



# City of Cañon City

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## 2017 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, with little to no change. 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 required 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 contained six areas the City must address in its stormwater management plan. These areas were:

- MCM1. Public Education and Outreach on Stormwater Impacts
- MCM2. Public Involvement/Participation
- MCM3. Illicit Discharge Detection and Elimination
- MCM4. Construction Sites Runoff Control
- MCM5. Post-construction Stormwater Management
- MCM6. Pollution Prevention/Good Housekeeping for Municipal Operations.

Each of the six areas has several program elements which have been used to meet the goals of the stormwater management plan.

On April 15, 2016, CDPHE issued a revised “Stormwater Discharges Associated with Municipal Separate Storm Sewer Systems (MS4s)” permit. The new permit became effective on July 1, 2016. The new permit is structured slightly different than the previous permits and has several new requirements with compliance deadlines to meet. Although the permit structure varies from the previous permits the same six areas are included in the permit requirements. An additional requirement of a Program Description Document is also included in the new permit.

This annual review looks at each of these elements to assess the City of Cañon City’s compliance status and the effectiveness of our programs. The report will include a breakdown of activities completed to meet the requirements of the previous permit which was in effect through June 30, 2016 and activities completed under the new permit which became effective July 1, 2016. For areas that have new requirements and a compliance deadline, the report will summarize what was completed under the previous permit requirements, which is still in effect until the compliance date for the new requirements. The report will also summarize the steps which will be taken to meet the new requirements.

### Section 1. Program Description Document (PDD)

The PDD is a new requirement in the permit. To meet this requirement the City of Cañon City’s Stormwater Program must create a document which will describe how all the requirements of the new permit will be met and where any supporting documents, such as ordinances, program element procedures and records will be kept.

The PDD will be a fluid document, kept up-to-date as program elements are modified to meet compliance dates. Once the PDD is completed, prior to the January 1, 2019, deadline, it will be posted to the City of Cañon City’s website where it can be viewed and commented on by the public.

## Section 2. 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.

The new permit clarifies the public notice, feedback and recordkeeping requirements.

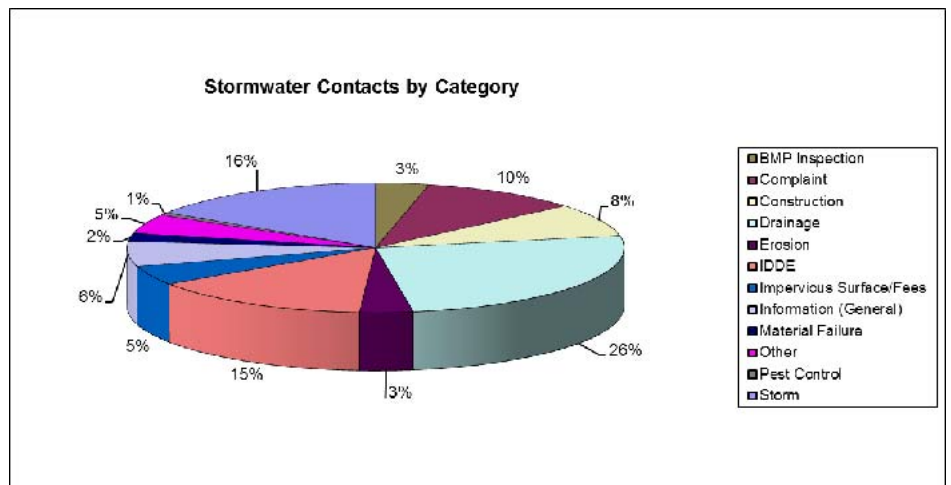
**Discussion of Elements:** All programs listed were ongoing and will continue to be utilized during 2018. These elements will be addressed in detail in the PDD.

**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 and in social media. Meeting schedules, agendas and minutes are posted on the City of Cañon City’s website.

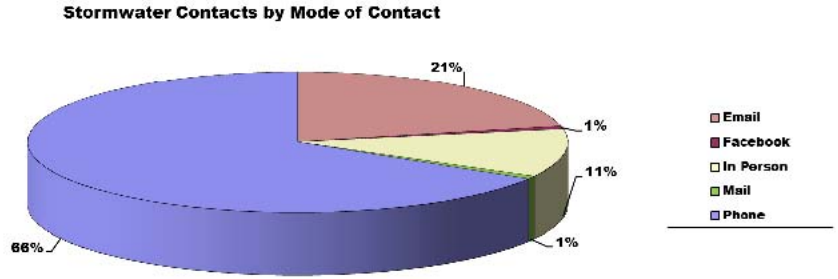
**2. Contact Information Availability:** Contact information is available through the quarterly newsletters and on the web page. It is also included in any newspaper articles and public service announcements. All City of Cañon City field staff have the Stormwater Technician’s direct line in order to 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, “in person” and website report form) concerning stormwater issues with the intent to better track the effectiveness of the public education and outreach 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 Technician and those handled by other departments or staff that the technician is made aware of. During 2017, 145 contacts were taken by staff. Of those calls, 19 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	0	0
BMP Inspection	5	3
Complaint	15	10
Construction	12	8
Drainage	37	26
Erosion	5	3
Illicit Discharge	21	15
Impervious Surface/Fees	7	5
Information (General)	9	6
Material Failure	3	2
Other	7	5
Pest Control	1	1
Storm	23	16



Mode of Contact	Number	%
Email	31	21
Facebook	1	1
In Person	16	11
Mail	1	1
Phone	96	66

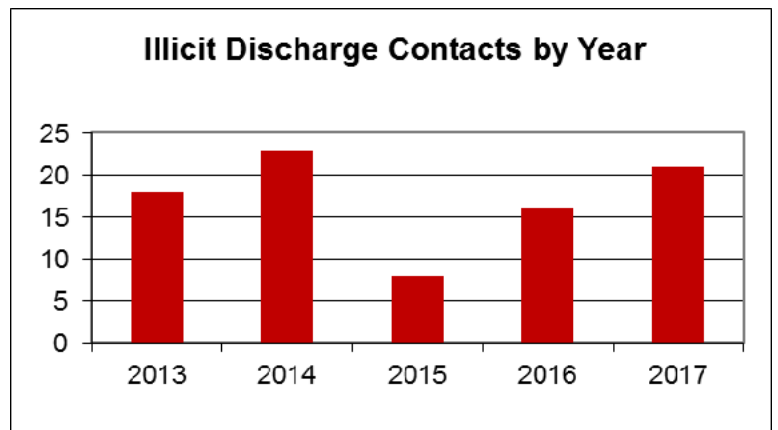
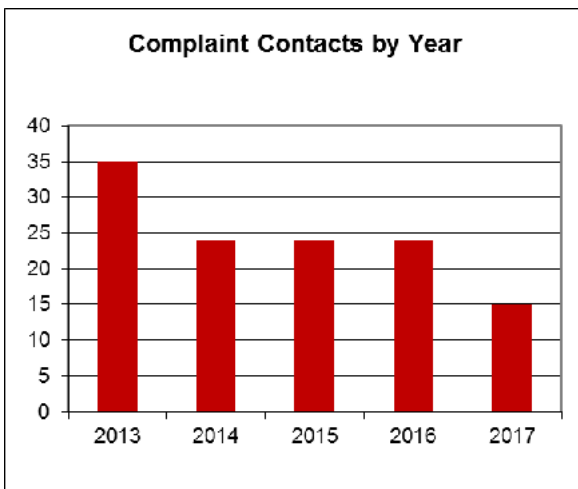


	2013	2014	2015	2016	2017
Accident			1	0	0
BMP Inspection	11	9	7	9	5
Complaint	35	24	24	24	15
Construction	1	5	8	12	12
Drainage	10	14	36	27	37
Erosion	2	2	5	10	5
Illicit Discharge	18	23	8	16	21
Impervious Surface/Fees	4	6	7	17	7
Information (General)	12	13	6	16	9
Material Failure					3
Other	4	3	6	5	7
Pest Control			2	2	1
Storm	38	44	34	1	23
Totals	135	143	144	139	145

The number of contacts handled in 2017 was slightly more than in 2016 (145 vs 139). The adjacent table show the number of contacts received in each category for 2013 through 2017. The following graphs show the contacts for some of the categories for the last five years. Variability in categories may be attributed to better tracking of the contacts, revisions made since the inception of the database, training of municipal employees, public education and outreach and general variability of issues throughout the year. The Drainage, Erosion, Illicit Discharge, Material Failure and Storm categories are separated from the Complaint category for better tracking of issues, even though some calls in these categories could

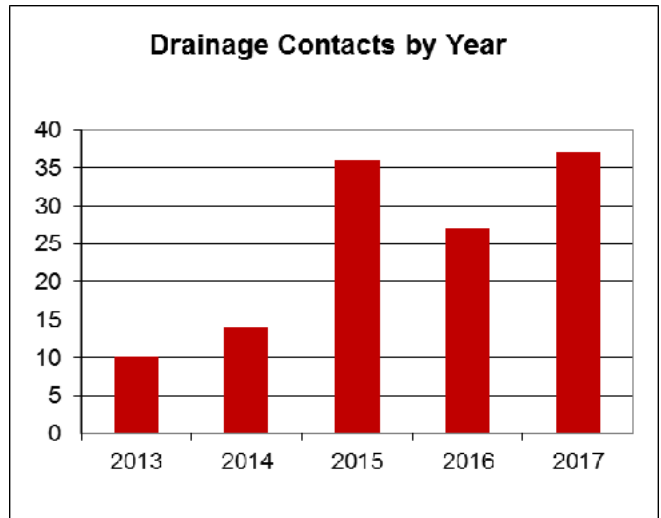
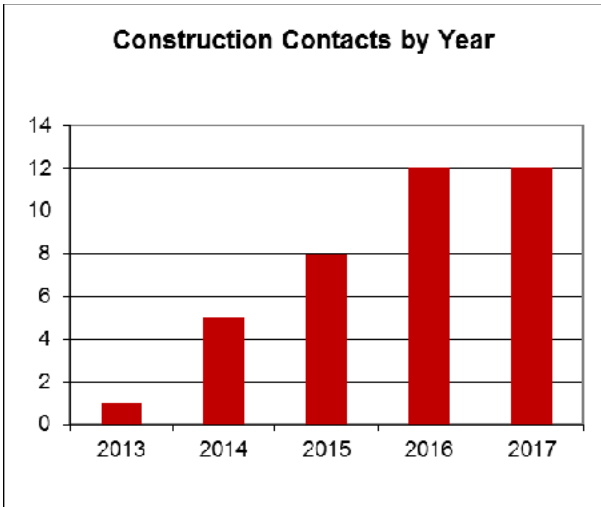
be considered complaints. Categories for “Accident” and “Pest Control” were added in 2015 and a “Material Failure” category was added in 2017.

The complaint category covers a variety of issues from blocked flowlines, BMP failure, debris, clogged culverts and inlets, and sediment accumulation to complaints about streets and vegetation. Complaints declined during 2014, remained fairly level for three years and declined again in 2017. All complaints are addressed as promptly as possible. Contacts resulted in 33 non-illicit discharge field investigations during 2017, which is up from the 18 in 2016.



The amount of illicit discharge contacts has varied in the last five years (see above chart). Variability is influenced by the number of actual illicit discharges which occurred, community awareness and municipal employee training. (See Section 4 Illicit Discharge Detection and Elimination.)

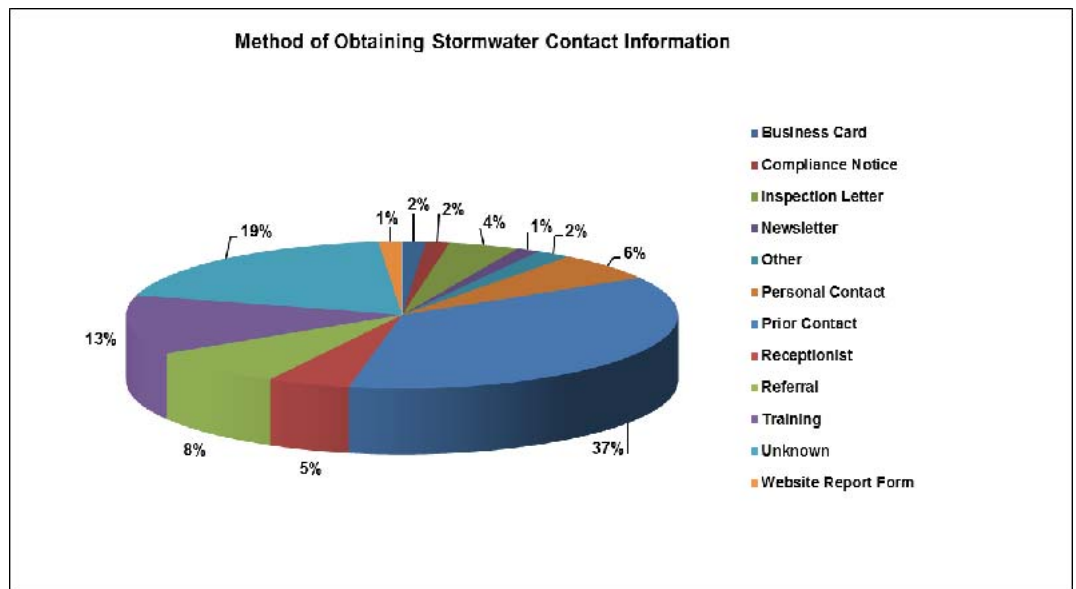
Construction calls have increased over the last five years. These types of calls include both complaints and requests for construction information.



Drainage calls rose dramatically during 2015, dropped in 2016 and rose again in 2017. This could be explained by the amount of precipitation received during the year, for example: the spring of 2015 was exceptionally wet, while 2016 was a drier year.

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, such as how the contact information for the Stormwater Program was obtained, in order to determine how effective our outreach efforts are. During 2017 the primary methods of obtaining stormwater contact information were through prior contact, referrals and training. The adjacent chart shows the breakdown. The method of contact is not consistently tracked (i.e. people are not consistently asked how they obtained the information). This is an area that needs strengthened.



The CarteGraph database is also linked with ArcMap. Reports from the various categories are plotted on the map to show areas which may need extra outreach and to assist in prioritizing infrastructure maintenance and capital projects.

**Action Items for new permit requirements:**

1. Documentation of the City of Cañon City’s Public Notice process and a database will be created to maintain copies of any public notices concerning the Stormwater Program and comments received as part of the public notice process. The database will be completed by the January 1, 2019, deadline.
2. The PDD requirements for Public Involvement/Participation will be completed prior to the January 1, 2019 deadline. Once completed, the PDD will be posted on the City’s website for public’s review and comment.
3. A mechanism will be developed for the public to comment on the PDD and for the City to respond; all comments will be tracked.
4. Requirement I.D.1.c (the ability to accept and respond to information submitted by the public) and I.D.2.c. (maintaining records of information submitted by the public and any actions taken to address the information) have already been met.

**Section 3. 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.

The revised permit lists the following requirements:

1) The permittee must implement a public education program to promote behavior change by the public to reduce pollutants in discharges from the MS4. Education and outreach activities, individually or as a whole, must address the impacts of stormwater discharges on water bodies, the steps the target audience can take to reduce pollutants in stormwater runoff, and water quality impacts associated with illicit discharges and improper disposal of waste.

2) The permittee must provide information to businesses and the general public regarding the permittee’s prohibitions of and the water quality impacts associated with illicit discharges as part of the public education program. The information must include the following:

A) The permittee must determine the targeted businesses that are likely to cause an illicit discharge or improperly dispose of waste. At a minimum, the permittee must identify at least one type of business and a list of those businesses that fit the identified type of business.

B) The permittee must develop and implement at least one education and outreach activity to those businesses identified. Educational materials and activities, individually or as a whole, must describe water quality impacts associated with illicit discharges and the improper disposal of waste, the behaviors of concern, and actions that the business can take to reduce the likelihood of illicit discharges and the improper disposal of waste.

3) The permit provides a table of education and outreach activities that the permittee must choose from to implement during the year. At least four from the table must be implemented each year with at least two of those from the Active and Interactive choices. Activities can vary from year to year as long as at least four are done.

4) As part of their public education program, the permittee must specifically address the reduction of water quality impacts associated with nitrogen and phosphorus in discharges from the MS4.

A) The permittee must determine the targeted sources that are contributing to, or have the potential to contribute, nutrients to the MS4’s receiving waters.

B) The permittee must prioritize which targeted sources are likely to obtain a reduction in nutrient discharges through education and must distribute educational materials or equivalent outreach to these. The educational materials or outreach must describe stormwater quality impacts associated with nitrogen and phosphorus in stormwater runoff and illicit discharges, the behaviors of concern, and actions that the target source can take to reduce nutrients.

The permit also details the types of written procedures, documentation and recordkeeping required to meet these requirements. Some of the requirements have an associated compliance date, which are discussed under the “Action Items for new permit requirements” section.

The following elements were used to meet our permit requirements during 2017.

**Discussion of Elements:**

**1. Educational Materials and Activities from the provided table in the permit:** The new permit contains a table of the Education and Outreach Activities which may be used to meet the permit requirement. The table contains both Passive Outreach and Active/Interactive Outreach. The permittee must implement at least four activities each year and at least two have to be from the Active/Interactive column. The activities can vary each year as long as they meet the requirements. The City of Cañon City’s current activities fall into the new activities table. As a whole, the activities address the impacts of stormwater discharges on our receiving waters and steps the general public and businesses can take to reduce their impact on stormwater runoff and thereby our local waterways. All the following programs were utilized during 2017.

**i. Passive Outreach:**

A. Radio/television/movie theater advertisement: Seven different 30-second public service announcements concerning stormwater were aired on local radio stations during 2017 for a total air time of 150 minutes (2.5 hours). Five stormwater/water-related programs were run on CCTV-Channel 19 with a total air time of 488.14 hours. 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 includes stormwater information.

B. Distribute educational materials by brochure: Several different types of brochures are handed out during festivals at which the Stormwater Program has a booth. A complete list of brochures, activity books and giveaways appears later in this report. A flash flood brochure was created and distributed during 2017.

C. Distribute educational materials by fact sheet: Fact sheets are also often available at the Stormwater Program’s booth during festivals. A rain barrel fact sheet is available in the information kiosk in the main lobby of City Hall. During National Pollution Prevention week, a display with fact sheets and free vehicle litter bags was placed in the main lobby of City Hall.



D. 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. Current editions of the newsletters, the annual program review, “Frequently Asked Questions” and the updated

Illicit Discharge manual were added in 2017. Additionally, articles on litter and the City of Cañon City’s policy on leaf pickup and disposal were posted under the City News section.

**ii. Active and Interactive Outreach**

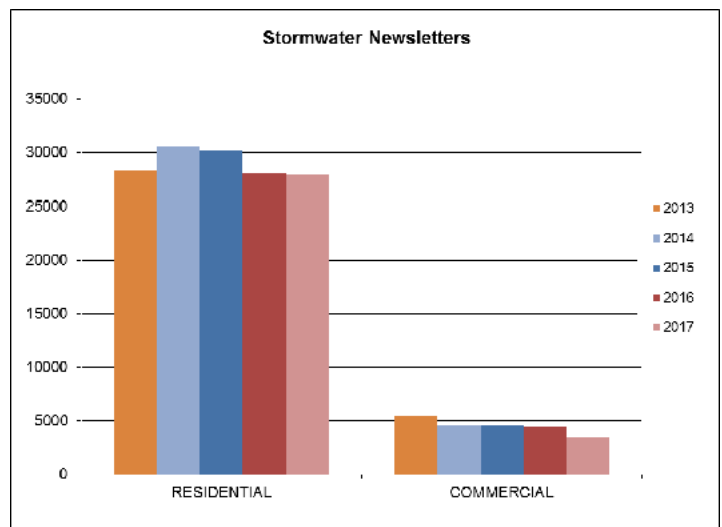
A. Ongoing advertisement/promotion of a stormwater hotline number or other method to report an illicit discharge: Contact information is provided in each of the quarterly newsletters, on the public service announcements aired by radio and on the City’s website.

B. Ongoing advertisement/promotion on how to get more information about the stormwater program: Contact information is provided in each of the quarterly newsletters, on the public service announcements aired by radio and on the City’s website.

C. Ongoing social media program: The City of Cañon City has a Facebook page and Twitter account. The Stormwater Program posted eleven times on a wide range of topics including pet waste stations and information, ditch clean up, Cañon Proud clean up, litter, snow and leaf clean up.

D. Web site that is interactive or contains stormwater information that includes actions that can be taken to reduce stormwater pollution: The City of Cañon City’s Stormwater webpages 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. Information about what citizens and businesses can do to lessen their impact on stormwater runoff is found under the “What Can I Do To Help?” link.

E. Newsletter (hard copy or electronic): 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). During 2017, 27,955 newsletters were sent to residents and 3,494 newsletters sent to commercial establishments. The adjacent graph compares the amount of newsletters sent out each year from 2013 through 2017. Residents that receive their water bill via email do not receive a copy of the newsletter.



F. Distribute promotional items or giveaways: Brochures, activity books, fact sheets and other items such as magnets, pet waste baggie dispensers and litter bags are all given out during events and festivals the Stormwater Program has a booth at. The following table shows the items which were distributed during 2017.

Title and or item	# Distributed in 2017
“After the Storm” brochure	23
“Brown Water” information booklet	3
“CSU Rainwater Collection in Colorado” fact sheet	25

“Dump No Waste” activity booklet	197
“A Fish’s Wish” activity booklet	176
“Flash Flood” Activity booklet (which includes stormwater information)	214
“Flash Flood” brochure	54*
“Let’s Find Out About Water” activity booklet	34
“Stormwater and the Construction Industry” 11” x 17” poster	5
“Sump Pump Alert” door hanger	7
“Water Does A Lot” activity booklet	28
Canon City Stormwater Program magnets with contact information	327
Vehicle Litter Bags	229
Pet Waste Baggie Dispensers	195

\* Pueblo Community College received 25 of the “Flash Flood” brochures for their kiosk.



Litter Bag



Magnet



Pet Waste Baggie Dispenser

G. Participate in or sponsor a service project: The Cañon City Parks Department and Councilwoman Kathleen Schumacher initiated a “Poop Fairy” program to educate Cañon City residents about the impacts of pet waste on community health, aesthetics and water quality. Members of The Boys and Girls Club of America’s local chapter, “The Club” participated in the public awareness campaign for several weeks during the late summer/early fall. The City provided t-shirts, fairy wings, pet waste baggies and “mutt mitts” for The Club members to hand out in City parks. The baggies and mutt mitts contained information with the City Ordinance inside as well as information on how the pet waste contaminates our water.



Sign



On August 10<sup>th</sup>, kiosk from the Boys and Girls Club were in full “Poo Patrol” gear handing out doggie bags stuffed with informationals on our municipal code and how pet waste contaminates our water. Even Murphy strapped on some wings and participated in our kiosk-off event. The B&G Club members will continue to educate our public on the importance of picking up after your pet!

H. Participate in or sponsor a stormwater or environmental event: The Stormwater Program had a booth at the Salida Watershed Festival on August 26, 2017 in Salida. Approximately 141 visitors stopped at the table to observe demonstrations and pick up information about the impacts of pollutants



on stormwater runoff. The EnviroScape was used to give 29 demonstrations, during which visitors were asked to participate by “making it rain” on the model.

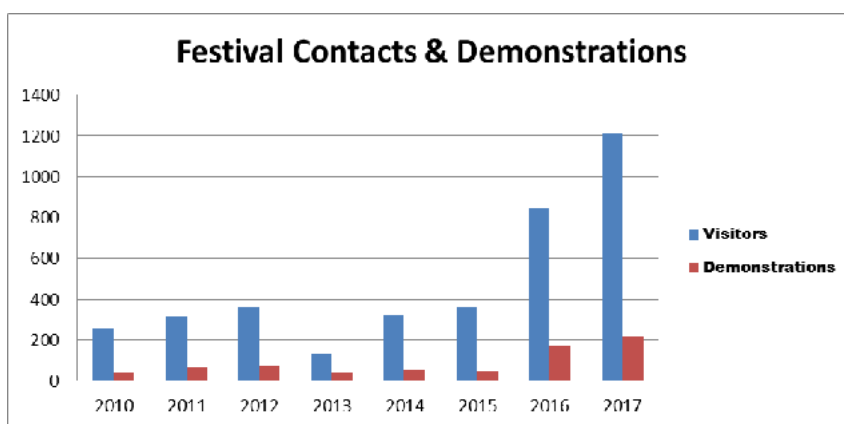
I. Participate in or sponsor community project based programs that investigate watershed health and meet applicable school Science, Technology, Engineering and Math (STEM) standards: The Stormwater Program participated in planning and execution of the Teaching Environment Naturally (TEN) course for Fremont County teachers, held from June 6 – 9, 2017. Thirty-six educators from Fremont County and elsewhere attended the four-day course which included a day on water.

J. Stormwater booth at a community event: 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. The number of 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 following table lists the festivals that the Stormwater Program had a booth at 2017, along with the approximate number of visitors and the demonstrations done with the EnviroScape:

<b>Festival/Event &amp; Dates</b>	<b># of Visitors</b>	<b># of Demonstrations</b>
Safety Town USA 4/18-4/20/2017	254	38
Blossom Festival Craft Fair 5/6-5/7/2017	344	73
Safety Jam 6/3/2017	250	42
Canon City Library’s Community Resource Day 7/13/2017	57	8
National Night Out 8/1/2017	164	25



The Stormwater Program began having a booth at the Blossom Festival in 2010. Since then more festivals have been added. 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 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 2. Public Participation/Involvement*) unless a specific complaint is taken.



K. Pet waste stations: The Cañon City Parks Department provides pet waste stations with bags and trash cans at all City parks, along the Riverwalk and along the Hogback Trail.

**2. Illicit Discharge Education to Businesses and the Public:** The quarterly newsletters and radio PSAs often address the issue of illicit discharges. Both are disseminated or directed to businesses as well as the general public. They also provide tips for preventing contamination of stormwater runoff.

### **3. Nutrients.**

The new permit has the additional requirements of determining targeted sources that are contributing to, or have the potential to contribute nutrients to our receiving waters and to distribute educational materials or equivalent outreach to prioritized target audiences. Targeted sources of nutrients have been determined to be fertilizers, pet/animal waste and yard waste. Information about nutrient impacts is already included in most of the Stormwater Program's brochures and presentations; however more specific messaging will be developed and distributed to the targeted audiences.

#### **Action Items for new permit requirements:**

1. Create a list of the targeted business types that are likely to cause an illicit discharge or improperly dispose of waste and list the local businesses under each type. Document the procedures used to create list. This will be completed prior to the July 1, 2018 deadline.
2. Conduct consistent outreach to the targeted businesses and document. This will begin prior to the compliance date of July 1, 2018.
3. Documentation of any signs and all pet waste stations. Permanent stenciling/markers of storm drains are already tracked in CarteGraph.
4. Determine targeted sources of nutrients and conduct outreach to prioritized targets. Document procedures and outreach. Targeted source determination was completed by the deadline of January 1, 2018. Outreach will begin prior to the July 1, 2018 deadline.
5. The PDD requirements for Public Education and Outreach will be completed prior to the January 1, 2019 deadline. Once completed, the PDD will be posted on the City's website for public's review and comment.

## **Section 4. Illicit Discharge Detection and Elimination**

The revised MS4 permit clarifies the requirements for illicit discharge detection and elimination including more detailed requirements on regulatory mechanisms, tracing and removing a discharge, enforcement responses, priority areas and training. Recordkeeping is also clarified.

The City of Cañon City's 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. Inspections 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 integral parts of the program.

**Discussion of Elements:** All programs listed were ongoing and will continue during 2018.

**1. Storm Sewer System Map:** The revised permit requires the permittee to maintain a current map of the location of all MS4 outfalls with the permit boundary. The City of Cañon City maintains a map of all storm sewer infrastructure including storm drains, pipes, culverts, manholes and outfalls in ArcMap. Outfall inspections and mapping of new outfalls continued during 2017. 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 and numbers of outfalls are listed in the table below. 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. Facility outlets are the point at which a municipal facility discharges to the storm sewer system (including a street). This category was added in 2016 in preparation for the new permit requirements. Footing/Foundation and Roof Drains are only mapped if they discharge directly to a drainage or waterbody. There are a total of 547 outfalls, outlets and other drainage end points 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 243 of them; County or State Agencies have jurisdiction for 14 and 290 are under private jurisdiction. The breakdown for each category as well as the number mapped during 2017 (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. Two outfalls were disconnected from their source in 2017. The pipes remain in place and are periodically checked for discharges to ensure they remain disconnected.

Category	Total Number	Number Mapped in 2017
Disconnected	2	0
Facility Outlet	7	0
Footing/Foundation Drain	58	0
Groundwater Drain	32	1
Industrial Discharge	5	0
Irrigation Return	148	0
Major Outfall	23	0
Outfall	184	1
Outlet	50	0
Roof Drain	37	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 of the outfalls. During 2017, 227 inspections were conducted on outfalls, drains and outlets. The following table shows the breakdown of inspections.

Category	Annual/Routine Inspections	Complaint	Courtesy	Illicit Discharge	Initial
Disconnected	2				
Facility Outlet	2		3		
Footing/Foundation Drains	1				
Groundwater Drain	21				1
Industrial Discharge	0				
Irrigation Return	49				
Major Outfall	17			1	
Outfall	107				1
Outlet	20				
Roof Drains	1	1			

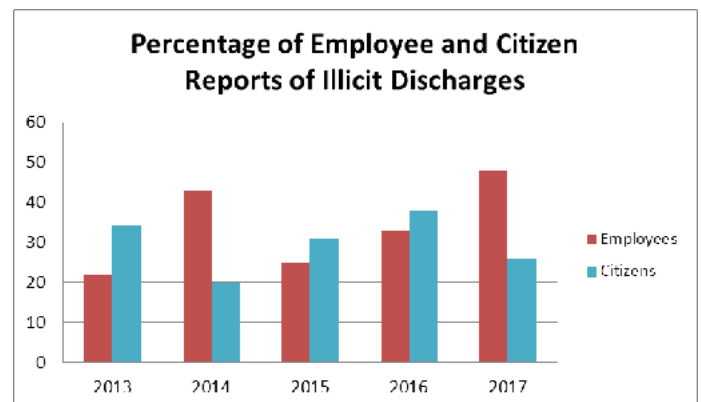
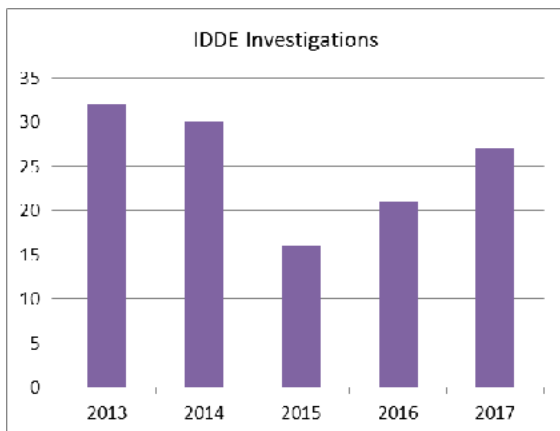
**2. Regulatory Mechanism:** The City of Cañon City adopted Ordinance No. 20, Series of 2005 to establish codes concerning illicit discharges. Some minor changes were made to the Ordinance, effective September 9, 2012 through Ordinance No. 14, Series of 2012 AN ORDINANCE MAKING CERTAIN MINOR AMENDMENTS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

**3. Tracing an Illicit Discharge:** The revised permit requires the permittee to implement procedures to respond to reports or identifications of illicit discharges. The procedures and tools needed to trace the illicit discharge must be documented. The City of Cañon City had previously implemented an Illicit Discharge Detection and Elimination Manual (IDDE Manual) which documented the required procedures and tools. The manual was reviewed and revised in 2017 to ensure consistency with the permit requirements. The full manual may be viewed at [http://www.canoncity.org/departments/departments/streets\\_stormwater\\_and\\_engineering/stormwater\\_construction\\_and\\_water\\_quality.php](http://www.canoncity.org/departments/departments/streets_stormwater_and_engineering/stormwater_construction_and_water_quality.php).

**4. Removing an Illicit Discharge:** The permit requires that the permittee must have written procedures requiring the cessation and removal of illicit discharge, including removal of any surface residue and pollutant sources. The IDDE Manual contains these procedures.

**i. Discussion of the Illicit Discharge Program**

Twenty-seven incidents of potential illicit discharges were investigated in 2017. Although illicit discharge investigations were slightly higher during 2017 as compared to 2016, overall they have steadily declined since 2012. The following graph on the left portrays the trend. The Contact database in CarteGraph assists in tracking how many reports of illicit discharges the Stormwater Program receives from citizens and employees (See Section 3. Public Participation/Involvement). 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.



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 database in CarteGraph allows for comparisons between categories each year which enables staff to see trends and adjust outreach accordingly.

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

Six water quality samples were taken during 2017. Five of the samples were taken either on a single property or from pipes discharging from the property. Sampling was done in response to Code Enforcement’s concerns of illicit discharges into groundwater springs on the property. No human sources of *E. coli* were located on the property. One sample was taken from a newly installed groundwater discharge pipe into a detention basin. It was determined the white residue carried in the water and deposited downstream from the pipe was mostly likely alkali. Benthic macroinvertebrate sampling of the Arkansas River and Four Mile Creek was not conducted in 2017 due to time constraints and budgetary concerns.

**5. Enforcement Response:** The revised permit requires that the permittee must implement written enforcement procedures and actions to eliminate the source of the illicit discharge when identified/reported, discourage responsible parties from willfully or negligently repeating or continuing illicit discharges and discourage future illicit discharges from occurring. The IDDE Manual contains these procedures which the Municipal Code allows for.

Investigations resulted in the illicit discharge enforcement measures shown in the adjacent graph. All illicit discharges were corrected and cleaned up.

Enforcement Action	Number
Verbal Warning	11
Notice of Non-Compliance	3
Cease & Desist	1
Notice of Violation & Enforcement Action w/ fine	0
Letters detailing violation/corrective action	0
Emails detailing violation/corrective action	0

The database in CarteGraph facilitates tracking of other aspects of illicit discharge reports and investigations such as repeat violators. No party was a repeat violator during the year in 2017. Five of those cited had been previously cited for illicit discharges between 2007 and 2017. 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.

**6. Priority Areas:** The permit requires that the permittee must locate priority areas with a higher likelihood of having illicit discharges. The database and mapping of illicit discharges assists in determining areas of past illicit discharges and areas where illicit discharges are concentrated. Land use is also taken into account when determining priority areas. Using these criteria, which are documented in the IDDE Manual, the following areas were deemed priority areas for the City of Cañon City:

- NW Cañon from 2<sup>nd</sup> Street to 9<sup>th</sup> Street; Main Street to Pine Ave
- Businesses along the Water Street Channel from Rainbow Drive to 12<sup>th</sup> Street
- Businesses along Fremont Drive and East Main Street

**7. Training:** Training must be held for applicable municipal staff so they may recognize and appropriately respond to illicit discharges observed during typical duties. Illicit Discharge training was held for 39 Parks, Streets, Water Department, Code Enforcement and Engineering employees. Attendees learned what to look for, how to respond and where the priority areas are. In addition, a short fact sheet was sent to the Chief of Police for distribution among the patrol officers.

**Action Items for new permit requirements:**

1. Develop written procedures for updating the Storm Sewer Map. Written procedures for updating and maintaining the storm sewer map are contained in the Stormwater Technician Reference Manual which was created in 2017.
2. Review ordinances/municipal code and revise as necessary. The review has been started and any needed updates will be completed prior to the July 1, 2019 deadline.
3. Update the IDDE manual. The updates were completed in 2017.
4. Document written procedures for enforcement to ensure consistency. The written procedures are included in the revised IDDE Manual. This was completed before the January 1, 2018 deadline.
5. Develop written list of priority areas. Written procedures were created for determining priority areas. The procedures are contained in the IDDE Manual. This was completed by the January 1, 2018 deadline.
6. Revise training to include the priority areas. Update documentation of training to include recordkeeping requirements. This was completed before January 1, 2018.
7. Review CarteGraph database forms to ensure all requirements are included for recordkeeping. This was completed before January 1, 2018.
8. The PDD requirements for Illicit Discharge Detection and Elimination will be completed prior to the January 1, 2019 deadline. Once completed, the PDD will be posted on the City's website for public's review and comment.

**Section 5. Construction Sites**

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. The revised permit contains new and clarified requirements which need to be implemented prior to July 1, 2019. Until all are implemented the City of Cañon City continues to adhere to the previous permit requirements as is stated in the new permit.

**Discussion of Elements:** All programs listed were ongoing during 2017.

**1 - 3. Regulatory and Compliance Mechanisms:** Ordinance No. 20, Series of 2005 and the City of Cañon City Grading, Erosion & Sediment Control (GESC) 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 2. 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 and post-construction sites with appropriate enforcement actions being taken when needed. During 2017, twenty inspections were performed. Eleven were full inspections, six were reconnaissance inspections and three were compliance re-inspections. During 2017 there were seven active Grading, Erosion and Sediment Control (GESC) permits at seven sites. Two of those were closed out during the year. Due to a clarification in the new permit, after July 1, 2016, Drainage, Erosion and Sediment Control (DESC) permits were no longer required for single family residences being built in subdivisions which have been stabilized. For this reason no DESC permits were issued during 2017. Four permits were active during 2017; three of which were closed during the year. The inspections resulted in the following actions:

<b>Enforcement Action</b>	<b>Number</b>
Verbal Warning	0
Notice of Non-Compliance	4
Cease & Desist	2
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 two repeat violators during 2017.

**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 City-County Health Department, the Pueblo County Engineering and Public Works Department and the Pueblo West Metro District to host a Regional Stormwater Seminar on February 15, 2017. The seminar was geared toward contractors, developers and engineers who work throughout the region, as well as municipal employees. Featured topics and speakers were Todd Griffeth with a Colorado 811 update; Jeremy Hakes with GH Phipps on a basic overview of BMPS, pollution sources and corrective measures; Rik Gay, CDPHE, on state construction inspections; and Alan Searcy, Lakewood, on rain gardens. The seminar was held at the Abbey Events Center in Cañon City and attended by eighty-four people, including organizers, speakers and vendors. The full report is kept with the MS4 permit documentation for 2017.

**Action Items for new permit requirements:**

1. Review the municipal code and ordinances for compliance with new permit requirements. The review has been started and any needed updates will be completed prior to the July 1, 2019 deadline.
2. Create a database to track any permitted exclusions. This will be completed prior to the January 1, 2019 deadline.

3. Update of the GESC Manual to reflect changes in the revised MS4 Permit. This will be completed prior to the July, 1, 2019 deadline.
3. Review and update, if needed, design standards/criteria. This will be completed prior to the July, 1, 2019 deadline.
4. Review procedures and documentation in regards to site plan requirements, review and recordkeeping. This will be completed prior to the July, 1, 2019 deadline.
5. Review inspection procedures and frequencies. Revise as needed to comply with new permit requirements and document. Review and revise inspection forms, if needed. This will be completed prior to the July, 1, 2019 deadline.
6. Document written procedures for enforcement to ensure consistency. The written procedures must include informal, formal and judicial responses. Revise ordinances if necessary. This will be completed by July 1, 2019.
7. Document training procedures for operators of applicable construction activities and document training. This will be completed prior to the January 1, 2019 deadline.
8. Document procedures for IGAs, MOUs, etc. This will be completed prior to the January 1, 2019 deadline.
9. The PDD requirements for Construction Sites will be completed prior to the January 1, 2019 deadline. Once completed, the PDD will be posted on the City's website for public's review and comment.

## **Section 6. Post-construction Stormwater Management in New Development and Redevelopment**

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. The revised permit contains new and clarified requirements which need to be implemented prior to July 1, 2019. Until all are implemented the City of Cañon City continues to adhere to the previous permit requirements as is stated in the new permit.

**Discussion of Elements:** All programs listed were ongoing during 2017.

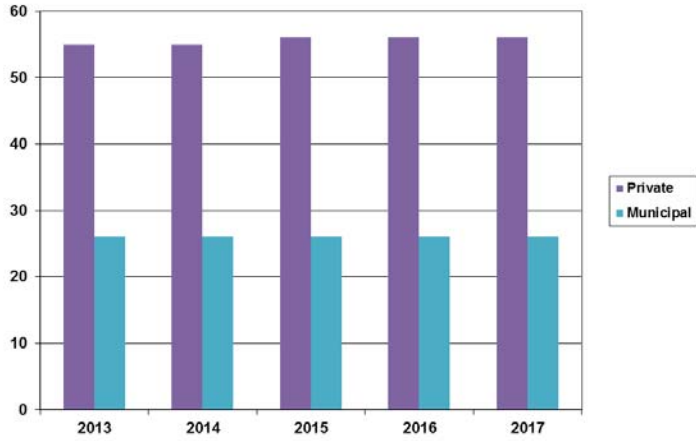
**1 & 5. Regulatory Mechanisms:** Ordinance 20, Series of 2005 addresses the requirements for post-construction permanent BMPs including technical standards and specifications, review and approval procedures and the long-term operation and maintenance of the BMPs.

**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.

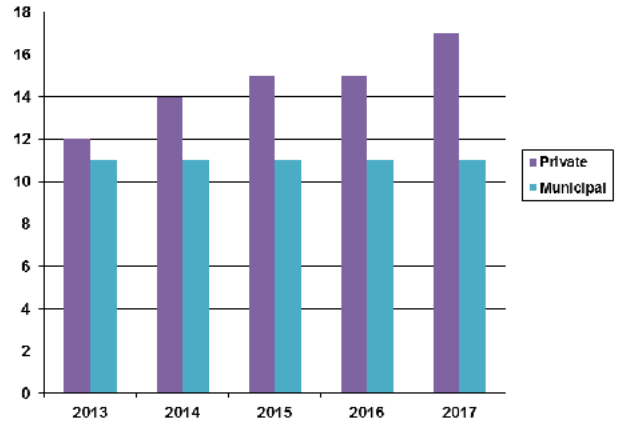
**4. Tracking:** Permanent BMPs are recorded at final inspection, mapped and entered into the CarteGraph database. Five new BMPs were implemented in 2017. The BMPs consisted of two Nyloplast EnviroHoods, one grass buffer, one grass swale and one PLD. The following graphs show the number of private and municipal BMPs inspected each year from 2013 to 2017. Yearly variation in numbers reflects new BMPs added, transfer of jurisdiction from the County to the City, and BMPs removed from service.



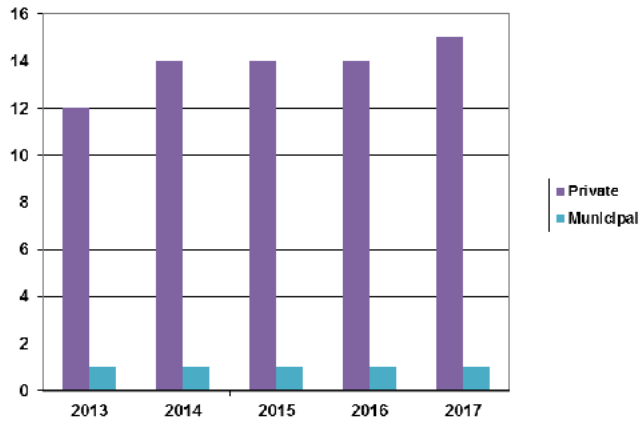
Detention Basins



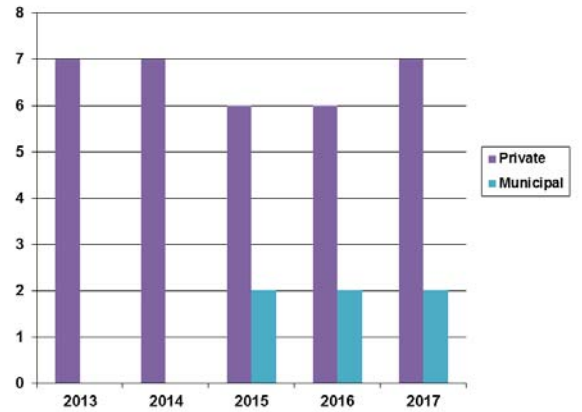
Underground BMPs



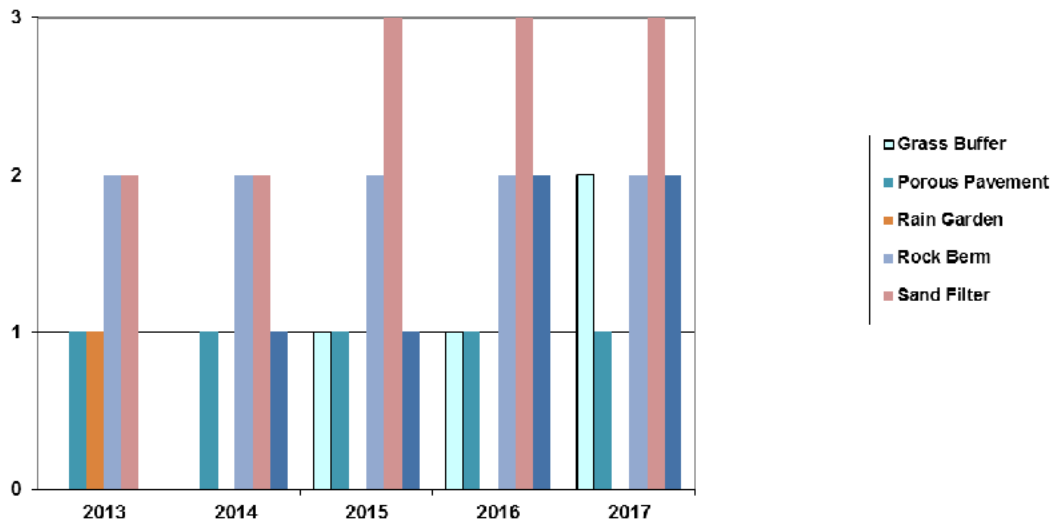
Grass Swales



Porous Landscape Detention



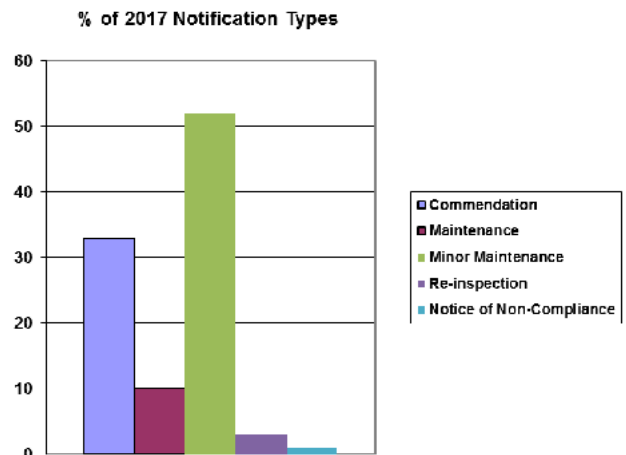
Other BMPs



**6. Monitor long-term compliance:** One hundred forty-five permanent BMPs, of which one hundred three 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 private BMPs. The letters fall into the categories of commendation, maintenance or minor maintenance. Minor maintenance letters are sent for those BMPs that need minor, routine maintenance such as trash removal. Recipients of the minor maintenance letters have shown a history of good maintenance and a willingness to respond favorably to past maintenance letters. A follow-up inspection is not done on the BMP. Maintenance letters are sent for those BMPs which need more extensive maintenance. The BMP is then 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. The appropriate department receives the inspection report for municipal BMPs; the report also serves as a work order. During 2017, a total of one hundred ninety-six inspections were performed on permanent BMPs. The following table shows the breakdown of the inspections. The “Courtesy” category of inspection has been added in response to clarified permit requirements which state that only those BMPs within the permit boundary (City Limit) need to be inspected. Prior to the 2016 revised MS4 permit all municipal BMPs were inspected whether they were inside the permit boundary or not. To remain consistent those BMPs outside of the permit boundary are still inspected as a courtesy to the department which maintains them.

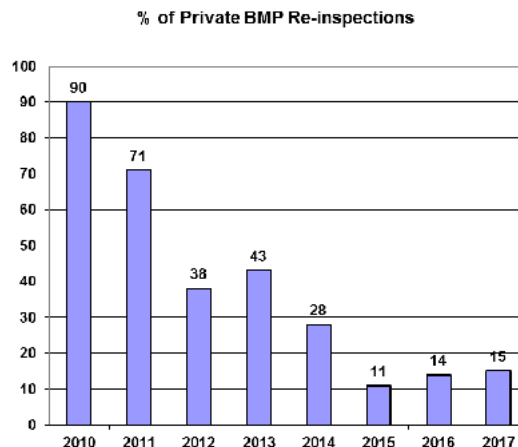
	Private/Federal/County			Municipal		
	Basins	Storm Vaults	Other BMPs	Basins	Storm Vaults	Other BMPs
<b>Annual</b>	56	15	27	25	7	5
<b>Complaint</b>	0	0	0	1	0	0
<b>Construction</b>	0	0	1	0	0	0
<b>Courtesy</b>	0	0	0	1	3	0
<b>Illicit Discharge</b>	0	0	0	0	0	0
<b>Initial</b>	0	2	3	0	0	0
<b>Maintenance</b>	0	0	1	0	0	1
<b>Monitoring</b>	0	0	6	19	0	0
<b>Other</b>	1	0	0	1	0	0
<b>Post-Storm</b>	0	0	0	2	0	0
<b>Re-inspection</b>	5	4	6	1	0	0
<b>Storm</b>	1	0	0	2	0	0

Seventy notifications were sent to non-municipal custodians indicating some level of non-compliance (i.e. needing maintenance). Of those, eleven were maintenance letters and fifty-five were minor maintenance letters. Three letters were sent after a re-inspection revealed the requested maintenance had not been done and one custodian received a Notice of Non-Compliance for two newly installed underground BMPs on the site. Thirty-five of the inspections resulted in letters of commendation being sent to non-municipal custodians. The adjacent graph shows the percentages of types of notifications sent out during 2016.



The following graph shows the trends in re-inspections from 2010 to 2017 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 may be interpreted as more consistent routine maintenance of the privately owned BMPs, resulting in fewer maintenance letters involving re-inspections.



**Action Items for new permit requirements:**

1. Create Standard Operating Procedures or other documentation for exclusions. Create database to track required information. This will be completed prior to the July 1, 2019 deadline.
2. Review applicable ordinances and revise if needed. The review has been started and any needed updates will be completed prior to the July 1, 2019 deadline.
3. Review ordinances & current procedures concerning control measure design, revise if necessary. Review any manuals/design specifications & revise to meet new requirements. Create SOPs if needed. This will be completed prior to the July 1, 2019 deadline.
4. Review current procedures for site plans. Revise if necessary. Create SOPs if needed. Revise the CarteGraph database if needed or create a new recordkeeping method. This will be completed prior to the July 1, 2019 deadline.
5. Review, revise and document procedures for construction inspection and acceptance. Revise recordkeeping. This will be completed prior to the July 1, 2019 deadline.
6. Review, revise and document procedures for long-term operation, maintenance and post-acceptance oversight. Revise CarteGraph database forms as needed. This will be completed prior to the July 1, 2019 deadline.
7. Review, revise and document procedures for enforcement response. Revise CarteGraph database forms as needed. This will be completed prior to the July 1, 2019 deadline.
8. Document procedures for tracking permanent BMPs. Revise CarteGraph database forms if needed. This has been completed.
9. Document training procedures and revise recordkeeping. This will be completed prior to the July 1, 2019 deadline.
10. Document procedures for IGAs, MOUs, etc. This will be completed prior to the January 1, 2019 deadline.
11. The PDD requirements for Post-construction Stormwater Management will be completed prior to the January 1, 2019 deadline. Once completed, the PDD will be posted on the City’s website for public’s review and comment.

**Section 7. Pollution Prevention/Good Housekeeping For Municipal Operations**

The focus of this area of the Stormwater 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 revised MS4 permit requires the permittee to implement a program to prevent or reduce water quality impacts from pollutants from facilities and operations that they own, operate or perform *within the permit area*. The permit conditions have a range of compliance dates from July 1, 2017 to July 1, 2021.

**Discussion of Elements:** All programs listed were ongoing during 2017.

**1. Municipal Facility Runoff Control Measures:**

- A. The permittee shall implement control measures to prevent or reduce potential discharges of pollutants to the MS4 from following municipal facilities: vehicle maintenance facilities, asphalt and

concrete batch plants which do not have a separate permit, solid-waste transfer stations and outdoor storage yards with exposed stockpiles of materials.

B. The permittee shall implement the following categories as necessary to prevent or reduce the pollutant sources present: preventative maintenance, good housekeeping, spill prevention and response procedures, structural control measures, evaluation of non-stormwater discharges and employee training.

C. The permittee shall implement written municipal facility inspection procedures which, at a minimum, must include:

- An annual visual inspection of each applicable municipal facility
- Verification that written facility procedures and documentation reflect current conditions
- Observation of locations and areas where stormwater is discharged off of facility
- Observation of facility conditions, including pollutant sources and control measures.

The recordkeeping requirements for the above permit requirements include the following for each facility:

- Facility identification
- Description of all pollutant sources
- Control measures implemented
- Staff responsible for implemented control measures
- Description of control measures implemented for bulk storage structures
- Inspection records which contain the following: Inspection date, Inspector, Facility ID, Inspection findings including any evidence of polluted discharges leaving the facility and a list of follow-up actions if needed.

Most of these requirements were already being met through the previous permit's requirements. A Pollution Prevention Operations and Maintenance Manual had been created and implemented on January 1, 2010. The manual was reviewed and revised prior to the July 1, 2017 deadline.

A database of all municipal facilities is kept in CarteGraph. Currently there are 56 municipal facilities of which 12 are outside of the permit area. All of the required information is tracked in the database, including inspections. The forms were reviewed and revised to ensure that all required data is recorded. Two new forms were created to address pollutant sources and pollution potential for each facility. The following table shows the number of facilities under each City department.

<b>Department</b>	<b>Total # of Facilities</b>	<b># outside of Permit Area</b>
<b>Stormwater</b>	3	2
<b>Equipment Repair</b>	1	1
<b>Parks</b>	36	4
<b>Streets</b>	1	1
<b>Water Distribution</b>	1	1
<b>Water Treatment</b>	14	3

All municipally owned facilities (including parks) are inspected annually. Courtesy inspections are conducted on those facilities outside of the permit area. The results of the inspections are sent to the appropriate department heads. In 2017, fifty-three inspections were conducted – 41 annual inspections and 12 courtesy inspections. Five trails in the Dawson Ranch area were added to the inspection list in 2017, but not all were inspected during the year.

**2. Municipal Operations and Maintenance Procedures:** The permit requires the implementation of control measures that prevent or reduce discharges from applicable municipal operations (activities). The minimum municipal operations that must be addressed includes:

- Operation and maintenance of streets, roads, highways
- Operation and maintenance of municipal parking lots
- Operations at maintenance storage yards
- Operations at maintenance shops with outdoor storage areas
- Operation and maintenance of snow dumps/snow disposal areas
- Operation and maintenance of sites used for temporary storage of sweeper tailings or other waste piles
- Park and open space maintenance
- Building maintenance
- New construction of municipal facilities
- Application of pesticides, herbicides and fertilizers
- Large outdoor festivals and events
- Municipal construction activities
- Maintenance, replacement and construction of utilities and the storm system

The Pollution Prevention Operations and Maintenance Manual covers each of these areas in detail, providing standard operating procedures for each department in order to reduce or eliminate any pollutants which may be discharged during municipal activities.

**3. Nutrient Source Reductions:** The permittee must implement a program to prevent or reduce nitrogen and phosphorus in stormwater runoff associated with municipal facilities and operations. The City of Cañon City must evaluate, identify and document municipal operations and facilities that have the potential to contribute nitrogen and phosphorus to stormwater runoff and ultimately to the Arkansas River and Four Mile Creek. The City must then implement control measures to prevent or reduce this from happening. These requirements have a compliance deadline of July 1, 2020.

The Pollution Prevention Operations and Maintenance Manual addresses operations and procedures to reduce or prevent nitrogen and phosphorus in stormwater runoff from municipal facilities and operations. The CarteGraph database forms provide for the evaluation, identification and documentation of the facilities with the potential to contribute nutrients to runoff.

**4. Outdoor bulk storage structures of more than 55 gallons for petroleum products and other liquid chemicals:** The permit requires secondary containment or equivalent protection for any bulk storage structures. Currently municipal facilities within the permit area do not have any bulk storage structures which meet the permit requirements. If at any time such structures are installed within the permit area, secondary containment or equivalent protection will be provided. This requirement has a compliance deadline of July 1, 2021.

**5. Training:** The permit requires that applicable municipal staff be trained to implement good housekeeping and pollution prevention during their regular duties. The training must also include information on trash and its effects on water quality. Municipal Pollution Prevention training was held for 39 Parks, Streets, Water Department, Code Enforcement and Engineering employees. Attendees watched the “MS4 RAINcheck” video which addressed good housekeeping, spills, vehicle maintenance, materials management, municipal facilities maintenance and landscape management. In addition the revisions to the Pollution Prevention Operations and Maintenance Manual were reviewed. Each attendee received a copy of the manual.

In addition to the permit requirements The City of Cañon City also conducts inspections on other drainage and stormwater infrastructure such as drainage channels, storm drains, manholes and culverts. Each has its own database in CarteGraph in which is recorded data on each asset and inspection reports.

<b>Channels</b>	<b>Private</b>	<b>Municipal</b>
<b>Annual</b>	24	48
<b>Complaint</b>	1	2
<b>Monitoring</b>	0	1
<b>Post-storm</b>	1	9
<b>Re-inspection</b>	1	2
<b>Storm</b>	0	5

Approximately 17.2 miles of drainage channels (including some under private custodianship) are also inspected. Ninety-four inspections were conducted on the sixty-seven channels under the custodianship of the City of Cañon City and the twenty-nine under private custodianship during 2017. Not all channels were inspected during 2017. The adjacent chart shows the breakdown for inspection types.

Of the channels under private custodianship which were inspected, twelve received letters of commendation for keeping the channels clean. Seven 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-eight of the municipal channels during 2017.

Storm drains are mapped and categorized as part of our Stormwater Program. A percentage of those are inspected yearly. A total of 1,098 storm drains have been identified and mapped to date. Of these, 690 are under municipal jurisdiction, 99 are under county/state/federal jurisdiction and 309 are under private jurisdiction. Like outfalls, inlets are assigned to a primary category in the CarteGraph database. The categories are Irrigation, Irrigation Box, Irrigation Clean-out, Overflow, Storm Clean-out and Storm Inlet. Irrigation boxes and 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 2017 (new, previously identified but unmapped and rebuilt/moved inlets) is detailed in the following table.

<b>Category</b>	<b>Total Number</b>	<b>Number Mapped in 2017</b>
Irrigation	1	0
Irrigation Box	2	1
Irrigation Clean-out	224	3
Overflow	16	1
Storm Clean-out	36	0
Storm Inlet	819	19

There were 182 inlet inspections done during 2017. The following table shows the inspections done per category of inlet.

<b>Category</b>	<b>Complaint</b>	<b>Courtesy</b>	<b>Illicit Discharge</b>	<b>Initial</b>	<b>Maintenance</b>	<b>Monitoring</b>	<b>Other</b>	<b>Post Storm</b>	<b>Re-inspection</b>	<b>Routine</b>	<b>Storm</b>
Irrigation	0	0	0	0	0	0	0	0	0	0	0
Irrigation Box		0	0	1	0	0	0	0	0	0	0
Irrigation Clean-out	4	0	0	3	1	0	0	0	0	12	0
Overflow	1	0	0	1	0	0	0	0	0	2	0
Storm Clean-out	0	0	0	1	0	0	0	0	0	3	0
Storm Inlet	8	1	2	18	8	1	5	2	1	105	2

Storm manholes are also mapped and categorized as part of our Stormwater Program. A percentage of those are inspected yearly. A total of 206 storm manholes have been identified and mapped to date, but data still needs to be collected for many of them. Of these, 161 are under municipal jurisdiction, 15 are under county/state/federal jurisdiction and 30 are under private jurisdiction. Like outfalls and inlets, manholes are assigned to a primary category in the CarteGraph database. The breakdown for each category as well as the number mapped during 2017 (new, previously identified but unmapped and rebuilt/moved manholes) is detailed in the following table.

<b>Category</b>	<b>Total Number</b>	<b>Number Mapped in 2017</b>
Combination Irrigation/Storm	12	0
Dry Well/Clean-out	4	0
Irrigation Clean-out	16	2
Storm Manhole	169	6
Storm Sump Manhole	1	0
Vault Access	1	0
Vault Clean-out	3	0

There were 13 manhole inspections done during 2017. The following table shows the inspections done per category of manhole.

<b>Category</b>	<b>Complaint</b>	<b>Initial</b>	<b>Maintenance</b>	<b>Routine</b>
Combination Irrigation/Storm	0	0	1	0
Drywell Clean-out	0	0	0	0
Irrigation Clean-out	0	2	0	0
Storm Manhole	1	5	0	4
Storm Sump Manhole	0	0	0	0
Vault Access	0	0	0	0
Vault Clean-out	0	0	0	0

The culverts database currently contains 572 culverts. The City of Cañon City has jurisdiction of 427; 52 are under county/state/federal jurisdiction and 93 are under private jurisdiction. Culverts are divided into two categories based upon the primary type of flow they receive: drainage or irrigation flow. Of the culverts in the database, 396 are classified as drainage and 176 are irrigation. There were 220 inspections conducted on culverts during 2017. The following table shows the number of inspections done in each category.

<b>Category</b>	<b>Complaint</b>	<b>Courtesy</b>	<b>Initial</b>	<b>Maintenance</b>	<b>Post Storm</b>	<b>Re-inspection</b>	<b>Routine</b>
Drainage	3	8	5	16	3	0	164
Irrigation	1	0	4	10	0	2	24

Data entry into the storm pipe database began in 2016 and continued in 2017. Pipes are assigned to a category based on the primary type of flow they carry. The categories are Groundwater, Irrigation, Non-Potable, Potable, Stormwater, Stormwater Siphon and Waste. Currently the database contains 1,846 pipes totaling approximately 39 miles. The City of Cañon City has jurisdiction over 905 of the pipes (approximately 22.3 miles); 138 are under county/state/federal jurisdiction (approximately 3.4 miles) and 798 are under private jurisdiction (approximately 13.2 miles).

Stormwater infrastructure projects completed during 2017:

- Completed installation of storm infrastructure on Orchard Ave north of Central Ave.
- Continued the NE Cañon Drainage Study and detention basin design and prepared FEMA grant application.
- Designed and constructed storm sewer improvements on Field Ave north of Central Ave.
- Installation of pipe and repair of ditch on Vine Street between 9<sup>th</sup> and 10<sup>th</sup> Streets.
- Maintenance, repair and replacement of storm water infrastructure City-wide.
- Repair of the low-flow crossings on North Sand Creek
- Storm clean-ups and repairs City-wide

**Action Items for new permit requirements:**

1. Document SOPs for selection, installation, implementation and maintenance of control measures. Prepare Municipal Facility Runoff Control Plans. This was completed by the July 1, 2017 deadline.
2. Review current SOPs for municipal facilities, revise as necessary. Revise CarteGraph forms as necessary. This was completed by the July 1, 2017 deadline.
3. Document inspection procedures and revise CarteGraph inspection forms if necessary. This was completed in 2017, prior to the July 1, 2019 deadline.
4. Review current SOPs for municipal operations, revise as necessary. This was completed by the July 1, 2017 deadline.
5. Identify, evaluate and document operations and facilities which have the potential to contribute nutrients to the MS4. Create new or revise existing SOPs. This was completed in 2017, prior to the July 1, 2020 compliance deadline. Implement control measures as necessary. This will be completed by the July 1, 2020 deadline.
6. Identify sources needing secondary containment, install the containment and document. Currently no municipal facilities within the permit area require secondary containment. This was done prior to the July 1, 2021 deadline.
7. Review training procedures and documentation. Revise as necessary. This was completed.
8. The PDD requirements for Municipal Pollution Prevention/Good Housekeeping will be completed prior to the January 1, 2019 deadline. Once completed, the PDD will be posted on the City’s website for public’s review and comment.

**Trainings, Conferences and Projects:**

1. Colorado Data Sharing Network and WRAP seminar on water quality
2. eRAMS CLEAN Nutrient Dashboard webinar
3. Water Educators Network workshop
4. “Cyanotoxins, Nutrients and Public Health” webinar
5. “Find Your Bacteria Sources – Microbial Source Tracking” webinar
6. “Selling Water & Stormwater Rate Increases” webinar
7. Work Zone/Flagger training
8. Confined Space training
9. “Anti-littering: Social Marketing for Behavior Change” webinar
10. EPA listening session on the Waters of the US
11. International Erosion Control Association Mountain States Regional Conference in Denver
12. Magnesium Chloride/deicing presentation
13. Colorado Association of Stormwater and Floodplain Managers conference
14. 2A Streets Project meetings
15. Data gathering for the Stormwater Utility Rate study
16. “When Basic BMPs are Not Enough” webinar
17. “Green Infrastructure Maintenance – Case Studies in Program Development and Implementation” WEF webinar.



**Memberships/Partnerships:** The City of Cañon City is a member of, or involved in, several councils and associations. The following meetings were attended during 2017:

A. Colorado Stormwater Council (CSC):

i. Cañon City's representative to the CSC served as the Past-Chair for the Council during 2017. Eight Administrative Committee meetings were attended via conference calls. Eight general membership meetings were attended; one by conference call.

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

B. Urban Drainage and Flood Control District (UDFCD): UDFCD began hosting quarterly meetings with the CDPHE staff again in 2016. Two meetings were attended during the year.

C. The City of Cañon City is a member of the Colorado Association of Stormwater and Floodplain Managers. The annual conference was attended by the City Engineer.

D. Staff also called in to several stakeholder meetings of the Water Quality Control Commission, the Water Quality Control Division and the Colorado Water Congress Water Quality Committee.

E. The City of Cañon City is partnered with the Upper Arkansas Recycling Program and the Cañon Proud Program. The Upper Arkansas Recycling Program received \$13,067 in financial support during 2017. Cañon Proud received \$1,350 in support for its annual city-wide clean-up program.

F. The Stormwater Program is a member of the Regional Stormwater Education/Outreach Committee, partnering with Colorado Springs, Pueblo and surrounding small MS4 permittees to pool resources and share ideas for regional stormwater outreach. Two meeting were attended in 2017.

G. The Stormwater Program is also a member of the Southern Colorado Stormwater Education Committee, along with the City of Pueblo, Pueblo County, Pueblo West and the Pueblo City/County Health Department. The committee hosts a seminar each year for construction stormwater education and training of contractors, developers, engineers and municipal employees.

H. A Stormwater Task Force committee was formed in 2017 in partnership with members of the Cañon City Council, Fremont County Commissioners and the Hydraulic Ditch Company. Meetings are mediated by a representative from the Upper Arkansas Area Council of Governments. The mission of the task force is to create a road map to address stormwater issues, in particular funding stormwater infrastructure improvements. The task force has facilitated the funding of a study of the Abbey Detention Basin and stormwater flows intercepted by the Hydraulic Ditch. The latter study will also identify potential primary projects to alleviate some of the flooding of the ditch and surrounding areas. The task force is also working on the concept of an expanded Stormwater Authority which would encompass the populated areas around the Cañon City limits which lie in the county and are not currently under a MS4 permit.