



City of Cañon City

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2015 Annual Program Review

Introduction

In 2003, the City of Cañon City was issued a permit for “Stormwater Discharges Associated with Municipal Separate Storm Sewer Systems (MS4s)” from the Colorado Department of Public Health and Environment (CDPHE). This permit was renewed in 2008. The 2003 permit required Cañon City to develop, implement and enforce a Colorado Discharge Permit System (CDPS) Stormwater Management Plan. The program had to be designed to reduce the discharge of pollutants from our storm sewer system to the maximum extent practicable to protect the water quality of the Arkansas River and Four Mile Creek and to satisfy the appropriate water quality requirements of the Colorado Water Quality Control Act and Colorado Discharge Permit Regulations. The permit also requires that the City of Cañon City do a written annual review of the program and to submit an annual report to the State.

The MS4 discharge permit contains six areas the City must address in its stormwater management plan. These areas are:

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

Each of the six areas has several program elements which are used to meet the goals of the stormwater management plan. This annual review looks at each of these elements to assess its compliance status and effectiveness.

Public Education and Outreach

The Public Education and Outreach program strives to increase the public’s awareness of potential local water quality problems associated with stormwater runoff. Its goal is to give people the information and tools they need to lessen their impact on stormwater runoff, which in turn can improve our local water quality. Assessment of effectiveness in this category is a subjective evaluation as it is difficult to directly track the effect each of these has on public awareness, participation and behavioral changes.

Discussion of Elements:

1. Forming Partnerships: The City of Cañon City is a member of, or involved in, several councils and associations. The following meetings were attended during 2015:

A. Colorado Stormwater Council (CSC):

i. Cañon City’s representative to the CSC was elected to serve as the Vice Chair for the Council during 2015. Five Administrative Committee meetings were attended via conference calls. Eight general membership meetings were attended; four by conference calls.

ii. Five Legislative Committee meetings were attended by conference call.

B. Urban Drainage and Flood Control District (UDFCD): UDFCD took the lead on proposed legislation concerning regional stormwater detention – SB-212. The CSC and some of its individual

members provided input and support in the crafting of the bill. Cañon City's CSC representative participated in eleven web meetings concerning the bill.

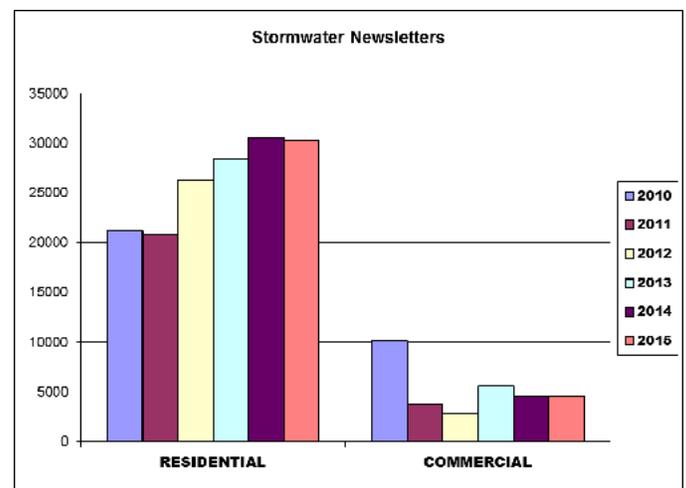
C. The Stormwater Discharges Associated with Municipal Separate Storm Sewer Systems (MS4s) permit was due for renewal in March 2013. In November 2012, the CDPHE notified permit holders the permit would be significantly revised. The CDPHE initiated a series of stakeholder meetings to present possible revisions to the permit during 2013. The draft permit was released for stakeholder comment at the end of 2013. The City of Cañon City drafted a comment letter which was submitted to the Division in January of 2014. Due to the many comments CDPHE received, the decision was made to revise the draft permit and re-release it for public comment. The revised draft was released for stakeholder comment in May, 2015. The CDPHE hosted several work sessions, which were attended either in person or via conference call. The CSC also held many work sessions to draft comments for its general membership. The City of Cañon City submitted comments on the second draft at the end of June, 2015.

D. The City of Cañon City is a member of the Colorado Association of Stormwater and Floodplain Managers.

E. The City of Cañon City is partnered with the Upper Arkansas Recycling Program and Cañon Proud Program. The Upper Arkansas Recycling Program received \$13,067 in financial support during 2015. Cañon Proud received \$1,497.99 in support for its annual city-wide clean-up program.

2. Using Educational Materials and Strategies: All programs listed were ongoing and will continue to be utilized during 2016. Materials and strategies will be revised, if needed, to maintain compliance when the new permit is issued.

A. Quarterly stormwater newsletters are sent out with City water bills and are available on the City of Cañon City's website. Each issue addresses stormwater concerns and provides information about the Stormwater Program and the prevention of illicit discharges. The public is encouraged to contact us with their concerns and questions or if they have suggestions for future topics or programs (newsletters include the contact information). There were 30,240 residential newsletters sent during 2015; 4,587 newsletters were sent to commercial establishments, including 29 mailed directly to landscape companies. The adjacent graph compares the amount of newsletters sent out each year from 2010 through 2015.



B. The City of Cañon City's website was completely updated in 2015. The Stormwater Program's webpages were expanded during the update. The webpages now contain much more information for the public from informational brochures about water quality, illicit discharges and construction stormwater runoff control to children's activity booklets. A fillable form was also added to report a problem or an illicit discharge.

C. Demonstrations/presentations are given as requested to local schools, groups and civic organizations. Programs are continually evaluated and updated. The following presentations were given in 2015:

- i. Presentations and EnviroScape demonstrations were given at the following schools:
 - a. Cañon Exploratory School – 3rd and 4th grades
 - b. Washington Elementary School – 3rd and 4th grades
 - c. Lincoln School of Science and Technology – Kindergarten to 5th grade.
- ii. A presentation on green infrastructure for residential areas was given to attendees of the Dawson Ranch HOA Spring Meeting.
- iii. The Stormwater Technician assisted FremontDr.com business members in trash pick-up from the median between Fremont Drive and U.S. Highway 50.

D. Dissemination of industry appropriate stormwater BMP information is done through the quarterly newsletters. (*See Section 2.A. above*).

E. Eleven public service announcements concerning stormwater were aired on local radio stations during 2015 for a total air time of 377 minutes (6.28 hours). This is significantly more than during 2014. Four stormwater-related programs were run on CCTV-Channel 19 with a total air time of 10 hours and 35 minutes. Radio public service announcements are rotated and new ones added throughout the year. Newspaper notices were also run in conjunction with the leaf pick-up program which also includes stormwater information. Additionally, public service flyers were hand distributed in December to all Main Street businesses from 3rd Street to 8th Street regarding the use of ice melt on the newly installed sidewalks. By hand delivering the flyers, opportunities were available to visit with business owners about stormwater quality and illicit discharges.

3. Signage and Stenciling:

A. Approval was given to purchase metal storm drain markers to be installed in two subdivisions. The markers were installed with the assistance of five members of the Cub Scout Troops 519 and 521, along with three den mothers. The markers were affixed to seven inlets in the Sunrise Mesa Subdivision and to six inlets in the Old Farm on the Bluffs Subdivision.



4. Reaching Diverse Audiences: Direct mail, public service announcements and programs and personal contact are all utilized to reach a broad spectrum of our citizens and businesses. A Stormwater Program booth is set up at one or more local festivals. EnviroScape demonstrations, short presentations and giveaways are all

available at the booth. The giveaways include items such as information brochures, children’s activity books, litter bags, magnets and pet waste baggie dispensers. Visitors to the booth and demonstrations are recorded, as are how many items are given out. Programs are evaluated and updated continually in order to reach as many people as possible and to promote interest and participation in the programs. The Stormwater Program had a booth at the following festivals in 2015:

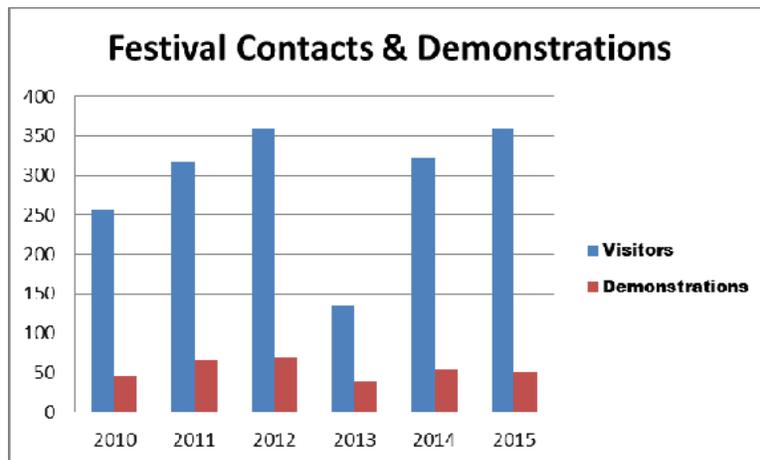
i. A joint water/stormwater information booth was set up during the annual Blossom Parade on May 2nd. Brochures, flyers, magnets, litter bags, pet waste baggie dispensers and children’s activity booklets were distributed, along with glasses of water.

ii. EnviroScape demonstrations were given during the Cañon City Police Department’s National Night Out. The booth had 137 visitors during the event; twenty demonstrations were given. Brochures, flyers, magnets, litter bags, pet waste baggie dispensers and children’s activity booklets were also distributed.



iii. Thirty-one EnviroScape presentations were done during the St. Thomas More Children’s Health Fair. The booth received approximately 223 visitors during the event. Brochures, flyers, magnets, litter bags, pet waste baggie dispensers and children’s activity booklets were also distributed.

The Stormwater Program began having a booth at the Blossom Festival in 2010. In 2015, two additional festivals were added – National Night Out and the St. Thomas More Children’s Health Fair. The following graph shows the approximate number of visitors and demonstrations given each year. In 2013 the booth was only set up during one day of the Blossom Festival, hence the much lower numbers. For 2015 the numbers only include the two additional festivals; the booth was not set up at the Blossom Festival, but rather at the parade. No demonstrations were given and the number of visitors was not tracked. Contacts during festivals and other presentations are not recorded in our contact database (see Section 3. under “Public Participation/Involvement”) unless a specific complaint is taken.



5. Illicit Discharge Education to Businesses and the Public: The quarterly newsletter often addresses the issue of illicit discharges. It also provides tips for preventing contamination of stormwater runoff.

6. Regulation #85: Nutrients Management Control Regulation (5 CCR 1002-85): Regulation #85 became effective September 30, 2012. Section 85.5(4)(a) states:

MS4 Permit Requirements for Nutrient Source Reductions

The following requirements, at a minimum, shall be incorporated into a CDPS Permit for discharges from a Municipal Separate Storm Sewer System (MS4) required to obtain a CDPS Permit pursuant to Regulation #61.

(a) Public education and outreach on stormwater impacts associated with nutrients. The MS4 permittee must develop, document, and implement a public education program to reduce water quality impacts associated with nitrogen and phosphorus in stormwater runoff and illicit discharges and distribute educational materials or equivalent outreach to targeted sources (e.g., residential, industrial, agricultural, or commercial) that are contributing to, or have the potential to contribute, nutrients to the waters receiving the discharge authorized under the MS4 permit.

This requirement will be included in the updated MS4 permit when issued. Information about nutrient impacts is already included in most of the Stormwater Program's brochures and presentations.

Public Participation/Involvement

The goal of the Public Participation/Involvement area of our stormwater permit is to provide a method for the public to be involved with the City's stormwater management program by providing feedback through a variety of methods. Assessment of effectiveness in this category is a subjective evaluation as it is difficult to directly track the effect each of these has on public awareness and participation.

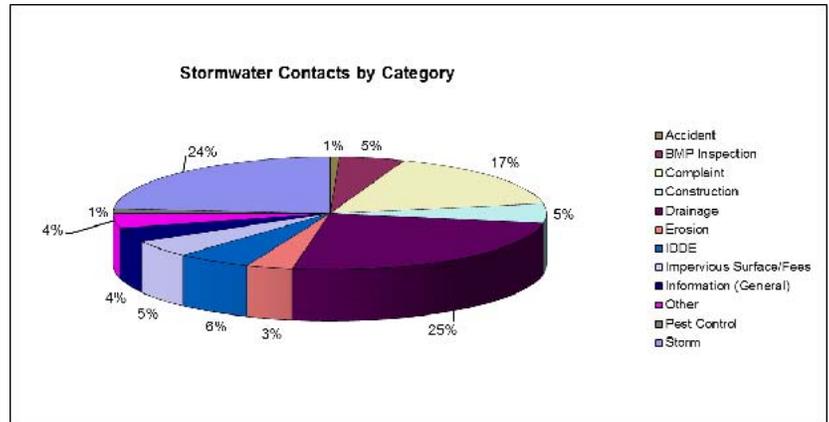
Discussion of Elements: All programs listed were ongoing and will continue to be utilized during 2016.

1. Public Notices: The City of Cañon City complies with the Open Meeting act as set forth in Colorado Revised Statutes. All public meetings are posted on a public bulletin board inside City Hall at least 24 hours in advance on any public hearing. A notice is also printed in the local newspaper. Meeting schedules, agendas and minutes are posted on the City of Cañon City's website.

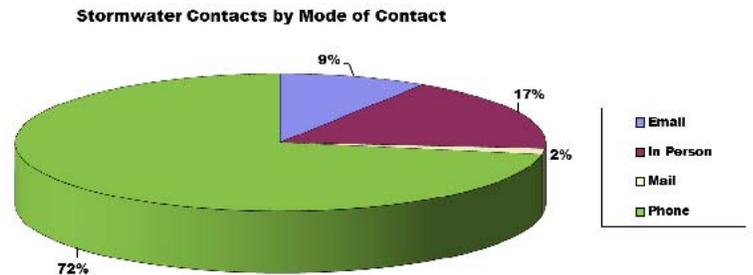
2. Contact Information Availability: Contact information is available through the quarterly newsletters and on the web page. It is also included in any newspaper articles and public service announcements. All City of Cañon City field staff have the Stormwater Technician's direct line in order to report any suspected illicit discharges.

3. Feedback: The quarterly newsletters encourage everyone to get involved by calling, emailing or writing in with their questions, complaints or ideas. A database is kept of contacts (phone, email, letters and "in person") concerning stormwater issues with the intent to better track the effectiveness of the public education and participation programs, as well as to assist in identifying areas and concerns which may need more public outreach. The database also assists in capital project planning. Contacts are broken into categories of issues to facilitate these decisions. The log represents those contacts handled directly by the Stormwater Technicians and those handled by other departments that the technicians are made aware of. During 2015, 144 contacts were handled by the Stormwater Technicians. Of those calls, 8 resulted in illicit discharge investigations. The number of contacts and mode of contact are broken into the following categories:

Category	# of Calls	% of Calls
Accident	1	1
BMP Inspection	7	5
Complaint	24	17
Construction	8	5
Drainage	36	25
Erosion	5	3
Illicit Discharge	8	6
Impervious Surface/Fees	7	5
Information (General)	6	4
Other	6	4
Pest Control	2	1
Storm	34	24

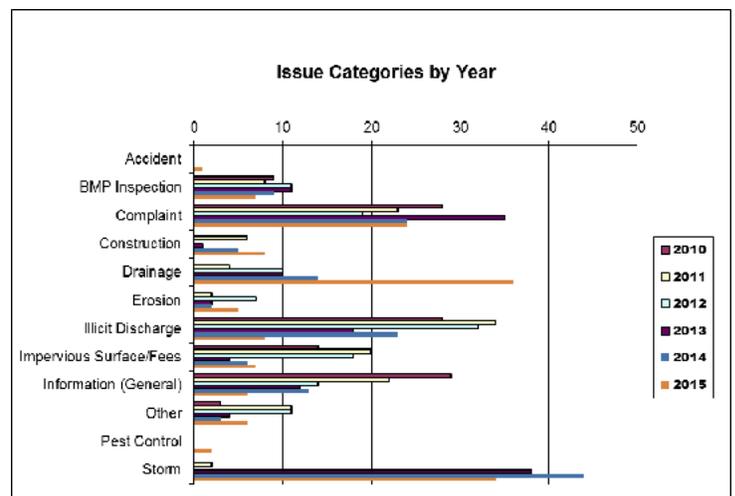


Mode of Contact	Number	%
Email	13	9
In Person	25	17
Mail	2	2
Phone	104	72

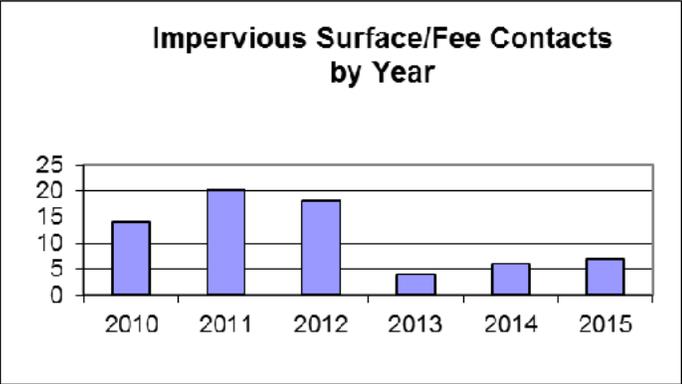
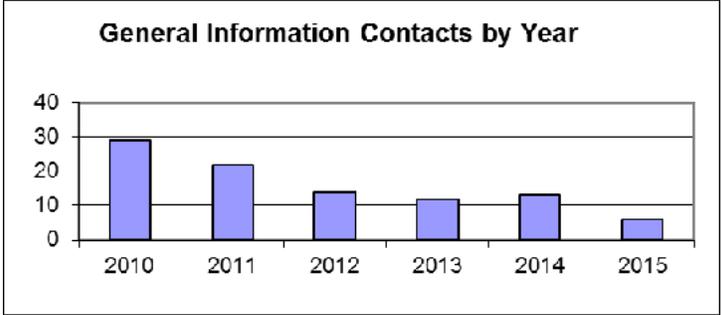
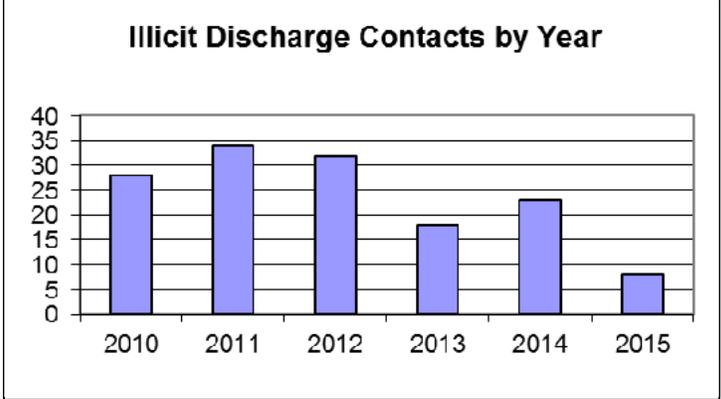
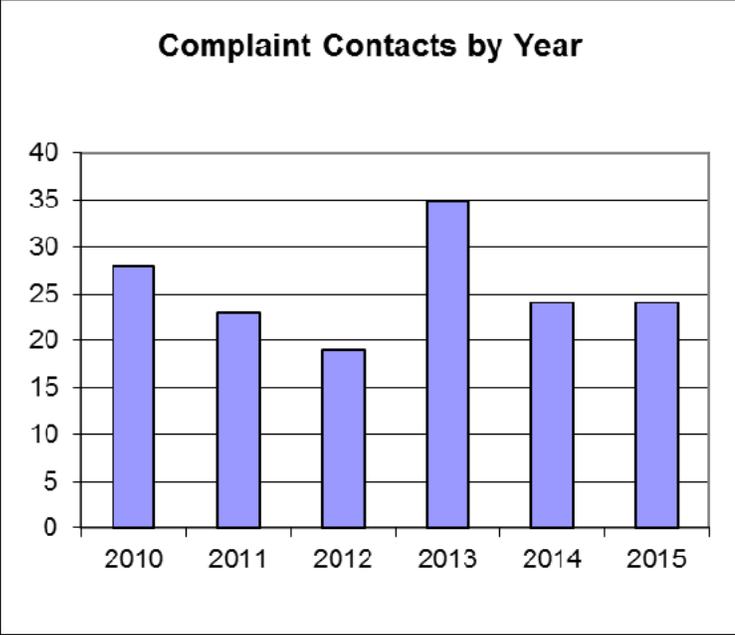


The number of contacts handled in 2015 was about the same as in 2014 (144 vs 143). The following table and graphs show the number of contacts received in each category for 2010 through 2015. Variability in categories may be attributed to better tracking of the contacts and revisions made since the inception of the database, as well as training for municipal employees and public education and outreach. The Drainage, Erosion, Illicit Discharge and Storm categories are separated from the Complaint category for better tracking of issues, even though some calls in these categories could be considered complaints. Categories for “Accident” and “Pest Control” were added in 2015.

	2010	2011	2012	2013	2014	2015
Accident						1
BMP Inspection	9	8	11	11	9	7
Complaint	28	23	19	35	24	24
Construction		6		1	5	8
Drainage		4	10	10	14	36
Erosion		2	7	2	2	5
Illicit Discharge	28	34	32	18	23	8
Impervious Surface/Fees	14	20	18	4	6	7
Information (General)	29	22	14	12	13	6
Other	3	11	11	4	3	6
Pest Control						2
Storm		2		38	44	34
Totals	111	132	122	135	143	144



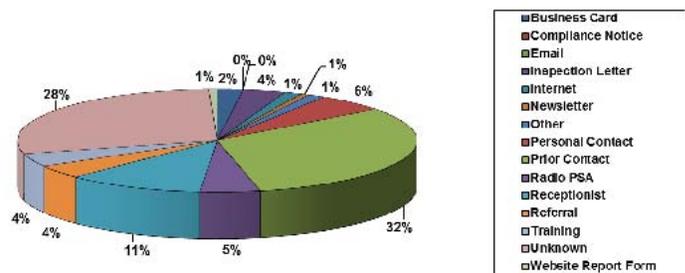
Contacts concerning permanent BMP inspections have remained relatively constant over the last 6 years. Complaints cover a variety of issues from blocked flowlines, BMP failure, debris, clogged culverts and inlets, and sediment accumulation to complaints about streets and vegetation. Complaint contacts decreased from 2010 to 2012, but rose again during 2013 and leveled in 2014 and 2015. All complaints are addressed as promptly as possible. Contacts resulted in 49 non-illicit discharge field investigations during 2015, which is up from the 16 in 2014. Construction and erosion calls have remained relatively consistent over the last six years. Drainage calls rose dramatically during 2015. Many of the calls can be attributed to the high levels of precipitation received in early spring. Illicit discharge contacts showed an upward trend between 2010 and 2011 then decreased during 2012 and 2013; 2014 showed a slight increase in this type of contact. Illicit discharge calls dropped dramatically in 2015, as did illicit discharge investigations (16 compared to 30 in 2014.) (See Section 3 under *Illicit Discharge Detection and Elimination*.) Inquiries concerning impervious surface/stormwater utility fees remained about the same from 2010 to 2012, but dropped dramatically from 2013 through 2015. Contacts for general information have declined since 2010, with the number of calls leveling off from 2012 through 2014, then dropping again during 2015. The following graphs show the variation in some of these categories from 2010 to 2015.



Statistical analysis of the data is not done, but the graphs generated from tracking contacts show general trends. Overall, it appears that the Public Outreach efforts of the Stormwater Program have been successful in increasing awareness of stormwater issues and in providing an avenue for the citizens and employees of Cañon City to participate in the program.

The database in CarteGraph also facilitates tracking of other aspects of contacts, such as how the contact information for the Stormwater Program was obtained, in order to determine how effective our outreach efforts are. During 2015 most of the information was obtained either through prior contact or via the receptionist. The adjacent chart shows the breakdown.

Method of Obtaining Stormwater Contact Information



The CarteGraph database is also linked with ArcMap. Complaints and illicit discharge reports are plotted on the map to show areas which may need extra outreach and to assist in prioritizing infrastructure maintenance and capital projects.

Goals for Public Education and Outreach/Public Participation: The following were listed as goals in the 2014 program review. The comments following each show whether the goal was met during 2015 or will be carried over as a goal for 2016.

1. Increase the number of presentations to groups and schools. EnviroScape demonstrations at area schools increased by one during 2015. This is a continuing goal. Presentations are given when requested by outside parties. Outreach to local schools, festivals and civic/homeowner groups is conducted throughout the year to offer presentations.
2. Have a booth at an additional festival (Blossom and at least one other). Two additional festivals were added in 2015 and will stay on the schedule for 2016.
3. Investigate the feasibility of starting an “Adopt-a-Drainageway” program. The feasibility of the program will continue to be investigated during 2016.
4. Have a river &/or drainageway clean-up day, possibly in conjunction with Cañon Proud. Stormwater Program personnel assisted a local business group with trash pick-up along a median during 2015. The feasibility of an expanded program will continue to be investigated during 2016.
5. Update and increase the content of the Stormwater web page. A more robust and interactive stormwater page was included when the City of Cañon City’s website was updated. Current editions of newsletters and announcements are added throughout the year.
6. Develop a paint disposal brochure to be distributed to local paint supply stores. This was not done, but may be developed in 2016.
7. Develop a BMP/grease disposal flyer for distribution to local restaurants. This was not done, but may be developed in 2016.
8. Develop a wall mural program for local students to replace the river rafting bus murals. The feasibility of this program will be further investigated in 2016.
9. Creation of new radio Public Service Announcements. Seven new PSAs were developed during 2015 and more are scheduled to be developed in 2016.
10. Work with the Colorado Stormwater Council to develop outreach materials concerning nutrients as required by Regulation 85. Development is ongoing through the Council.
11. Continue to provide input and assistance to the Colorado Stormwater Council concerning the draft renewal stormwater permit and any other regulations undergoing review. Comments from Cañon City on the second draft stormwater renewal permit were developed and submitted in June.

New Goals for 2016

1. Update the Education and Outreach and Public Participation elements of our program as needed when the revised Phase II General Stormwater permit is released.

Illicit Discharge Detection and Elimination

The Illicit Discharge Detection and Elimination (IDDE) program identifies sources of potential illegal discharges and actual discharges to the City's storm sewer system in order to reduce the frequency of these discharges and to protect the water quality of the Arkansas River and Four Mile Creek. Public education and municipal employee training are important elements in this program. Monitoring of the storm sewer discharge pipes (outfalls) on the Arkansas River and Four Mile Creek as well as water quality testing if discharges are found are also integral parts of the program.

Discussion of Elements: All programs listed were ongoing and will continue during 2016.

1. Outfall Map: Outfall inspections and mapping of new outfalls continued during 2016. Outfalls are assigned to a category in the CarteGraph database based upon the primary type of flow. Many outfalls, though, will carry several types of flow (i.e. ground water, irrigation return and storm runoff). The categories are Footing/Foundation Drain, Groundwater Drain, Industrial Discharge, Irrigation Return, Major Outfall, Outfall, Outlet and Roof Drain. Prior to 2013 Footing/Foundation Drains and Roof Drains were consolidated into one category. In 2013 these were separated into two categories for more accurate records. An outfall is the point where a municipal storm sewer discharges to waters of the United States. A major outfall is a pipe with an inside diameter of 36 inches or more or where stormwater enters waters of the United States from a drainage area of more than 50 acres. An outfall pipe with an inside diameter of 12 inches which drains land zoned for industrial activities is also considered a major outfall; these have been separated into the Industrial Discharge category. Outlets are the structural point where BMPs such as detention basins empty to areas other than a waterbody. Footing/Foundation and Roof Drains are only mapped if they discharge directly to a drainage or waterbody. There are a total of 528 outfalls, outlets and other drainage pipes located along the Arkansas River, Four Mile Creek and the various drainages and irrigation canals throughout the City. The City of Cañon City has jurisdiction over 240 of them; State Agencies have jurisdiction for 13 and 275 are under private jurisdiction. The breakdown for each category as well as the number mapped during 2015 (new and previously identified but unmapped) is detailed in the following table. There is one unclassified outfall on which a drainage investigation needs to be conducted in order to determine which (if any) category it belongs in.

Category	Total Number	Number Mapped in 2015
Footing/Foundation Drain	59	0
Groundwater Drain	33	1
Industrial Discharge	3	0
Irrigation Return	133	2
Major Outfall	25	0
Outfall	186	2
Outlet	57	2
Roof Drain	31	0
Unclassified	1	0

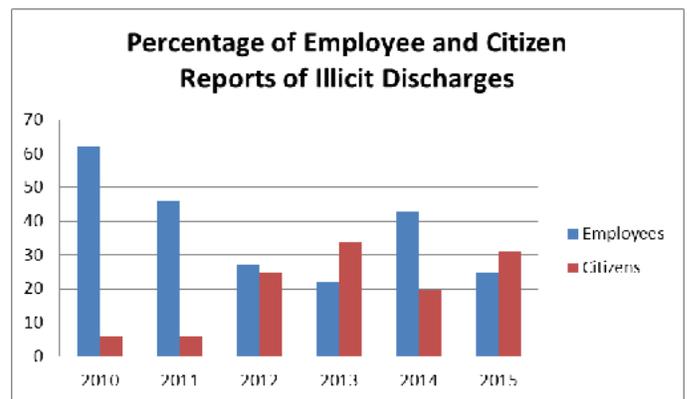
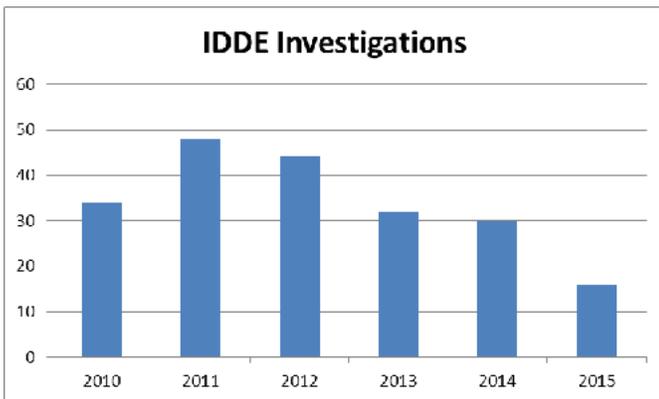
The footing/foundation and roof drains, groundwater drains and irrigation returns do not require yearly inspections or monitoring but are often noted during annual inspections of drainage channels. The City of Cañon City is currently not required to monitor industrial discharge outfalls as these are covered under separate discharge permits; again, these are often noted during other inspections. Outlets are inspected annually with the various BMPs. Outfalls and major outfalls are inspected annually (at a minimum). The outfall database in CarteGraph and the mapping assist in prioritizing inspections and monitoring the outfalls. During 2015, 254 inspections were conducted on outfalls, drains and outlets. The following table shows the breakdown of inspections.

Category	Annual/Routine Inspections	Complaint	Illicit Discharge	Initial
Footing/Foundation Drains	16			
Groundwater Drain	18			1
Industrial Discharge	2			
Irrigation Return	51	1		2
Major Outfall	20	1		
Outfall	109	1	1	1
Outlet	24			2
Roof Drains	4			

2. Regulatory Mechanism: The City of Cañon City adopted Ordinance No. 20, Series of 2005 to establish codes concerning illicit discharges. Some minor changes were made to the Ordinance, effective September 9, 2012 through Ordinance No. 14, Series of 2012 AN ORDINANCE MAKING CERTAIN MINOR AMENDMENTS TO THE CITY'S STORMWATER REGULATIONS. The Ordinance can be viewed on the City of Cañon City's website at www.canoncity.org.

3. Illicit Discharge Detection and Elimination Plan:

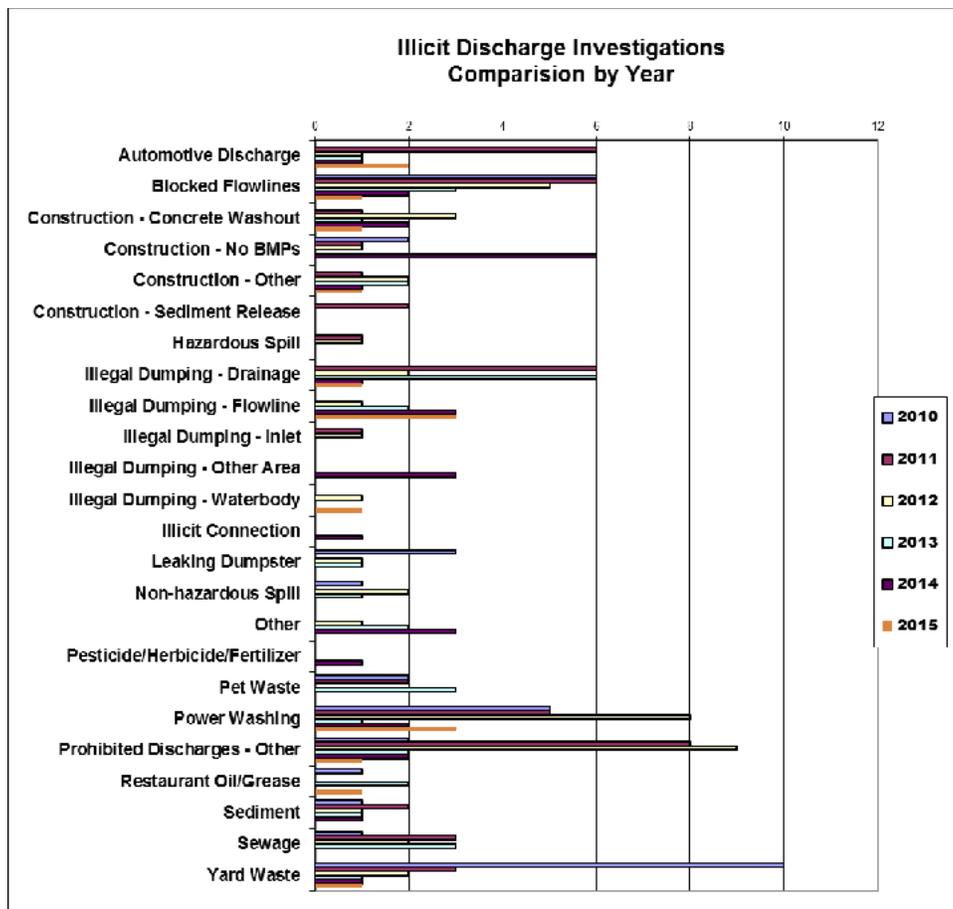
Sixteen incidents of potential illicit discharges were investigated in 2015, which is significantly less than the thirty investigated in 2014. Illicit discharges have steadily declined since 2011. The following graph on the left portrays the trend. The Contact database in CarteGraph (See Section 3. under "Public Participation/Involvement") assists in tracking how many reports of illicit discharges the Stormwater Program receives from citizens and employees. The following graph on the right shows the reports received from each category as a percentage of the total number of illicit discharge investigations each year



Employee reporting varies from year to year, but citizen reports show an overall increase since 2011.

Illicit discharges are assigned a category in the CarteGraph database to assist in identifying types of pollutants which may need targeting through our Public Education program. The following table shows how many investigations for each category were conducted during the year. The accompanying chart compares investigations for each category for the past six years.

Category	Investigations	Category	Investigations
Automotive Discharge	2	Illicit Connection	0
Blocked Flowlines	1	Leaking Dumpster	0
Construction – Concrete Washout	1	Non-hazardous Spill	0
Construction – No BMPs	0	Other	0
Construction – Other	1	Pesticide/Herbicide/Fertilizer	0
Construction – Sediment Release	0	Pet Waste	0
Hazardous Spill	0	Power Washing	3
Illegal Dumping – Drainage	1	Prohibited Discharges – Other	1
Illegal Dumping – Flowline	3	Restaurant Oil/Grease	1
Illegal Dumping – Inlet	0	Sediment	0
Illegal Dumping – Other Area	0	Sewage	0
Illegal Dumping – Waterbody	1	Yard Waste	1



Investigations resulted in the illicit discharge enforcement measures shown in the adjacent graph:

**The fine with the Notice of Violation & Enforcement Action was rescinded after review by the City Engineer and City Attorney.*

Enforcement Action	Number
Verbal Warning	10
Notice of Non-Compliance	2
Cease & Desist	0
Notice of Violation & Enforcement Action w/ fine	1*
Letters detailing violation/corrective action	2
Emails detailing violation/corrective action	0

- A. The database in CarteGraph facilitates tracking of other aspects of illicit discharge reports and investigations such as repeat violators. There were no repeat violators during the year in 2015; however four of those cited had been previously cited for illicit discharges between 2007 and 2014. The CarteGraph database is also linked with ArcMap. Illicit discharge reports are plotted on the map to show areas which may need extra outreach or monitoring.
- B. Seven water quality samples were taken during 2015. Samples were all taken from a newly installed storm sewer manhole with three groundwater inlet pipes in which excessive foaming was present. The suds were likely caused by the high alkalinity and hardness of the groundwater and by the high total dissolved solids. However, the sampling did show very low levels of contaminants which could be associated with sanitary waste, although not conclusively. Monitoring of the manhole will continue in 2016. Benthic macroinvertebrate sampling of the Arkansas River and Four Mile Creek was not conducted in 2015 due to time constraints and budgetary concerns.

4. Staff Education: Illicit Discharge training was held for twelve seasonal and new Parks, Streets and Water Department employees.

Goals for Illicit Discharge Detection/Water Quality: The following were listed as goals in the 2014 program review. The comments following each show whether the goal was met during 2015 or will be carried over as a goal for 2016.

1. Begin additional testing of ground water discharges to drainage channels and ditches to establish more complete background data. This goal will be carried over to 2016. During the fall of 2015, the USGS did comprehensive sampling of outfalls located along the Arkansas River through Cañon City. The results, once available, will be incorporated into the Stormwater Program's data. A comprehensive monitoring plan will be developed which takes into consideration potential future requirements resulting from the stormwater renewal permit.
2. Outfall mapping is updated as structures are removed or moved during construction or new ones added.
3. Develop land use maps for each drainage basin and associated outfalls. The stormwater pipes database will be completed during 2016, which will facilitate the development of the land use maps.
4. Update the IDDE manual. An update was done in 2012 but is currently on hold pending potential permit requirement revisions in the revised stormwater permit which is due to be issued in 2016.

New Goals for 2016

1. Once the new permit is issued, any adjustments or changes required in the Illicit Discharge Detection and Elimination control measure will be addressed as quickly and efficiently as possible.

Construction Site Runoff Control

The Construction Sites Runoff Control area of our Stormwater Management Program is designed to reduce, as much as possible, sediment and other construction-related pollutants from entering our storm sewer system or from being discharged into the Arkansas River, Four Mile Creek and other drainages throughout the city.

Discussion of Elements: All programs listed were ongoing and will continue to be utilized during 2016.

1 -3. Regulatory and Compliance Mechanisms: Ordinance No. 20, Series of 2005 and the City of Cañon City Grading, Erosion & Sediment Control (GES) Manual were enacted in 2006. They have proved effective in obtaining compliance for construction site stormwater management.

4. Site Plan Review: The current procedures for site plan review are addressed through the City of Cañon City's Grading, Erosion and Sediment Control Manual and the Subdivision and Development Regulations.

5. Procedures for receipt and consideration of information submitted by the public: A database is kept of all contacts (phone, email, letters and “in person”) concerning stormwater issues with the intent to better track the effectiveness of the public education and participation programs. (See Section 3. under “Public Participation/Involvement”) All complaints and concerns are addressed promptly. Any illicit discharge investigations resulting from a complaint or concern submitted by a citizen is logged into the Illicit Discharge database in CarteGraph and can be cross-referenced through the Contact database.

6. Site inspections and enforcement of control measures: Inspections are performed at all applicable construction sites and post-construction sites with appropriate enforcement actions being taken when needed. During 2015, twenty-nine inspections were performed. Six were full inspections and twenty-three were reconnaissance inspections. During 2015 there were five active Grading, Erosion and Sediment Control (GESC) permits at five sites. Two of the GESC permits were issued during 2015; these were completed and closed during the year. Eight Drainage, Erosion and Sediment Control (DESC) permits were issued during 2015. Twelve DESC permits were active during 2015, with six being closed during the year. The inspections resulted in the following actions:

Enforcement Action	Number
Verbal Warning	0
Notice of Non-Compliance	2
Cease & Desist	0
Stop Work Order	0
Notice of Violation & Enforcement Action w/ fine	1

A detailed tracking system is in place to assess the number and nature of inspections and actions and to identify repeat violators. There were no repeat violators during 2015.

7. Training and education for construction site operators: This is achieved using the GESC manual and through the plan review process. New information and resources are passed to local contractors and developers when available.

A. Additional Training:

Cañon City again joined forces with the City of Pueblo, the Pueblo County Engineering and Public Works Department and the Pueblo West Metro District to host a Regional Stormwater Seminar on February 5, 2015. The seminar was geared toward contractors, developers and engineers who work throughout the region, as well as municipal employees. Featured topics and speakers were Richard Romano, NRCS, on revegetation of disturbed sites; Andrew Earles, Wright Water Engineers, on stormwater management; Sandy Samuelson, Colorado 811; Kendra Kelly and Megan Shirley, CDPHE, on construction dewatering and remediation; and Todd Croke, Wagner Rents, on filter bags and BMPs. The seminar was held at the Colorado State Fairgrounds in Pueblo and attended by eighty-nine people, including organizers, speakers and vendors. An optional afternoon session was offered demonstrating the EPA Stormwater Calculator. Twenty-five people attended. The full report is kept with the MS4 permit documentation for 2015.

Goals for Construction Site Runoff Control: The following were listed as goals in the 2014 program review. The comments following each show whether the goal was met during 2015 or will be carried over as a goal for 2016.

1. Cross-training between the stormwater technicians on construction inspection techniques. This goal will be carried over to 2016 as inspection opportunities and schedules allow.
2. Update of the GESC Manual to reflect changes in the updated UDFCD Volume 3 and any changes made to the revised MS4 Permit. This will be done in 2016 once the revised stormwater permit is issued.

3. Continue to co-host regional stormwater seminars for contractors, developers, engineers and municipal employees. The annual seminar has already been scheduled for February 10, 2016 at Colorado State University-Pueblo.

New Goals for 2016

1. Once the new permit is issued, any adjustments or changes required in the Construction Site Runoff control measure will be addressed as quickly and efficiently as possible.
2. Conduct a sediment and erosion control training for municipal employees and local contractors.

Post-construction Stormwater Management

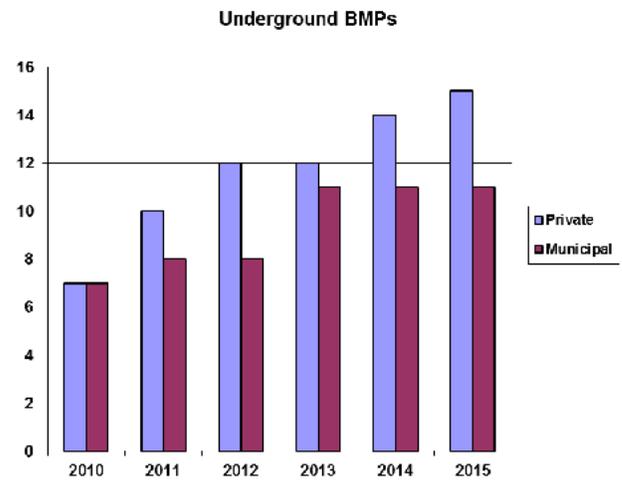
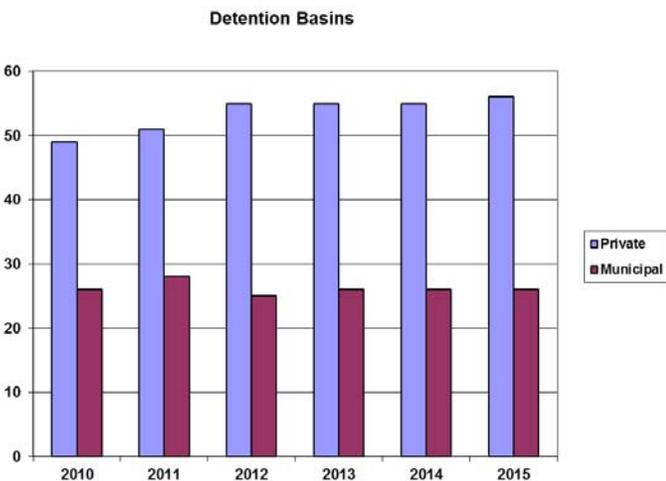
Per the City of Cañon City’s MS4 permit, the Post-construction Stormwater Management program must reduce the stormwater impacts from areas of new development and significant redevelopment as much as possible through planning procedures and enforcement mechanisms.

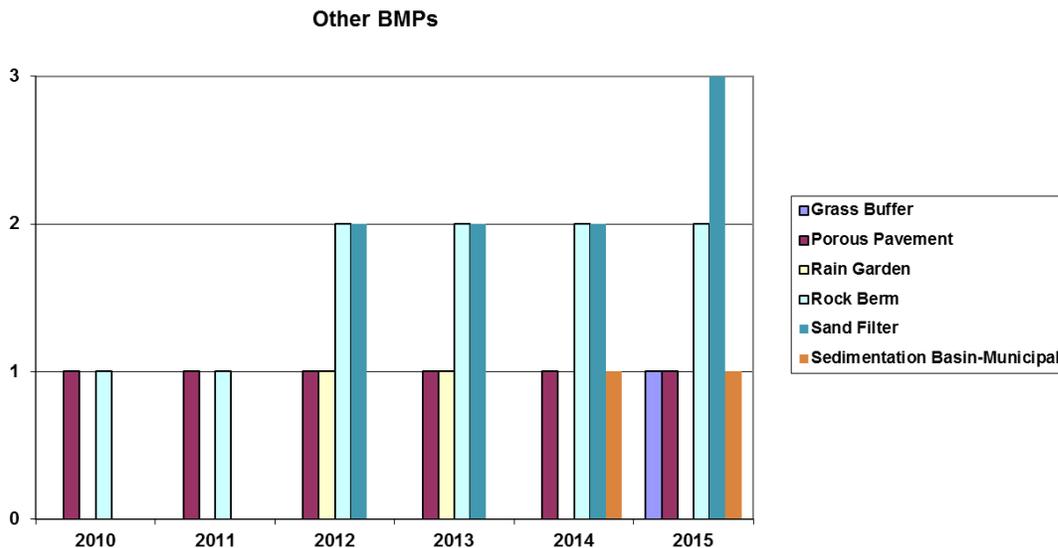
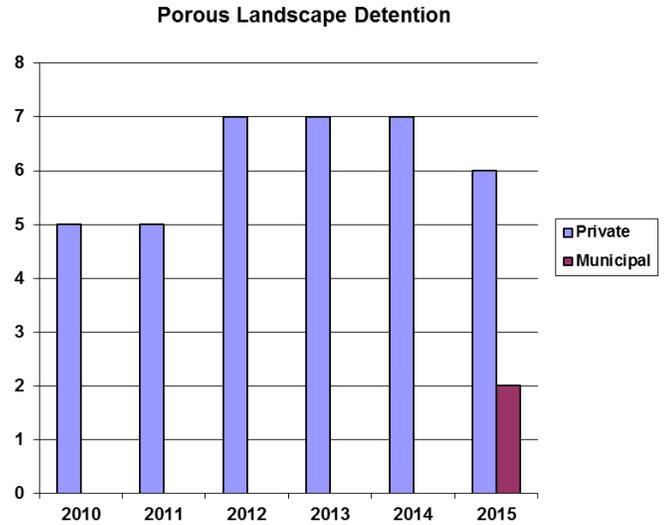
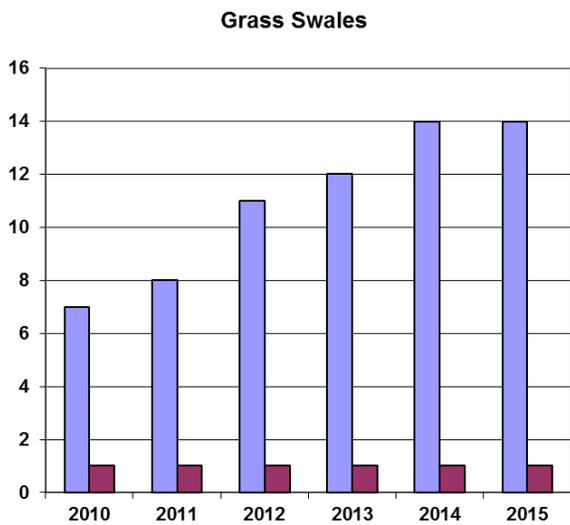
Discussion of Elements: All programs listed were ongoing and will continue to be utilized during 2016.

1 & 5. Regulatory Mechanisms: Ordinance 20, Series of 2005 addresses the requirements for post-construction permanent BMPs including technical standards and specifications, review and approval procedures and the long-term operation and maintenance of the BMPs.

2. & 3. Design Criteria & Standards and Review & Approval Procedures: The site plan review process assures that post-construction structural BMPs meet design standards. Inspections during the construction process and final inspections assure that the BMP has been properly constructed.

4. Tracking: Permanent BMPs are recorded at final inspection and entered into the CarteGraph database. Five new permanent BMPs were implemented during 2015. These included one underground BMP, a grass buffer, a sand filter and two PLDs. A detention basin installed in 1995, which was not in the Stormwater Program’s database was also added. The following graphs show the number of private and municipal BMPs inspected each year from 2010 to 2015. Yearly variation in numbers reflects new BMPs added, transfer of jurisdiction from the County to the City, and BMPs removed from service.



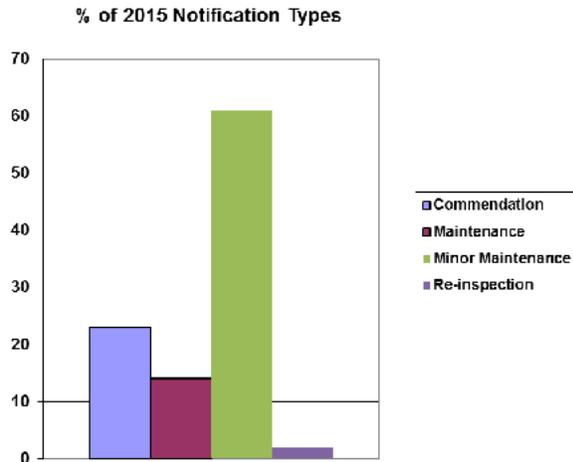


6. Monitor long-term compliance: One hundred thirty-nine permanent BMPs, of which ninety-eight are under private custodianship, are inspected at least annually with the results of those inspections entered into the CarteGraph database. An inspection report and letter are sent to the custodian of the BMP. If deficiencies are noted the BMP is re-inspected approximately 30 days later (depending upon the severity of the problem noted) and enforcement procedures are instituted if the corrective maintenance has not been done. During 2015, a total of one hundred ninety-five inspections were performed on permanent BMPs. The following table shows the breakdown of the inspections.

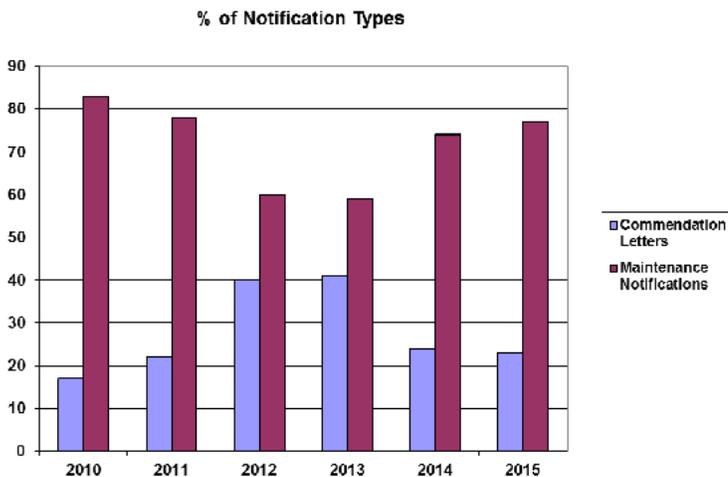
	Private/Federal/County			Municipal		
	Basins	Storm Vaults	Other BMPs	Basins	Storm Vaults	Other BMPs
Annual	55	14	25	25	11	2
Complaint	0	0	0	1	0	0
Illicit Discharge	0	0	0	0	0	0
Initial	1	1	2	0	0	2

Maintenance	0	0	0	1	0	0
Monitoring	0	0	0	1	0	0
Other	1	0	0	5	1	0
Post-Storm	1	0	0	4	0	0
Re-inspection	2	2	7	3	0	1
Storm	15	0	3	9	0	0

Seventy-five letters were sent to non-municipal custodians indicating some level of non-compliance (i.e. needing maintenance). Two letters were sent after a re-inspection revealed the requested maintenance had not been done. Twenty-three of the inspections resulted in letters of commendation being sent to non-municipal custodians. The results from inspections of municipal stormwater facilities were sent to the appropriate department heads. The adjacent graph shows the percentages of types of notifications given during 2015.

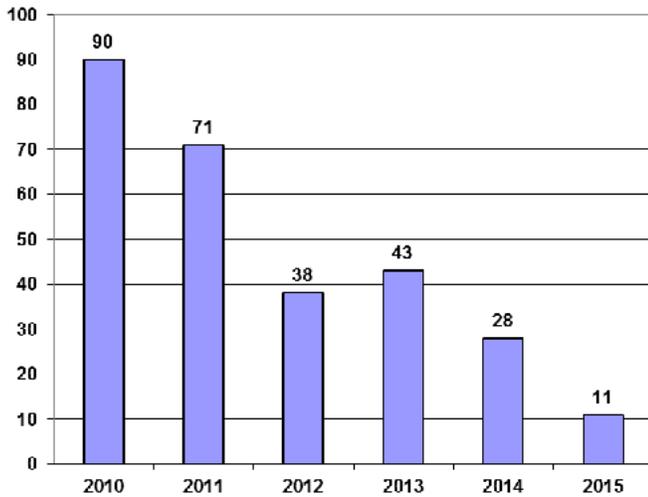


The following graph shows the trends in commendation letters and maintenance notifications sent to non-municipal custodians from 2010 to 2015. Maintenance notifications are shown as percentages of total non-municipal BMPs and include those sent by mail, email, or done by phone. Re-inspection notifications of incomplete work are not included. Commendation letters had increased yearly from 2010 to 2013 but declined in 2014 and remained level during 2015.



Beginning in 2014, maintenance notifications were revised to include letters indicating that only minor maintenance was needed (e.g. a small amount of trash was present which needed removed). The minor maintenance letter also congratulates the custodians on the good maintenance of their BMP. Custodians of the BMPs which received minor maintenance letters had shown a history of good maintenance and a willingness to respond favorably to past maintenance letters. These BMPs were not subjected to formal re-inspections. The introduction of this type of inspection letter explains the dip in commendation notification and rise in maintenance notifications after 2013.

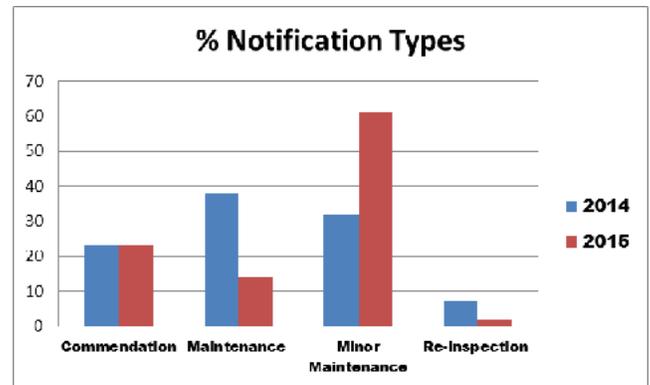
% of Private BMP Re-inspections



The adjacent graph shows the trends in re-inspections from 2010 to 2015 for BMPs under private custodianship. Numbers are shown as a percentage of BMPs which needed to be re-inspected after maintenance notices were sent out. Some BMPs were re-inspected more than once depending upon compliance or the time frame needed for completion of requested maintenance. As the graph indicates, re-inspections have declined significantly from 2010. This can be interpreted as more consistent routine maintenance of the privately owned BMPs, resulting in fewer maintenance letters involving re-inspections.

A comparison of notification types since the introduction of the minor maintenance notification shows a decrease in maintenance notifications and re-inspection notifications and an increase in minor maintenance notifications.

% Notification Types



2016 Goals for Post-construction Stormwater Management

1. Update procedures and program elements as needed to comply with the stormwater renewal permit once it is issued.

Pollution Prevention/Good Housekeeping For Municipal Operations

The focus of this area of the Stormwater Management Program is to reduce the amount and type of pollution that is generated by municipal operations or from municipally-owned properties to the maximum extent practicable. The City of Cañon City’s Stormwater Management Program Descriptions for the 2008 – 2013 Stormwater Permit contained the Measurable Goal of “Written procedures and lists for the implementation of an operation and maintenance program to prevent or reduce pollutants in runoff from the permittee’s municipal operations.” This goal was met in 2009.

Discussion of Elements: All programs listed were ongoing and will continue to be utilized during 2016.

1. Implementation of an Operation & Maintenance program:

All municipally owned facilities (including parks) are inspected annually. The results of the inspections are sent to the appropriate department heads for compliance. Follow-up inspections are done to insure required maintenance is completed. In 2015, forty-seven facilities were inspected. Four new facilities were added to City jurisdiction. In addition to the annual inspections, one post-storm and one maintenance inspection were done and four were re-inspected. The adjacent table shows the breakdown of facilities by department.

Department	# of Facilities
Stormwater	3
Equipment Repair	1
Parks	30
Streets	1
Water Distribution	1
Water Treatment	11

Drainage channels (including those under private custodianship) are also inspected. One hundred forty-three inspections were conducted on the sixty-six channels under the custodianship of the City of Cañon City and the twenty-seven under private custodianship during 2015. The following chart shows the breakdown for inspection types.

Channels	Private	Municipal
Annual	26	62
Complaint	0	11
Maintenance	0	1
Other		2
Post-storm	0	2
Re-inspection	0	6
Storm	2	31

Of the twenty-seven channels under private custodianship, nine letters of commendation for keeping the channels clean were sent out. Twelve minor maintenance notices and one maintenance notice were sent. Maintenance (i.e. mowing, trash clean-up, and post-storm debris and sediment removal) was performed on twenty-three of the municipal channels during 2015.

Inlets are mapped and categorized as part of our Stormwater Program. A percentage of those are inspected yearly. A total of 1,053 inlets have been identified and mapped to date. Of these, 651 are under municipal jurisdiction, 95 are under county/state/federal jurisdiction and 307 are under private jurisdiction. Like outfalls, inlets are assigned to a primary category in the CarteGraph database. The categories are Irrigation Clean-out, Overflow, Storm Clean-out and Storm Inlet. Irrigation clean-outs and overflows are only mapped when they have the potential to also receive stormwater runoff or are connected to pipes under City streets. The breakdown for each category as well as the number mapped during 2015 (new, previously identified but unmapped and rebuilt/moved inlets) is detailed in the following table.

Category	Total Number	Number Mapped in 2015
Irrigation Clean-out	196	8
Overflow	14	0
Storm Clean-out	32	1
Storm Inlet	811	33

There were 262 inlet inspections done during 2015. The following table shows the inspections done per category of inlet.

Category	Annual (Routine)	Complaint	Construction	Illicit Discharge	Initial	Maintenance	Monitoring	Other	Re-inspection	Storm
Irrigation Clean-out	10	0	0	0	6	1	5		0	
Overflow	2	0	0	0	0	0	0		0	
Storm Clean-out	6	0	0	0	1	1	0		0	
Storm Inlet	148	9	20	2	12	2	7	3	26	1

The CarteGraph databases for storm manholes, storm pipes and culverts were created in 2013. Currently 180 manholes are in the database. One hundred thirty-eight are under Cañon City’s jurisdiction; fifteen are under county/state/federal jurisdiction and twenty-seven are under private jurisdiction. Forty-one inspections were done in 2015. Data still needs to be collected for many of the manholes.

The culverts database was populated during 2015; it currently contains 564 culverts. Four hundred thirty-two are under Cañon City’s jurisdiction; twenty-eight are under county or state jurisdiction; twenty-five are under joint City/state jurisdiction and seventy-nine are under private jurisdiction. Culverts are divided into two categories based upon the primary type of flow they receive: drainage or irrigation flow. Two hundred twenty-three inspections were conducted on culverts during 2015. The following table shows the type of inspections done in category.

Category	Initial	Maintenance	Post-Storm	Re-inspection	Routine
Drainage	23	1	9	4	170
Irrigation	0	0	0	0	16

Stormwater infrastructure projects completed during 2015:

- Inlets on 6th and 7th Streets at Main Street were rebuilt and moved; additional inlets were added
- Storm sewer upgrades were performed on Central Ave and Orchard Ave
- Installation of storm pipe and repair of ditches on Vine Street between 9th and 10th Streets
- Installation of storm pipe and repair of ditches on S. Raynolds Ave
- Finalized the Dawson Ranch Basin Project Prioritization Plan
- Addition of two purchased properties for stormwater control

2. Employee training: A Municipal Pollution Prevention training was held for twelve seasonal and new Parks, Streets and Water Department employees.

Goals for Pollution Prevention/Good Housekeeping For Municipal Operations: The following was listed as a goal in the 2014 program review. The comments following each show whether the goal was met during 2015 or will be carried over as a goal for 2016.

1. Complete the databases for manholes, culverts and storm pipes. The databases for manholes and culverts have been populated. Missing data will continue to be gathered and entered. New manholes and culverts will be added as they are installed. The pipes database will be populated during 2016.
2. Finish mapping of inlets, storm pipes, storm culverts and manholes. Inlet and manhole mapping is finished and will be updated when these structures are removed or moved during construction or new ones added.

2016 Goals for Municipal Pollution Prevention and Good Housekeeping

1. Revise and add program elements as needed to meet new or revised requirements in the new stormwater permit once it is issued.

Other Trainings, Conferences and Projects:

1. CIRSA Safety Training
2. De-escalation Training
3. Stormwater Virtual Expo and seminars
4. CPR refresher course
5. Weed Workshop
6. Colorado Water Congress Summer Conference workshops
7. CDOT 2nd Annual Landscape Architecture & Water Quality Fall seminar
8. Three Chesapeake Stormwater Network webcasts on nutrients and RiverWise
9. Two International Erosion Control Association webcasts on stormwater sampling and municipal good housekeeping
10. CASFM Annual Conference
11. Royal Gorge Park tree planting
12. Meetings with the Dawson Ranch Home Owners' Association concerning drainage