the permitting agency for NPDES permits, so construction site operators must submit a Notice of Intent (NOI) to the USEPA to apply for coverage under the general construction permit.

Common Plans of Development or Sale
Larger-scale plans for land development to be carried out by one or more entities.
Examples: Housing developments, subdivisions, industrial parks, commercial developments, etc.

Construction Site Operators
Any party that has:

- Control over the construction plans and specifications and/or
- Day-to-day operational control of the site or part of the site, including activities necessary to implement the SWPPP.

Depending on the site, there may be one or more than one operator who needs a permit for a site.

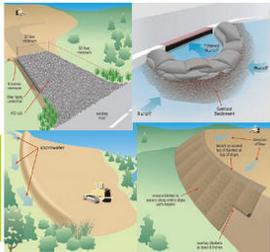


BEST MANAGEMENT PRACTICES

What are BMPs?
BMPs are controls and activities used to prevent stormwater pollution. BMPs are divided into two categories – structural and non-structural. Structural BMPs include silt fences, sedimentation ponds, erosion control blankets, and seeding, while non-structural BMPs include picking up trash and debris, sweeping up nearby sidewalks and streets, maintaining equipment, and training site staff on erosion and sediment control practices.

Selecting BMPs
An effective SWPPP reflects the specific conditions at your site and includes a combination of BMPs that are designed to work together.

National Menu of BMPs
The USEPA provides BMPs information at the following online address:
<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm>





EXAMPLE BMPs

Erosion Control (keeping dirt in place)

1. Minimize disturbed area and protect natural features and soil
2. Phase construction activity
3. Control stormwater flowing onto and through the project
4. Stabilize soils promptly
5. Protect slopes

Sediment Control (capturing sediment before it leaves the site)

6. Protect storm drain inlets
7. Establish perimeter controls
8. Retain sediment on-site and control dewatering practices
9. Establish stabilized construction exits
10. Inspect and maintain controls

Good Housekeeping

11. Provide for waste management
12. Establish proper building material staging areas
13. Designate paint and concrete washout areas
14. Establish proper equipment/vehicle fueling and maintenance practices
15. Control equipment/vehicle washing and allowable non-stormwater discharges
16. Develop a spill prevention and response plan

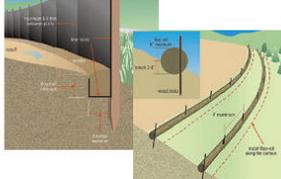


Figure B-9. Stormwater Construction Brochures.



 **Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices**

This fact sheet provides additional information about EPA's report *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices*, EPA publication number 841-F-07-006, December 2007.

BACKGROUND

Stormwater has been identified as a major source of pollution for all waterbody types in the United States, and the impacts of stormwater pollution are not static; they usually increase with land development and urbanization. The addition of impervious surfaces, soil compaction, and tree and vegetation removal result in alterations to the movement of water through the environment. As interception, evapotranspiration, and infiltration are reduced and precipitation is converted to overland flow, these modifications affect not only the characteristics of the developed site but also the watershed in which the development is located.

Low Impact Development (LID) is a stormwater management strategy that seeks to mitigate the impacts of increased runoff and stormwater pollution. LID comprises a set of site design approaches and small-scale stormwater management practices that promote the use of natural systems for infiltration, evapotranspiration, and reuse of rainwater. These practices can effectively remove nutrients, pathogens, and metals from stormwater, and they reduce the volume and intensity of stormwater flows.



Parking lot runoff is allowed to infiltrate through a vegetated bioretention area

COST ANALYSIS

This report is an effort to compare the projected or known costs of LID practices with those of conventional development approaches. Traditional approaches to stormwater management typically involve hard infrastructure, such as curbs, gutters, and piping. LID-based designs, in contrast, are designed to use natural drainage features or engineered swales and vegetated contours for runoff conveyance and treatment. In terms of costs, LID techniques can reduce the amount of materials needed for paving roads and driveways and for installing curbs and gutters. Other LID techniques can eliminate or reduce the need for curbs and gutters, thereby reducing infrastructure costs. Also, by infiltrating or evaporating runoff, LID techniques can reduce the size and cost of flood-control structures. Note that in some circumstances LID techniques might result in higher costs because of more expensive plant material, site preparation, soil amendments, underdrains and connections to municipal stormwater systems, as well as increased project management costs. Other considerations include land required to implement a management practice and differences in maintenance requirements. Finally, in some circumstances LID practices can offset the costs associated with regulatory requirements for stormwater control.

December 2007 Page 1 of 3

Figure B-11. Posters Near Building Permit Counter

Stormwater and the Construction Industry

Protect Natural Features



Bad



Good

- Minimize clearing.
- Minimize the amount of exposed soil.
- Identify and protect areas where existing vegetation, such as trees, will not be disturbed by construction activity.
- Protect streams, stream buffers, wet woodlands, wetlands, or other sensitive areas from any disturbance or construction activity by fencing or otherwise clearly marking these areas.

Construction Phasing



Bad



Good

- Sequence construction activities so that the soils are not exposed for long periods of time.
- Schedule or limit grading to small areas.
- Install key sediment control practices before the grading begins.
- Schedule site stabilization activities, such as landscaping, to be completed as soon as possible after the land has been graded to its final contour.

Vegetative Buffers



Bad



Good

- Protect and install vegetative buffers along waterbodies to slow and filter stormwater runoff.
- Maintain buffers by mowing or mucking periodically to ensure their effectiveness.

Maintain your BMPs!

www.epa.gov/npdes/menuofbmps

Silt Fencing



Bad



Good

- Inspect and maintain silt fences after each rainstorm.
- Make sure the bottom of the silt fence is buried in the ground.
- Securely attach the material to the stakes.
- Don't place silt fences in the middle of a driveway or use them as a check dam.
- Make sure muckwater is not flowing around the silt fence.

Site Stabilization



Bad



Good

- Vegetate, mulch, or otherwise stabilize all exposed areas as soon as land alterations have been completed.

Construction Entrances



Bad



Good

- Remove mud and dirt from the tires of construction vehicles before they enter a paved roadway.
- Properly size entrance BMPs for all nonpaved vehicles.
- Make sure that the construction entrance does not become buried in soil.

Slopes



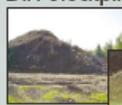
Bad



Good

- Rough grade or terrace slopes.
- Break up long slopes with sediment barriers, or under drains, or divert stormwater away from slopes.

Dirt Stockpiles



Bad



Good

- Cover or seal all dirt stockpiles.

Storm Drain Inlet Protection



Bad



Good

- The rock or other appropriate material to cover the storm drain inlet to filter out trash and debris.
- Make sure the rock size is appropriate (usually 1 to 2 inches in diameter).
- If you use inlet filters, maintain them regularly.

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APPENDIX C
OUTFALL SAMPLING RESULTS SUMMARY

Table Notes for Table C-1.

The following notes pertain to *Table C-1*.

- **Benchmarks.** The USEPA benchmark values assist in evaluating stormwater impacts; however, they are not enforceable standards.
- **Shading.** The following shades were used in table cells to highlight results higher than benchmark values.
 - Light Gold – Greater than benchmark value, but less than two times the benchmark value.
 - Dark Orange – More than two times greater than the benchmark value.
- **Acronyms:**
 - COD – Chemical Oxygen Demand
 - E. coli – Fecal Coliform
 - NA – Not Analyzed
 - NE – Not Established
 - NM – Not Measured
 - NO₃/NO₂ – Nitrate/Nitrite
 - NS – Not Sampled
 - TSS – Total Suspended Solids
 - TKN – Total Kjeldahl Nitrogen
- **Normal Background Conditions:**
 - Concentrations of TSS are indicative of soil sediments present in stormwater, and elevated TSS concentrations are typical in the arid Southwest.
 - Specific conductivity is generally found to be a good measure of the concentration of total dissolved solids (TDS) and salinity. Elements whose ionic forms contribute the most to these measures include: calcium (Ca²⁺), magnesium (Mg²⁺), sodium (Na⁺), potassium (K⁺), bicarbonate (HCO₃⁻), sulfate (SO₄²⁻), and chloride (Cl⁻). Elevated levels of specific conductivity are typical in the arid Southwest.
- **Precipitation Levels for Year 9 Sampling Events** (Data collected from CoCoRaHS, San Juan County – Average Reported Rainfall Depths from six (6) Stations in COF Limits):
Yearly Total Rainfall: 7.95 Inches (July 1, 2015 – June 30, 2016)
 - Monthly Totals; Daily Max:
 - July 2015 – Total 0.84 Inches; Daily Max 0.47 Inches
 - August 2015 – Total 1.23 Inches; Daily Max 0.57 Inches
 - September 2015 – Total 0.51 Inches; Daily Max 0.29 Inches
 - September 28, 2015 - Dry Weather Monitoring
 - October 2015 – Total 1.25 Inches; Daily Max 0.57 Inches
 - October 20, 2015 – Wet Weather Sampling Event – 0.13 inches
 - November 2015 – Total 0.93 Inches; Daily Max 0.27 Inches
 - November 4, 2015 – Wet Weather Sampling Event – 0.20 inches
 - December* 2015 – Total 0.68 Inches; Daily Max 0.32 Inches
 - January* 2016 – Total 0.74 Inches; Daily Max 0.22 Inches
 - February* 2016 – Total 0.36 Inches; Daily Max 0.20 Inches
 - March 2016 – Total 0.03 Inches; Daily Max 0.01 Inches
 - March 2, 2015 – Dry Weather Monitoring
 - April 2016 – Total 0.46 Inches; Daily Max 0.32 Inches
 - April 15, 2015 – Wet Weather Sampling Event – 0.32 Inches
 - May 2016 – Total 0.85 Inches; Daily Max 0.63 Inches
 - June 2016 – Total 0.07 Inches; Daily Max 0.06 Inches
 - June 28, 2015 – Dry Weather Monitoring

Table C-1: COF MS4 Outfall Sampling 1

Outfall #	Sample Location & Description	Sample Date	FIELD DATA					METALS – Lab Results										NUTRIENTS – Lab Results										
			Flow (gpm)	Temperature (°C) (°F)		DO (ppm)	pH	Spec. Cond. (mS/cm)	Al (mg/L)	As (mg/L)	Cd (mg/L)	Cu (mg/L)	Fe (mg/L)	Pb (mg/L)	Ni (mg/L)	Zn (mg/L)	Se (mg/L)	Hg (mg/L)	NO ₃ /N O ₂ (mg/L)	TKN (mg/L)	NH ₃ (mg/L)	Total Phosphorus (mg/L)	TDS (mg/L)	TSS (mg/L)	Oil & Grease (mg/L)	COD (mg/L)	Fecal (cfu/100ml)	E. coli (MPN/100ml) / (CFU/100ml)
Benchmark Values							6.0-9.0	<0.2	<0.75	<0.16854	<0.0159	<0.0636	<1.0	<0.0816	<1.417	<0.117	0.2385	0.0024	NE	NE	NE	NE		<100	<15	<120	NE	NE
1	Arroyo West of Lowe's Parking Lot	28-Sep-15	NOT SAMPLED – Dry Weather Inspection																									
1	Arroyo West of Lowe's Parking Lot	20-Oct-15	2558	NM	NM	NM	NM	NM	13	NA	NA	NA	14	NA	NA	0.33	<0.0050	<0.00020	<1.0	3.6	<1.0	0.59	92	690	NA	173	NA	NA
1	Arroyo West of Lowe's Parking Lot	2-Mar-16	NOT SAMPLED – Dry Weather Inspection																									
1	Arroyo West of Lowe's Parking Lot	28-Jun-16	NOT SAMPLED – Dry Weather Inspection																									
2	El Paso/Middle Fork Square	28-Sep-15	NOT SAMPLED – Dry Weather Inspection																									
2	El Paso/Middle Fork Square	2-Mar-16	NOT SAMPLED – Dry Weather Inspection																									
2	El Paso/Middle Fork Square	28-Jun-16	NOT SAMPLED – Dry Weather Inspection																									
3	Berg Park Location	28-Sep-15	NOT SAMPLED – Dry Weather Inspection																									
3	Berg Park Location	2-Mar-16	NOT SAMPLED – Dry Weather Inspection																									
3	Berg Park Location	28-Jun-16	NOT SAMPLED – Dry Weather Inspection																									
4	MOC 1	28-Sep-15	NOT SAMPLED – Dry Weather Inspection																									
4	MOC 1	4-Nov-15	25	10.4	50.7	10.11	6.21	0.351	9.4	NA	NA	NA	6.9	NA	NA	0.24	<0.0010	<0.00020	<1.0	<2.0	<1.0	0.19	NA	NA	NA	NA	NA	53.8
4	MOC 1	2-Mar-16	NOT SAMPLED – Dry Weather Inspection																									
4	MOC 1	15-Apr-16	112	NM	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	660	1600	<9.9	NA	NA	NA								
4	MOC 1	28-Jun-16	NOT SAMPLED – Dry Weather Inspection																									
5	MOC 2	28-Sep-15	NOT SAMPLED – Dry Weather Inspection																									
5	MOC 2	4-Nov-15	25	12.1	53.8	8.32	6.83	0.413	8.6	NA	NA	NA	8.9	NA	NA	0.20	<0.0050	<0.00020	<1.0	<2.0	2.5	0.2	NA	NA	NA	NA	NA	980
5	MOC 2	2-Mar-16	NOT SAMPLED – Dry Weather Inspection																									
5	MOC 2	15-Apr-16	40	NM	NM	NM	NM	NM	NA	NA	NA	NA	NA	NA	3060	970	<9.9	NA	NA	NA								
5	MOC 2	28-Jun-16	NOT SAMPLED – Dry Weather Inspection																									
6	MOC 3 Outfall # 6	No longer sampled. No data entry required.					No longer sampled. No data entry required.										No longer sampled. No data entry required.											
7	Murray Dr. Bridge Settling Pond	No longer sampled. No data entry required.					No longer sampled. No data entry required.										No longer sampled. No data entry required.											
8	South Side Lift Station # 2	No longer sampled. No data entry required.					No longer sampled. No data entry required.										No longer sampled. No data entry required.											

Outfall #	Sample Location & Description	Sample Date	FIELD DATA						METALS – Lab Results										NUTRIENTS – Lab Results										
			Flow (gpm)	Temperature (°C) (°F)		DO (ppm)	pH	Spec. Cond. (mS/cm)	Al (mg/L)	As (mg/L)	Cd (mg/L)	Cu (mg/L)	Fe (mg/L)	Pb (mg/L)	Ni (mg/L)	Zn (mg/L)	Se (mg/L)	Hg (mg/L)	NO ₃ /N O ₂ (mg/L)	TKN (mg/L)	NH ₃ (mg/L)	Total Phosphorus (mg/L)	TDS (mg/L)	TSS (mg/L)	Oil & Grease (mg/L)	COD (mg/L)	Fecal (cfu/100ml)	E. coli (MPN/100ml) /(CFU/100ml)	
Benchmark Values							6.0-9.0	<0.2	<0.75	<0.16854	<0.0159	<0.0636	<1.0	<0.0816	<1.417	<0.117	0.2385	0.0024	NE	NE	NE	NE			<100	<15	<120	NE	NE
9	Cannery Court Location		No longer sampled. No data entry required.						No longer sampled. No data entry required.										No longer sampled. No data entry required.										
10	Intersection of Gooding/ Riverview		No longer sampled. No data entry required.						No longer sampled. No data entry required.										No longer sampled. No data entry required.										
11	City Sports Complex BB Fields (Inlet)	28-Sep-15	NOT SAMPLED – Dry Weather Inspection																										
11	City Sports Complex BB Fields (Inlet)	2-Mar-16	NOT SAMPLED – Dry Weather Inspection																										
11	City Sports Complex BB Fields (Inlet)	15-Apr-16	224	NM	NM	NM	NM	NM	64	NA	NA	NA	64	NA	NA	0.28	<0.050	<0.0002 0	<1.0	3.4	<2.0	1.9	820	2,500	<5.2	41.8	NA	NA	
11	City Sports Complex BB Fields (Inlet)	28-Jun-16	NOT SAMPLED – Dry Weather Inspection																										
12	City Sports Complex BB Fields (Outlet)		No longer sampled. No data entry required.						No longer sampled. No data entry required.										No longer sampled. No data entry required.										
13	Glade Arroyo Culvert (S. side of Navajo St)	28-Sep-15	NOT SAMPLED – Dry Weather Inspection																										
13	Glade Arroyo Culvert (S. side of Navajo St)	2-Mar-16	NOT SAMPLED – Dry Weather Inspection																										
13	Glade Arroyo Culvert (S. side of Navajo St)	15-Apr-16	1300	NM	NM	NM	NM	NM	10	NA	NA	NA	8.8	NA	NA	0.21	<0.050	<0.0002 0	<1.0	3.4	<2.0	0.48	1090	300	<5.2	76.1	NA	NA	
13	Glade Arroyo Culvert (S. side of Navajo St)	28-Jun-16	NOT SAMPLED – Dry Weather Inspection																										
14	S. of Murray (Sweetland)		No longer sampled. No data entry required.						No longer sampled. No data entry required.										No longer sampled. No data entry required.										
14	S. of Murray (Sweetland)	28-Jun-16	NOT SAMPLED – Dry Weather Inspection																										
15	S. Butler	28-Sep-15	NOT SAMPLED – Dry Weather Inspection																										
15	S. Butler	2-Mar-16	NOT SAMPLED – Dry Weather Inspection																										
15	S. Butler	15-Apr-16	898	NM	NM	NM	NM	NM	13	NA	NA	NA	12	NA	NA	0.33	<0.050	<0.0002 0	1.0	7.0	<2.0	1.1	270	380	46	137	NA	NA	
15	S. Butler	28-Jun-16	NOT SAMPLED – Dry Weather Inspection																										
16	Airport Detention Pond		No longer sampled. No data entry required.						No longer sampled. No data entry required.										No longer sampled. No data entry required.										
17	Brookside Park	28-Sep-15	NOT SAMPLED – Dry Weather Inspection																										
17	Brookside Park	2-Mar-16	NOT SAMPLED – Dry Weather Inspection																										
17	Brookside Park	28-Jun-16	NOT SAMPLED – Dry Weather Inspection																										
17	Brookside Park		No longer sampled. No data entry required.						No longer sampled. No data entry required.										No longer sampled. No data entry required.										

Outfall #	Sample Location & Description	Sample Date	FIELD DATA					METALS – Lab Results										NUTRIENTS – Lab Results												
			Flow (gpm)	Temperature (°C) (°F)		DO (ppm)	pH	Spec. Cond. (mS/cm)	Al (mg/L)	As (mg/L)	Cd (mg/L)	Cu (mg/L)	Fe (mg/L)	Pb (mg/L)	Ni (mg/L)	Zn (mg/L)	Se (mg/L)	Hg (mg/L)	NO ₃ /N O ₂ (mg/L)	TKN (mg/L)	NH ₃ (mg/L)	Total Phosphorus (mg/L)	TDS (mg/L)	TSS (mg/L)	Oil & Grease (mg/L)	COD (mg/L)	Fecal (cfu/100ml)	E. coli (MPN/100ml) /(CFU/100ml)		
Benchmark Values							6.0-9.0	<0.2	<0.75	<0.16854	<0.0159	<0.0636	<1.0	<0.0816	<1.417	<0.117	0.2385	0.0024	NE	NE	NE	NE		<100	<15	<120	NE	NE		
18	Carwash/ Dustin & 20th	No longer sampled. No data entry required.					No longer sampled. No data entry required.										No longer sampled. No data entry required.													
19	Vine - East of Butler	No longer sampled. No data entry required.					No longer sampled. No data entry required.										No longer sampled. No data entry required.													
20	Vine at Irrigation (Manhole)	No longer sampled. No data entry required.					No longer sampled. No data entry required.										No longer sampled. No data entry required.													
21	Pinon/Cedar (Manhole)	No longer sampled. No data entry required.					No longer sampled. No data entry required.										No longer sampled. No data entry required.													
22	Civitan Pond Inlet (Butler & 30th)	28-Sep-15	NOT SAMPLED – Dry Weather Inspection																											
22	Civitan Pond Inlet (Butler & 30th)	20-Oct-15	1122	NM	NM	NM	NM	NM	4.9	NA	NA	NA	1.9	NA	NA	0.13	<	<	0.0050	0.00020	<1.0	2.5	<1.0	0.23	178	150	NA	102	NA	NA
22	Civitan Pond Inlet (Butler & 30th)	4-Nov-15	2244	9.61	49.3	10.1	5.1	0.952	8.5	NA	NA	NA	3.5	NA	NA	0.13	<0.005	<0.0002	0	0	<0.47	<1.0	<1.0	0.13	372	130	<5.2	60.3	NA	325.5
22	Civitan Pond Inlet (Butler & 30th)	2-Mar-16	NOT SAMPLED – Dry Weather Inspection																											
22	Civitan Pond Inlet (Butler & 30th)	28-Jun-16	NOT SAMPLED – Dry Weather Inspection																											
23	Travel Lodge/Brookside Park	No longer sampled. No data entry required.					No longer sampled. No data entry required.										No longer sampled. No data entry required.													

NA= Not Analyzed
NE=Not Established
NS= Not Sampled