

2023 Stormwater Program Annual Review

CITY OF CAÑON CITY



PREPARED BY CITY OF CAÑON CITY
STORMWATER PROGRAM



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CITY OF CAÑON CITY

Stormwater

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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), also known as the Phase II General Stormwater Permit. This permit was renewed in 2008, with little to no change. On April 15, 2016, CDPHE issued a revised permit. This permit became effective on July 1, 2016 and is currently under administrative extension. The revised permit has a slightly different structure from the previous permits and contained several new requirements with compliance deadlines to meet. Although the permit structure varies from the previous permit, the areas which must be addressed to minimize potential pollutants remain. An additional requirement of a Program Description Document is also included in the revised permit.

The Phase II General Stormwater permit requires Cañon City to develop, implement and enforce a Colorado Discharge Permit System (CDPS) Stormwater Management Plan. The program has 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 the City of Cañon City conduct an annual review of the program to assess the effectiveness of the program elements 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:

- Public Involvement/Participation
- Public Education and Outreach
- Illicit Discharge Detection and Elimination
- Construction Sites
- Post-construction Stormwater Management in New Development and Redevelopment
- Pollution Prevention/Good Housekeeping for Municipal Operations.

Each of the areas has several program elements which have been used to meet the goals of the Stormwater Management Plan.

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. This report contains a breakdown of activities completed by various City Departments during 2023 to meet the requirements of the current permit.

Supplemental Information

Recordkeeping

In late 2018, the City of Cañon City upgraded its asset management database from Cartegraph Navigator to Cartegraph OMS. The upgrade allows the City to not only track information and inspections on assets as was

previously done, but also allows for a more accurate accounting of tasks and costs associated with those assets. It also assists with documenting citizen contacts and any tasks associated with those contacts. The database was expanded to include City assets other than just Stormwater. Recordkeeping with the OMS database began in 2019 with adjustments to the methods and information tracked continuing in order to provide the best information possible.

Appendix C contains a table of the time and expenses associated with the programs and operations which contribute to meeting our MS4 permit requirements. Only those tasks which are tracked through OMS are listed in the table.

Stormwater Management Plan

Section 1. Program Description Document (PDD)

The Program Description Document (PDD) is a requirement of the 2016 permit. To meet this requirement the City of Cañon City's Stormwater Program must develop and maintain records in the form of a program description document. The PDD must contain a list of citations for documents and electronic records used to comply with the requirements of the permit. It must contain a current organizational chart and citations for the most recent version of documents, the date of the document and the location where the documents are kept. The PDD is a fluid document, kept up-to-date as program elements are modified to meet permit requirements and compliance dates.

The PDD for the City of Cañon City's Stormwater Program was initially completed on December 11, 2018. A statement was posted to the Stormwater webpages on the City of Cañon City's website stating:

“PUBLIC NOTICE:

The City of Cañon City administers a general permit for stormwater discharges associated with Municipal Separate Storm Systems (MS4s) in accordance with Colorado's Discharge Permit System (CDPS). The City of Cañon City maintains a Program Description Document that is available upon request to the public for review and comment.”

To date there have not been any requests from citizens to review the PDD.

Section 2. Public Involvement/ Participation

The goal of the Public Involvement/ Participation 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 the elements used to meet this requirement has on public awareness and participation.

The 2016 permit clarified the public notice, feedback and recordkeeping requirements. All public notices concerning stormwater are documented in a yearly program documentation spreadsheet maintained by the Stormwater Coordinator. The public can provide feedback through email, in person, via social media and applications, or by phone. Contacts are documented in the Cartegraph OMS Requests database.

Discussion of Elements: All programs listed below were ongoing in 2023 and will continue to be utilized during 2024. These elements are addressed in the PDD.

1. Public Notices: The City of Cañon City complies with the Colorado Sunshine Act for public notice as set forth in Colorado Revised Statutes. All public meetings are posted on the City of Cañon City's website and on a

public bulletin board inside City Hall at least 24 hours in advance of any public hearing. A notice is also printed in the local newspaper and posted on social media. Meeting schedules and agendas are posted on the City of Cañon City’s website. Digital copies of any public notices concerning stormwater issues are kept in a folder on the Stormwater drive and documented in the yearly annual report spreadsheet.

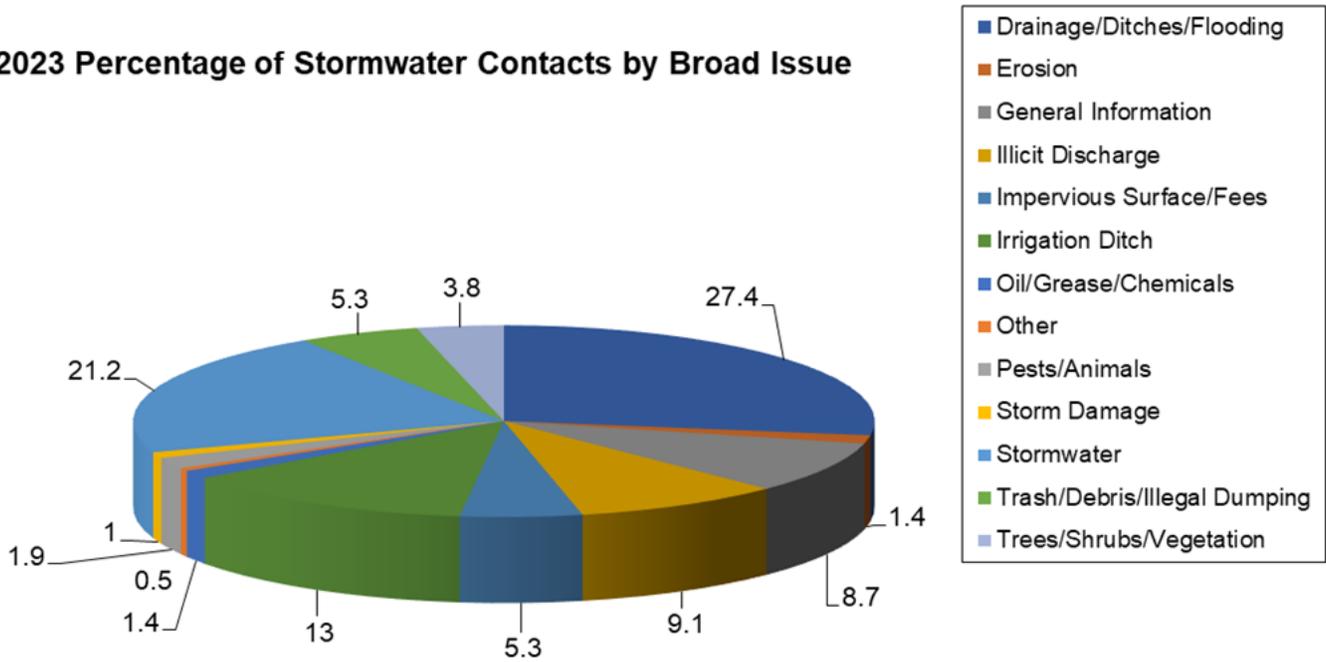
2. Contact Information Availability: Contact information for the City of Cañon City’s Stormwater Program is available through the Stormwater Newsletters and on the web page. It is also included in any newspaper articles and public service announcements. All City of Cañon City field staff have the Stormwater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

3. Feedback: The City of Cañon City introduced a web-based application known as SeeClickFix late in 2019. This application allows citizens and City employees to submit concerns they have to City departments on a wide range of City assets and allows City employees to track and address these concerns. SeeClickFix integrates with Cartegraph OMS for those departments, such as Stormwater, that use both databases. The Stormwater Newsletters also encourage everyone to get involved by calling, emailing or writing in with their questions, complaints or ideas.

A database is kept of contacts 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 broader categories of issues then further assigned to narrower classifications of issues such as clogged culverts or blocked storm drains to facilitate these decisions. The log represents those contacts handled directly by the Stormwater Coordinator, submitted through SeeClickFix or handled by other departments or staff that the Coordinator is made aware of. During 2023, 214 contacts were taken by the Stormwater Coordinator, other Engineering staff or submitted through SeeClickFix concerning 208 issues (i.e. multiple calls were taken on some issues). Illicit discharges comprised 19 of the contacts. The following table and the chart show the breakdown of the broader issue categories. Overall, calls to the Stormwater Program were up from the 198 taken in 2022.

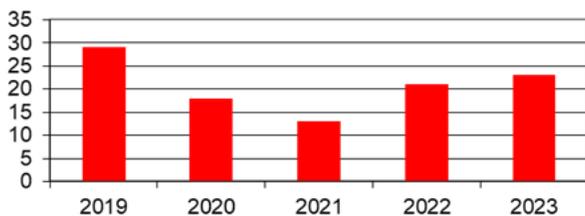
Broad Issue Category	# of Contacts	% of Contacts
Drainage/Ditches/Flooding	57	27.4
Erosion	3	1.4
General Information	18	8.7
Illicit Discharge	19	9.1
Impervious Surface/Fees	11	5.3
Irrigation Ditch	27	13
Oil/Grease/Chemicals	3	1.4
Other	1	0.5
Pests/Animals	4	1.9
Storm Damage	2	1
Stormwater (General)	44	21.2
Trash/Debris/Illegal Dumping	11	5.3
Trees/Shrubs/Vegetation	8	3.8

2023 Percentage of Stormwater Contacts by Broad Issue

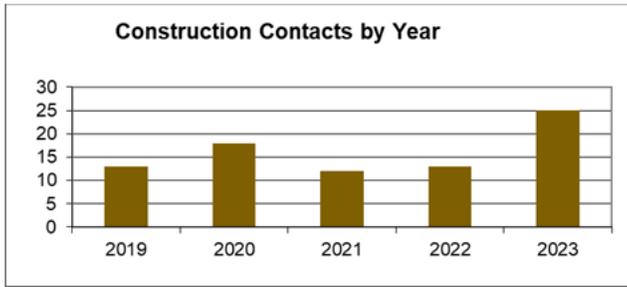


The OMS database allows for tracking trends in the number of calls received each year for each category. The following graphs show the contacts for some of the categories for the last five years. Variability in categories may be attributed to better tracking of the contacts, training of municipal employees, public education and outreach efforts and general variability of issues throughout the year.

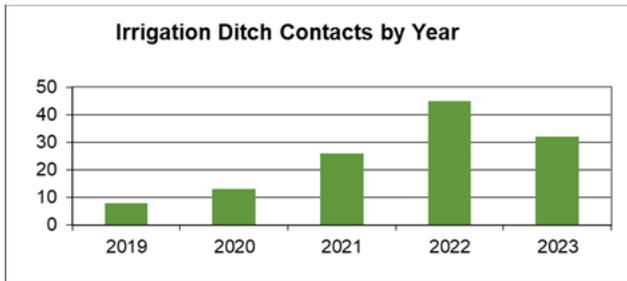
Illicit Discharge Contacts by Year



The amount of illicit discharge contacts has varied in the last five years. 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* for a more complete discussion.)



Construction calls also show variability over the years, mostly due to the amount and type of construction occurring during the year. These types of calls include both complaints about construction and requests for construction-related stormwater information.



A new broad category of “Irrigation Ditch” was added in 2019. Calls concerning irrigation ditches and laterals were rolled into the Drainage category prior to then. Although the City and various ditch companies assign the responsibility of maintaining the irrigation laterals between the center of the road and the property line to the private property owner or resident, the Stormwater Program and Streets Department receive numerous calls each year concerning plugged laterals

causing overflows onto City streets or irrigation water users not receiving their shares. Stormwater or Streets personnel often try to assist in resolving the issues.

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 also facilitates tracking of other aspects, such as how the contact was made and how the contact information for the Stormwater Program was obtained, in order to determine how effective our outreach efforts are. During 2023, the primary method of contact continued to be by phone, followed by the SeeClickFix app and “in-person” visits. The method of obtaining stormwater contact information primarily was through prior contacts, then via the receptionist and through the internet/social media. The charts below show the breakdown of each. 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 has strengthened, but still needs to be pursued more diligently.

Mode of Contact	Number	%
Email	22	10.6
In Person	26	12.5
Mail	1	0.5
Phone	120	57.7
SeeClickFix	32	15.4
Social Media	3	1.4
Text	4	1.9

How Contact information was Obtained	Number	%
Inspection Letter	3	1.4
Internet/Social Media	34	16.3
Newsletter	7	3.4
Other	2	1.0
Personal Contact	5	2.4
Prior Contact	67	32.2
Receptionist	37	17.8
Referral	16	7.7
Training	22	10.6
Unknown	15	7.2

The OMS database maps the locations of received requests, which then can be exported to analyze which areas may need extra outreach and to assist in prioritizing infrastructure maintenance and capital projects.

With the upgrade to the OMS database, tasks can now be assigned to specific requests which allows various City departments to track labor and material costs associated with those requests. The data can also be analyzed to see how long tasks associated with the requests took to complete and the amount of time for the request to be closed. In 2023, 106 tasks were entered into the OMS database associated with requests (excluding those associated with illicit discharges and stormwater construction-permitted sites). Of those, 90 tasks were investigations or inspections; the rest were a combination of debris removal and general cleaning, enforcement actions and other miscellaneous tasks. Illicit discharge tasks are discussed further in Section 4.

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 the effectiveness of the program elements in this category is a subjective evaluation as it is difficult to directly track the effect each of these measures has on public awareness, participation and behavioral changes.

The 2016 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 (nutrients) 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 that must be done to meet these requirements.

The following elements were used to meet our permit requirements during 2023.

Discussion of Elements:

1. Illicit Discharge Education to Businesses and the Public:

A) In 2018, the Stormwater Program determined that construction contractors, restaurants and window washers should be targeted as likely sources of illicit discharges or improper disposal of waste. Lists of individual businesses were created and updated as needed.

Due to an incident involving a food truck vendor in 2022, food cart/truck vendors were added to the list as a likely source of illicit discharges and improper disposal of waste. A fact sheet was developed and distributed to 7 vendors by the Stormwater Coordinator. An additional 25 fact sheets were given to the Royal Gorge Chamber of Commerce for distribution during the Whitewater Festival. The fact sheet was also incorporated into the application packet each food vendor must submit to be licensed to operate within the City of Cañon City's limits. The fact sheet describes what illicit discharges are and provides tips for pollution prevention in regards to the operation of a food cart or truck. Additionally, it describes the types of enforcement which may occur for illicit discharges. The Planning Director provides a list of those vendors which have received or renewed their license and received the fact sheet through that process.

B) The Stormwater Newsletters and radio PSAs often address the issue of illicit discharges. Both are disseminated or directed to businesses as well as the general public. The newsletters and PSAs also provide tips for preventing contamination of stormwater runoff. The Stormwater Program webpages on the Cañon City website contain a section on what businesses can do to minimize and/or prevent contamination of stormwater runoff.

2. Educational Materials and Activities (from the provided table in the permit): The 2016 permit contains a table of the Education and Outreach Activities which must 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 past and current activities are in accord with the activities contained in this 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. The following programs were utilized during 2023.

i. Passive Outreach:

A. Radio/television/movie theater advertisement: During 2023, 10 different 30-second public service announcements concerning stormwater were aired on local radio stations for a total airtime of 571.5 minutes (9.53 hours). Radio public service announcements are rotated throughout the year. Newspaper notices and radio PSAs which include stormwater information were also run in conjunction with the leaf pick-up program. Five stormwater/water-related programs were run on CCTV-Channel 19 with a total airtime of 168.8 hours.

B. Distribute educational materials by brochure: Several types of brochures are given out during events at which the Stormwater Program has a booth. See further discussion under Section 3.2.ii.G.

C. Distribute educational materials by fact sheet: Several types of fact sheets are given out during events at which the Stormwater Program has a booth. See further discussion under Section 3.2.ii.G.

D. Distribute educational material by utility bill insert: The Stormwater newsletters are sent out as a utility bill insert and contain educational material. See Section 3.2.ii.E for further discussion.

E. **Stormwater related signage:** The City of Cañon City has stormwater related signage as well as pet waste stations. A total of 107 pet waste educational and regulation signage and pet waste stations, as well as stormwater educational signage are located within the permit boundaries (City Limits). The following table lists the types and numbers of signage and waste stations.

Type of Signage/Station	Number
Pet Waste Educational Signage	55
Pet Waste Signs	4
Pet Waste Station Indicator Signs	3
Park Trailhead Signs which include pet waste regulations	6
Pet Waste Stations	38
Stormwater Educational Signage	1



F. **Website:** The City of Cañon City’s Stormwater webpages contain information for the public ranging from informational brochures about water quality, illicit discharges and construction stormwater runoff control to children’s activity booklets. Current editions of the newsletters, the annual program review, and other content were added or updated during 2023. Additionally, various announcements or articles were posted under the City News section. Visits to the stormwater webpages were tracked via monthly reports. Due to a change in format, the monthly reports were only generated from January through June, 2023, during which time 105 entrances into the webpages were recorded.

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 Stormwater Newsletters, on the public service announcements aired by radio and on the City’s website. With the implementation of the SeeClickFix application, the public can now report issues via their phone or computer. Reports entered into the application are automatically assigned to a City department and an email notification is sent to the contact person for that department.

B. **Ongoing advertisement/promotion on how to get more information about the stormwater program:** Contact information is provided in each of the Stormwater Newsletters, on the public service announcements aired by radio and on the City’s website as well as the City’s social media sites.

C. **Ongoing social media program:** The City of Cañon City has a Facebook page and Twitter account. Thirty stormwater-related posts were included on the City’s social media pages during 2023. The posts covered a wide range of topics including pollution prevention information.

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 information for the public ranging 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): Stormwater Newsletters are sent out periodically with City water bills and are available on the City of Cañon City’s website. Each newsletter 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 Stormwater Program’s contact information). During 2023, 13,713 newsletters were sent to residents and 1,695 newsletters were sent to commercial establishments. Residents and businesses that receive their water bill via email also receive the stormwater newsletter by email. A total of 1,920 newsletters were emailed throughout the year. The 2023 newsletters are included in Appendix A. Additionally, six City Employee newsletters contained information on the Stormwater Program activities and pollution prevention tips.

F. Promotion of existing local stormwater/environmental events or program that help protect water quality: The City of Cañon City promoted its Stormwater Program and various events through social media and the City’s website. The City also promoted municipal, private and non-profit clean up events, as well as the City Streets Department’s annual fall leaf pick-up program.

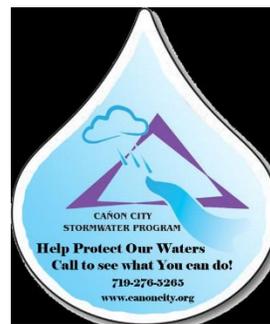
G. Distribute promotional items or giveaways: Several different types of giveaways, such as reusable litter bags, pet waste dispensers and Cañon City Stormwater Program magnets were given out during in-person events which occurred in 2023. Lip balm and hand sanitizer pens were added to the giveaways in 2023. Litter bags, pet waste baggie dispensers, activity books, crayons and magnets were available in a display during National Pollution Prevention week. Brochures, activity booklets and other items given out during events are tracked in a yearly spreadsheet as per permit record-keeping requirements. The following table shows the breakdown of the types of items given out.



Litter Bag



Pet Waste Baggie Dispenser



Magnet



Lip balm and Hand Sanitizer

Type of Giveaway	Number Given Out
Brochures and flyers	32
Activity Booklets	35
Cañon City Stormwater Program Magnets	27
Biodegradable Reusable Litter Bags	39
Pet Waste Baggie Dispensers	225
Crayons with Cañon City Stormwater Logo	36
Hand Sanitizer Pens “Only Rain Down the Drain”	107
Lip Balm “Only Rain Down the Drain”	146

H. Participate in or sponsor a waterway clean-up and trash removal event:

1. The City of Cañon City co-sponsored and participated in the Cañon City Metro Recreational District’s annual Clean Up/Green Up Arkansas River and Riverwalk trash removal event in 2023. Approximately 5,000 pounds of trash were removed (including homeless camps) by the 53 volunteers that participated in the event.

2. The City of Cañon City also participated in a river clean-up organized by the Royal Gorge RIO and provided beverages and a stormwater booth for the event. Volunteers rafted the river or walked along the banks and Riverwalk to remove trash and debris. Over 500 pounds of trash and debris were removed.



I. Participate in or sponsor a stormwater or environmental presentation:

- a. A Stormwater presentation was provided for the Cañon City Council’s Water Committee. Ten members were presented with information on the effects of stormwater runoff, permitting background, the Cañon City Stormwater Program and upcoming issues.
- b. The Director of Public Works presented to the Royal Gorge Realtors Association on floodplain and stormwater issues and regulations.
- c. The Director of Public Works presented information on various topics, including stormwater, to the Dawson Ranch HOA annual meeting.

J. Participate in or sponsor a stormwater or environmental event: The City held a Cañon Proud Dumpster and Electronics Recycling clean-up event in April. The event netted 10 dumpsters full of items and 2 truckloads of electronics to be recycled.



K. 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 participates in the bi-annual Teaching Environment Naturally (TEN) course for Fremont County teachers. A mini-workshop was held for approximately 50 K-8 Harrison School teachers in February. The Stormwater Program assisted and provided giveaways for the workshop.



L. Stormwater booth at a community event:

- a. During the RIO River Clean Up event, the Stormwater booth had 26 visitors and conducted 5 demonstrations using the EnviroScope.
- b. The Cañon City Community Service Officers and the Stormwater Program had a joint booth at the 2023 Safety Jam. Approximately 300 people visited the booth, learning about pet safety and stormwater pollution prevention and flood safety. The EnviroScope was used to conduct 33 demonstrations.



M. Pet waste stations: The Cañon City Parks Department provides pet waste stations with bags, trash cans and signage at all City parks, along the Riverwalk and along the Hogback and Tunnel Drive Trails. Pet waste stations have also been added to the trail network in the Dawson Ranch Subdivision. See the discussion under Section 3.2.i.F. for a list of signage and pet waste stations.



N. Participate in, plan or present stormwater materials to schools: In October, the Stormwater Program was invited to present to the Mountain View Core Knowledge School 6th Grade Social Studies students on the topic of “Where you live can affect how you live”. Three demonstrations were given – impervious area effects on stormwater runoff, Stormwater Soup and pollution prevention using the EnviroScope. The students were encouraged to participate by answering questions and proposing solutions for pollution prevention.

3. **Nutrients:** The 2016 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.
- A) Targeted sources of nutrients have been determined to be fertilizers, pet/animal waste and yard waste.
 - B) Information about nutrient impacts is included in most of the Stormwater Program’s brochures, presentations and PSAs. During National Pollution Prevention Week, social media posts included tips for reducing nutrient pollution.

Section 4. Illicit Discharge Detection and Elimination

The 2016 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, Four Mile Creek and various drainages throughout the City, as well as water quality testing if discharges are found are integral parts of the program.

Discussion of Elements: All programs listed were ongoing in 2023 and will continue during 2024.

1. Storm Sewer System Map: The revised permit requires the permittee to maintain a current map of the location of all MS4 outfalls within 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 and through the Cartegraph OMS database. Outfall inspections and mapping of new outfalls continued during 2023. 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 permanent stormwater control measures 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.

The Cañon City Stormwater Program has mapped a total of 584 active outfalls, outlets and other drainage end points located along the Arkansas River, Four Mile Creek and the various drainages and irrigation ditches throughout the City. The City of Cañon City has jurisdiction over 268 of them; County or State Agencies have jurisdiction for 27 and 289 are under private jurisdiction. The breakdown for each category is detailed in the following table. Ten outfalls (either new, replaced or existing but un-mapped) were added to the database during 2023.

Category	Total Number
Facility Outlet	22
Footing/Foundation Drain	61
Groundwater Drain	35
Industrial Discharge	4
Irrigation Return	152
Major Outfall	28
Outfall	197
Outlet	32
Roof Drain	53

The footing/foundation, roof and groundwater drains and the 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 permanent stormwater control measures and facilities. Outfalls and major outfalls are inspected annually (time permitting). The outfall database in Cartegraph and the mapping assist in prioritizing inspections of the outfalls. During 2023, 169 inspections were conducted: 152 were routine inspections, 14 were initial inspections and 3 were conducted in response to complaints.

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. In 2019, the Stormwater Regulations were moved to a new section of municipal code: Title 20 Stormwater Illicit Discharges and Permits (Ordinance No. 12, Series of 2019). Some minor corrections and/or additions were made at that time. The Ordinance can be viewed on the City of Cañon City’s website at www.canoncity.org. During 2022, revisions to Title 20.10.160.E were proposed and adopted by City Council. Ordinance 18, Series 2022 entitled “An Ordinance of the City of Cañon City Amending Chapter 20.10 of the Cañon City Municipal Code Concerning Notice of Violation and Penalty Assessment for Stormwater Violations” allows City personnel to move straight to assessing penalties in cases of egregious violations or chronic violators.

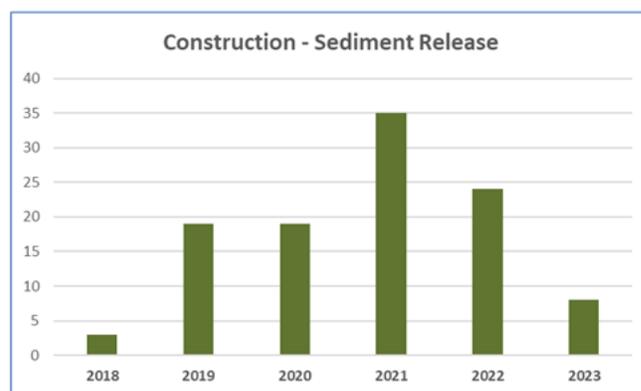
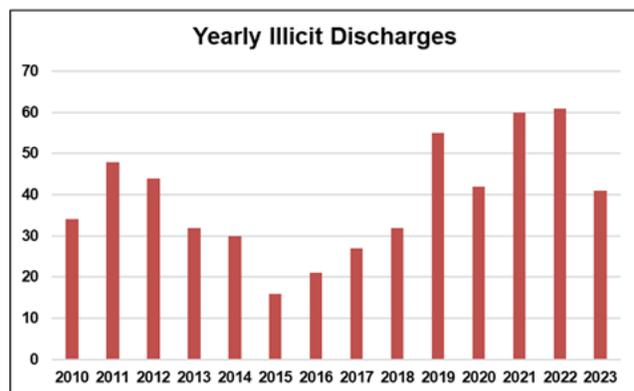
3. Tracing an Illicit Discharge: The revised permit requires the permittee to implement procedures to respond to reports or identifications of illicit discharges. The procedures and tools needed to trace the illicit discharge must be documented. The City of Cañon City had previously implemented an Illicit 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 and again in 2019 in keeping with the municipal code Title changes. The full manual may be viewed at: <https://www.canoncity.org/DocumentCenter/View/235/Illicit-Discharge-Detection-and-Elimination-Manual-PDF>.

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

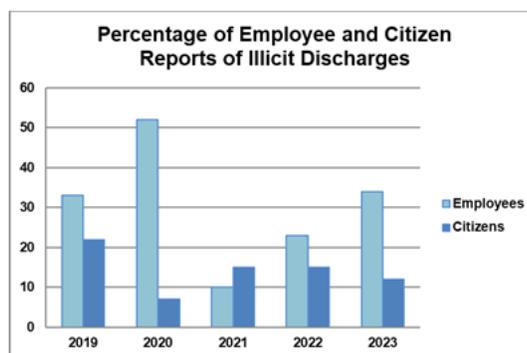
i. Discussion of the Illicit Discharge Program

Forty-two incidents of potential or actual illicit discharges were investigated during 2023, resulting in 87 initial and follow-up inspections. Of the 42 reported or discovered discharges 10 were potential

discharges and the rest were prohibited discharges. Reported discharges had declined between 2011 and 2015 then rose again. The increase in illicit discharges since 2015 may be due to better awareness and reporting of potential illicit discharges. The significant increase in illicit discharges from 2019 through 2022 is mainly due to increased oversight and enforcement on single family residential construction sites. Due to this increased oversight, discharges from single family residential construction sites decreased in 2023. The following graphs show the trend in overall illicit discharges and construction sites sediment release illicit discharges.



The Request database in Cartegraph assists in tracking how many reports of illicit discharges the Stormwater Program receives from citizens and employees (*See Section 2. Public Participation/Involvement*). The adjacent graph shows the reports received from citizens and employees as a percentage of the total number of reported illicit discharges each year for the last 5 years.



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 discharges were reported or discovered for each category during 2023. The database in Cartegraph allows for comparisons between categories each year which enables staff to see trends and adjust outreach accordingly.

Category	Incidents	Category	Incidents
Accident	2	Illicit Connection	0
Automotive Discharge	11	Leaking Dumpster	0
Blocked Flowlines	3	Non-hazardous Spill	0
Construction – Concrete Washout	3	Other	1
Construction – No BMPs	2	Pesticide/Herbicide/Fertilizer	0
Construction – Other	2	Pet Waste	1
Construction – Sediment Release	8	Power Washing	0
Hazardous Spill	1	Prohibited Discharges – Other	0
Illegal Dumping – Drainage	3	Restaurant Oil/Grease	1
Illegal Dumping – Flowline	1	Sediment	1
Illegal Dumping – Inlet	2	Sewage	0
Illegal Dumping – Other Area	0	Yard Waste	0
Illegal Dumping – Waterbody	0		

Water quality sampling is done when needed to assist in determining the source of the discharge. One sampling event was conducted during 2023 using field testing strips only. The sampling was to determine the source of water bubbling up where a section of pavement had been removed. The source was determined to most likely be groundwater, not a leaking City water pipe. Benthic macroinvertebrate sampling of the Arkansas River and Four Mile Creek was not conducted in 2023 due to time and budgetary constraints.

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 or 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.

i. Discussion of Enforcement Responses

Investigations resulted in the illicit discharge enforcement measures shown in the following table. The majority of enforcement actions were due to sediment tracking from single-family residential construction sites. Single-family residential construction lots typically fall under the one-acre or more size requirement of the CDPHE’s Construction Stormwater Permit and the City of Cañon City’s GESC permit, and as such, discharges are handled through the City’s Illicit Discharge program. One Notice of Violation was issued with a \$168.00 fine for City abatement costs in cleaning up a restaurant grease discharge.

Enforcement Action	Number
Verbal Warning	26
Notice of Non-Compliance	0
Notice of Violation & Enforcement Action w/ fine	1
Stop Work Order (Verbal)	1
Letters detailing violation/corrective action	2

The database in Cartegraph facilitates tracking of other aspects of illicit discharge reports and investigations such as repeat violators. Five parties had more than one violation during the year, all but one were residential construction companies. The fifth party with more than one violation was a garbage disposal company. The Cartegraph OMS database also maps the locations of illicit discharges 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 assist 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 have been deemed priority areas for the City of Cañon City:

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

Review of illicit discharges during 2023 did not result in a change of the priority areas.

7. Training: Training must be conducted for applicable municipal staff so they may recognize and appropriately respond to illicit discharges observed during typical duties. A video training was created in December, 2020, which all applicable employees hired after July 2019, are required to complete. Twenty-one employees completed the on-line training and passed the exam in 2023. Employees included those from Parks, Streets and Water Distribution, as well as Community Services Officers, the Director of Public Works, the Water Distribution Supervisor and the Economic Development Manager. Additionally, twenty Cañon City Police Officers attended

abbreviated trainings on illicit discharge detection and response. These trainings were facilitated and conducted by the Chief of Police and the Community Services Supervisor.

Section 5. Construction Sites

The Construction Sites elements of our Stormwater Management Program are 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 were implemented prior to the July 1, 2019 compliance date.

Discussion of Elements: All programs listed were ongoing during 2023.

1. Regulatory, Compliance and Exemption 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. 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. In 2019, the Stormwater Regulations were moved to a new section of municipal code: Title 20 Stormwater Illicit Discharges and Permits (Ordinance No. 12, Series of 2019). Some minor corrections and/or additions were made at that time. During 2022, revisions to Title 20.10.160.E were proposed and adopted by City Council. Ordinance 18, Series 2022 entitled "An Ordinance of the City of Cañon City Amending Chapter 20.10 of the Cañon City Municipal Code Concerning Notice of Violation and Penalty Assessment for Stormwater Violations" allows City personnel to move straight to assessing penalties in cases of egregious violations or chronic violators. The Municipal Code can be viewed on the City of Cañon City's website at www.canoncity.org. The City of Cañon City's GESC manual was reviewed and revised to ensure compliance with the new and updated requirements in the revised 2016 MS4 Stormwater Discharge Permit. City Council approved the revisions on June 17, 2019 (Resolution No. 18, Series 2019).

2. Control Measure Requirements: The City Municipal Code requires the implementation of stormwater control measures on all applicable construction sites. The City's GESC manual provides guidance for construction site operators on that implementation.

3. Site Plan Review: The procedures for site plan review are addressed through the City of Cañon City's Grading, Erosion and Sediment Control Manual. The Director of Public Works reviews all site plans prior to approval and issuance of any permits for construction within our permit boundaries.

4. Procedures for Receipt and Consideration of Information Submitted by the Public: A database is kept of all contacts 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 or construction investigations resulting from a complaint or concern submitted by a citizen is logged into the database in Cartegraph and can be cross-referenced through the Request database.

5. Site Inspections and Enforcement of Control Measures: Inspections are performed at all applicable construction and post-construction sites as per the schedule provided in the 2016 MS4 permit. Appropriate enforcement actions are taken when needed. During 2023, there were 25 open Grading, Erosion and Sediment Control (GESC) permits and 5 open Drainage, Erosion and Sediment Control (DESC) permits. Eleven of the GESC permits and 1 of the DESC permits were issued in 2023. Fourteen of the open GESC permits and 4 of the DESC permits were completed and closed during the year. Five of the GESC permits were City construction sites which also had State Construction Stormwater Discharge Permits.

Due to a clarification in the 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 had been stabilized, however, contractors are encouraged to still apply for the permit to ensure proper control measures and drainage are addressed for the site. The DESC permit issued during 2023 was for single family residence being constructed in a subdivision that had not yet been stabilized. Those single family residential sites which do not require a DESC permit are addressed through the City’s Illicit Discharge programs should there be an issue at the site. The 2016 MS4 permit contains more robust inspection requirements, including a timeline for conducting routine, reduced and compliance inspections. Recordkeeping requirements are also detailed in the permit. With the upgrade of our database to Cartegraph OMS, City GESC and DESC permits are tracked in the database along with all inspections, associated tasks and enforcement actions. The following tables show the number and type of inspections conducted at permitted construction sites during 2023 and any enforcement actions taken. It should be noted that the State Construction Stormwater Discharge permit has a slightly different inspection schedule than the MS4 Stormwater Discharge permit. The City sites which also had a State construction permit were inspected per the State permit’s schedule which also served to meet our required MS4 permit inspections.

Inspection Type	Number
Complaint	2
Compliance	28
Final Close-Out	2
Initial	12
Other	6
Post-Storm	12
Preliminary Close-Out	1
Reduced Frequency-Indicator Inspection	6
Reduced Frequency-Final Stabilization	2
Reduced Frequency-Inactive Site	12
Reduced Frequency-Winter Conditions Exclusion	1
Re-inspections	5
Routine	105

Enforcement Action	Number
Verbal Warning	4
Notice of Non-Compliance	3
Stop Work Order	1
Notice of Violation & Enforcement Action w/ fine	0
Letter detailing violation/corrective action	3

No fines were issued for permitted construction activities during 2023.

6. Training and Education for Construction Site Operators: This is primarily 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. Regional Stormwater Seminar

Cañon City again joined forces with the City of Pueblo, the Pueblo County Engineering and Public Works Department, the Pueblo West Metro District and Colorado State University-Pueblo (Southern Colorado Stormwater Education Committee) to host a Regional Stormwater Seminar on February 23, 2023. Colorado Department of Transportation (CDOT) Region 2 joined the planning committee in 2023. The seminar was geared toward contractors, developers and engineers who work throughout the region, as well as municipal employees. The seminar featured an update on CO811 by Todd Griffith, followed by a day-long training on Stormwater Management & Erosion Control (SMEC) presented by Scott Olson of Altitude Training Associates. The seminar was held at CSU-Pueblo and was attended by 90 people, excluding organizers, speakers and vendors. Attendees of the full-day training received a certificate of completion from Altitude Training Associates. The full report is kept with the MS4 permit documentation for 2023.

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 2016 permit contains new and clarified requirements which were implemented prior to July 1, 2019, compliance date.

Discussion of Elements: All programs listed were ongoing during 2023.

1. Regulatory Mechanisms and Exemptions: Ordinance No. 20, Series of 2005 and the City of Cañon City Grading, Erosion & Sediment Control (GESC) Manual were enacted in 2006. 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. In 2019, the Stormwater Regulations were moved to a new section of municipal code: Title 20 Stormwater Illicit Discharges and Permits (Ordinance No. 12, Series of 2019). Some minor corrections and/or additions were made at that time. The Ordinance can be viewed on the City of Cañon City’s website at www.canoncity.org.

2. Design Criteria & Standards and Review & Approval Procedures: The City of Cañon City’s revised Grading, Erosion and Sediment Control (GESC) manual now contains a section on post-construction permanent stormwater control measures design criteria. Additionally, the site plan review process assures that post-construction permanent structural control measures meet design standards. Inspections during the construction process and final inspections assure that the control measure(s) has been properly constructed. The Director of Public Works documents all site plan reviews and approvals. Final as-built drawings are kept with the file for the post-construction permanent control measure. All construction inspections of the control measure are entered into the Cartegraph OMS database for that asset.

3. Recordkeeping/Tracking: Permanent stormwater control measures are recorded, mapped and entered into the Cartegraph OMS database. Ten new permanent stormwater quality control measures were implemented in 2023. Of the ten new permanent control measures, six were detention/water quality basins, two were porous landscape detention facilities, one was an underground water quality structure and one was a sand filter. Procedures for documenting and mapping new permanent control measures are contained in the Stormwater Coordinator’s manual. The following table lists the number of active control measures and custodianship for maintenance.

BMP Type	Private/Federal/County/State	Municipal
Bioretention – Rain Garden	1	0
Detention/Water Quality Basins	64	27
Grass Buffer	2	0
Grass Swale	19	1
Porous Landscape Detention	10	2
Porous Pavement – Gravel	2	0
Rock Berm	2	0
Sand Filter	7	0
Permanent Sedimentation Basin	0	2
Underground Water Quality Structures	21	12

The 2016 MS4 permit contained an additional recordkeeping requirement of documenting which applicable development sites were subject to an exclusion and the type of exclusion (allowed by the permit) granted. Exclusions are documented in the Stormwater Construction Permits database in Cartegraph OMS. Three exclusions for “Excluded Existing Roadway Areas” were granted in 2023.

4. Monitor Long-term Compliance with Enforcement Actions: The 2016 permit requires that permanent post-construction stormwater control measures be inspected at least once a permit term (5 years) to ensure conformity with the site plan and to identify any inadequate control measures or needed maintenance. Every effort is made to inspect each control measure at least once a year, however, occasionally time constraints prevent a yearly inspection on every one. When time constraints occur, those control measures which have shown a history of needing routine maintenance are prioritized for inspection. The results of inspections are entered into the Cartegraph OMS database.

An inspection report and letter are sent to the custodian of the private control measures. The letters fall into the categories of commendation, maintenance or minor maintenance. Minor maintenance letters are sent for those 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. Maintenance letters are sent for those control measures which need more extensive maintenance. The control measure 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. For municipal stormwater control measures, the appropriate department receives the inspection report. Tasks are assigned in Cartegraph OMS to address any issues noted.

During 2023, a total of 58 inspections were performed on permanent stormwater control measures. Due to time constraints, the majority of those were on permanent control measures under City jurisdiction. Newly installed control measures were inspected during construction to ensure installation was per plan detail. As the City is a relatively small MS4, most of the private permanent control measures were driven by at least once during the year; if any issue was noted, an inspection was conducted and a report was sent to the custodian of the control measure. The following table shows the type and number of inspections performed during the year.

	Private/County/Federal/State			Municipal		
	Basins	Storm Vaults	Other PSWCMs	Basins	Storm Vaults	Other PSWCMs
Annual	1	0	1	23	9	5
Complaint	0	0	1	4	0	0
Construction	0	0	1	1	0	0
Initial	5	1	3	0	0	0
Post-Storm	0	0	1	0	0	0
Re-inspection	1	0	1	0	0	0

Ten notifications were sent to non-municipal custodians indicating some level of non-compliance (e.g. needing maintenance). Of those, 1 was a maintenance letter, 8 were minor maintenance letters and 1 was a re-inspection letter requiring that the maintenance work be completed. Twenty-one of the inspections resulted in letters of commendation being sent to non-municipal custodians.

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 2016 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 had a range of compliance dates from July 1, 2017 to July 1, 2021. All requirements with a compliance date were met prior to the compliance date.

Discussion of Elements: All programs listed were ongoing during 2023.

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 the 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 from a 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 and again in 2020. Copies were distributed to all applicable City employees.

A database of all municipal facilities is kept in Cartegraph. Currently there are 63 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 in Cartegraph have been 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 in 2017. The following table shows the number of facilities under each City department.

Department	Total # of Facilities	# outside of Permit Area
Facilities	2	1
Parks	39	4
Stormwater	7	2
Streets	1	1
Water Distribution	12	4
Water Treatment	2	0

Every effort is made to inspect all municipally owned facilities (including parks) annually. In the event of time constraints, priority is given those facilities which rate higher on the pollution source and pollution

potential evaluations. 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 2023, 52 inspections were conducted – 51 on facilities within the permit boundaries and 1 on a facility outside of the permit boundary.

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 include:

- 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.

The City of Cañon City conducts inspections and maintenance on other stormwater infrastructure such as drainage channels, storm drains, manholes, culverts and pipes. Each type of asset has its own database in Cartegraph in which base data, inspections and tasks are recorded for each individual asset.

i. Drainage Channels: The City of Cañon City has custodianship over 59 drainage channels; 35 are under private custodianship. The City of Cañon City participates in the FEMA Community Rating System to provide our citizens with reduced flood insurance rates. As part of this system, drainage channels are inspected and maintenance is conducted (e.g. vegetation management, trash removal, sediment removal and repairs). During 2023, 84 inspections were conducted on channels. Maintenance was conducted on 21 channels throughout the year, including vegetation management, debris removal, herbicide application and excavation of sediment.

ii. Storm Drains: Storm drains are mapped and categorized as part of our Stormwater Program. A percentage of those are inspected yearly. A total of 1,256 storm drains have been identified and mapped to date. Of these, 761 are under municipal jurisdiction, 102 are under county/state/federal jurisdiction and 393 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/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 2023 (new, previously identified but unmapped and rebuilt or moved inlets) is detailed in the following table.

Category	Total Number	Number Mapped in 2023
Irrigation	4	0
Irrigation Box	37	13
Irrigation Clean-out	215	2
Overflow	20	3
Storm Clean-out	56	10
Storm Inlet	924	47

One hundred seventy-two inlet inspections were conducted during 2023. The adjacent table shows the types of inspections conducted.

Inspection Type	Number
Complaint	4
Illicit Discharge	3
Initial	64
Routine	101

iii. Storm Manholes: Storm manholes are also mapped and categorized as part of our Stormwater Program. A percentage of those are inspected yearly. A total of 240 storm manholes have been identified and mapped to date, but data still needs to be collected for many of them. Of these, 188 are under municipal jurisdiction, 14 are under county/state/federal jurisdiction and 38 are under private jurisdiction. Like outfalls and inlets, manholes are assigned to a primary category in the Cartegraph database. The breakdown for each category is detailed in the following table.

Category	Total Number	Number Mapped in 2023
Combination Irrigation/Storm	16	3
Dry Well/Clean-out	7	2
Irrigation Clean-out	19	0
Storm Manhole	192	2
Storm Sump Manhole	2	0
Vault Access	1	0
Vault Clean-out	3	0

Six initial manhole inspections were conducted during 2023.

iv. Culverts: The culverts database currently contains 610 culverts. The City of Cañon City has jurisdiction of 446; 50 are under county/state/federal jurisdiction and 114 are under private jurisdiction. Culverts are divided into two categories based upon the primary type of flow they carry: drainage or irrigation flow. Of the culverts in the database, 442 are classified as drainage and 168 are irrigation. During 2023, 25 new culverts were added to the database and 222 inspections were conducted.

v. Pipes: Data entry into the storm pipe database began in 2016. 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 2,129 pipes. The City of Cañon City has jurisdiction over 971 of the pipes; 177 are under county/state/federal jurisdiction and 981 are under private jurisdiction.

vi. Maintenance: Beginning in January, 2021, the City acquired a new vac truck and created two new full-time positions for the express purpose of cleaning and maintaining our storm sewer system. The Streets Department also performs maintenance, repair, replacement and installation of stormwater infrastructure

throughout the City. Some vegetation management and other tasks are conducted by City contractors. Fremont County Weed Management performs weed control on City properties. Tasks and costs associated with the maintenance of the storm sewer system, whether by City personnel, contractors or Fremont County Weed Management, are tracked in the Cartegraph database. These costs are shown in the table in Appendix C.

During 2023, the Stormwater Maintenance Crew cleaned and maintained the following which resulted in the removal of 32.8 cubic yards of debris and sediment:

- 318 storm drains and irrigation boxes/clean-outs
- 31 storm manholes
- 2 water quality vaults
- 64 culverts
- 328 storm pipes
- 2 storm outfalls
- Performed cleaning of storm drain grates only City-wide, primarily after storm events
- Performed debris removal from other City stormwater assets

Stormwater infrastructure projects during 2023:

- Installation and replacement of storm water and irrigation infrastructure in conjunction with the 2A Streets Project on N. Reynolds Ave, Pear Street and Field Ave.
- Installation and modifications to stormwater and irrigation infrastructure in conjunction with the 2A Streets Project on Franklin Ave between N. 19th Street and Orchard Ave.
- Modifications to stormwater infrastructure in conjunction with the 2A Streets Project on College Ave.
- Continuation of the Abbey-Rhodes Avenue drainage stormwater capital improvements funded through the Certificates of Participation issued in 2019.

vii. Good Housekeeping: The Street Sweeping Program through the City Streets Department is also partially funded through the Stormwater Program as it removes sediment and trash from the streets which otherwise would enter our storm sewer system and eventually our waterways. In 2023, the street sweeper removed 935.25 tons of sediment and debris from the City streets. The Streets Department's annual leaf pick-up program also benefits stormwater quality by removing yard waste (and potential nutrients) that has the potential of entering our storm sewer system. The 2023 event collected 197.4 cubic yards of leaves, of which 41 cubic yards were recycled.

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 had 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, as well as the types of control measures implemented to prevent or reduce pollutants from leaving the facility. The manual was created and implemented on January 1, 2010. The manual was reviewed and revised in 2017 and again in 2020. No new control measures needed to be implemented to address nitrogen and phosphorus in stormwater runoff from municipal facilities or operations.

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 municipal bulk storage structures within our permit boundaries (City Limits). 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 had a compliance deadline of July 1, 2021. Secondary containment was installed around the Magnesium Chloride container at the Public Works facility on October 3, 2018, which is outside of the permit limits.

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. A video training was created in December, 2020, which all applicable employees hired after July, 2019, are required to complete. Twenty-one employees completed the on-line training and passed the exam in 2023. Employees included those from Parks, Streets and Water Distribution, as well as Community Services Officers, the Director of Public Works, the Water Distribution Supervisor and the Economic Development Manager. Each received a copy of the Pollution Prevention Operations and Maintenance Manual upon completion of the training.

Other Duties, Trainings and Meetings

In addition to duties conducted to meet the City of Cañon City's Stormwater Discharge Permit requirements, Stormwater and Engineering personnel also perform additional duties and attend trainings, conferences and association meetings in which the City has a membership. Cost information is not tracked in the OMS database for all of these activities; for those that are, the cost information is included in Appendix C. Information on these items follows:

Other Duties:

1. Stormwater and GIS personnel maintain and update the impervious areas for all parcels within the City limits for the assessment of the Stormwater Utility Fee.
2. Assistance with projects as assigned by the Director of Public Works.
3. Staying informed on other types of State permits and actions which may affect the City's Stormwater Program.

Trainings and Conferences:

1. CIRSA's hazardous and confined space awareness training
2. Porous Pavement webinar
3. Cartegraph OMS asset management database updates
4. Modern Design of Stormwater Channels
5. Fundamentals of Stormwater Treatment
6. EPA National Nutrient Inventory
7. CDPHE TMDL 101 webinar
8. Process-based Restoration
9. Gutter Bin Presentation
10. Working in Waterways
11. Concrete Canvas webinar
12. Sexual Harassment & Workplace Violence
13. Colorado Association of Floodplain and Stormwater Managers

Memberships/Partnerships: The City of Cañon City is a member of, or involved in, several councils and associations. The following meetings were attended during 2023:

1. Colorado Stormwater Council (CSC): Cañon City's representative to the CSC attended 11 virtual general membership meetings, 5 303d Committee meetings and 1 Monitoring Workgroup meeting.
2. MS4 Permit Workgroup Quarterly Meetings with CDPHE, hosted by Mile High Flood District: Three meetings were attended during the year.
3. The 303(d) Rulemaking hearing through the CDPHE Water Quality Control Commission.
4. Two meetings of the Colorado Water Congress Water Quality Group on CDPHE's proposed dredge and fill actions/permits.
5. The Stormwater Program is also a member of the Southern Colorado Stormwater Education Committee, along with the City of Pueblo, Pueblo County, Pueblo West Metro District and CSU-Pueblo. The committee hosts a seminar each year for construction stormwater education and training of contractors, developers, engineers and municipal employees. During 2023, 5 meetings were attended concerning the 2023 and 2024 regional seminars.

APPENDIX A
EDUCATION & OUTREACH EXHIBITS



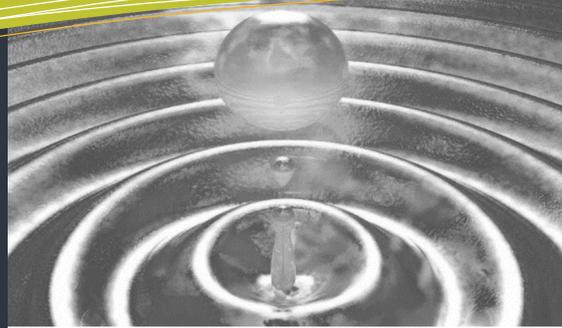
Stormwater Management Program News

First Edition 2023

Stormwater Pollution Prevention Tips

Follow these tips to minimize potential impacts to stormwater runoff.

- Use fertilizers sparingly and only as the manufacturer directs. Excess fertilizer will just wash off the lawn and into the storm system, potentially causing water quality problems in the Arkansas River and possibly other drainages. Excess fertilizer in our waterbodies can lead to algae blooms which impact wildlife, recreation and drinking water.
- Pick up your pet waste while out on walks and make sure outdoor pet areas are cleaned regularly. Pet waste can carry bacteria and viruses that we don't want in our waterways and it can contribute nutrients as it decays.
- Never blow, sweep or place grass clippings or other yard waste in the street along the curb. Runoff from storm events or over-irrigation of lawns can wash the clippings or other waste into the nearest storm drain or culvert, leading to blockages of flow and localized flooding. If the waste makes it through the storm sewer system, it will be washed into the Arkansas River where it may cause other issues such as algae blooms or other impacts to wildlife and recreation.
- Wash your car on a vegetated area rather than in the street. The vegetation will filter pollutants from the wash water.



City of Cañon City

P.O. Box 1460
128 Main Street
Cañon City, CO 81215-1460
(719) 276-5265

City News:

The City of Cañon City welcomed its new Director of Public Works, Leo Evans, in January of this year. Leo will be the direct supervisor of the Stormwater Program. He also manages and oversees the following departments: Engineering, Facilities & Fleets, Parks & Open Space, Streets, and Water Treatment & Distribution. Please welcome him when you see him out and about!



Cañon City Water Committee:

City Council is forming a Water Committee to assist Council in reviewing, evaluating and to make recommendations concerning all legislative water issues which may include development, regulations, water quality, water quantity and conservation. Council accepted letters of interest from individuals through March 10, 2023 and will select the committee members. Committee member positions will include representatives from a Fremont County irrigation ditch company or agriculture, water recreation/conservation, development, and Fremont County/Cañon City residents.

Rhodes Avenue Stormwater Improvement Project:

Improvements to the drainage channel on the west side of Rhodes Avenue have been substantially completed from south of E Main Street to south of Ute Street. The project is currently on hiatus pending permit approval from the railroad.

North Reynolds Avenue 2A Streets Project:

Water line replacement is currently underway on North Reynolds Avenue from Fremont Drive north to Pear Street. The 2A Street Improvement project is out to bid with selection of the contractor anticipated to occur in April and work beginning shortly thereafter. Improvements include road reconstruction and installation of curb and gutter and sidewalk.

2023 Regional Stormwater Seminar:

The Southern Colorado Stormwater Education Committee, of which Cañon City is a member, held their 10th Regional Stormwater Seminar on February 23rd. The seminar featured a full-day course on Stormwater Management and Erosion Control (for construction sites). Attendees of the full-day course received a certificate of completion. Over 100 people attended the seminar this year.



Earth Day, April 22, 2023

This year's theme for Earth Day is "Invest In Our Planet". By investing our time, energy and resources in activities such as community clean-ups, we are supporting cleaner water and environment which can help lead to healthier communities.

April 22 is the 53rd anniversary of Earth Day. It marks the birth of the modern environmental movement to address issues such as pollution of our land, water and air. Earth Day sprang from a 1969 massive oil spill in Santa Barbara, California which (then) Senator Gaylord Nelson and others witnessed. The incident prompted Senator Nelson, with the assistance of others, to promote a national day of action. The first Earth Day in 1970 inspired 20 million Americans to rally and demonstrate against the impacts of pollution. In the time since, the movement has gone global resulting in more than one billion people world-wide marking the day as one of action to improve our environment, change human behavior and advocate for global, national and local policy changes. To learn more about Earth Day visit www.earthday.org

Did you know that a 2019 study led by 5 Gyres Institute showed an estimated 171 trillion floating plastic particles in the world's oceans. The study looked at data from 11,777 ocean stations in six major marine regions from 1979 to 2019. It is estimated that the amount of plastic pollution could rise 2.6 fold by 2040. Plastics (and other types of pollutants) are often carried to the oceans via inland rivers and streams, so preventing it at the source is a major step in reducing the amount of pollution that makes it to the seas.

Locally, there are several clean-up events in the planning for the next few months. Watch for announcements for these events:

- Cañon City Area Recreation and Park District's Annual Clean Up/Green Up River and Riverwalk event. The annual event is scheduled for April 29.
- Royal Gorge RIO will be hosting their river clean-up on May 21.
- Events for Canon Proud Clean-up are in the planning stages for April; more information will be posted as details are confirmed.
- Trail clean-ups are regularly scheduled by Fremont Adventure Recreation. More information on these can be found at www.joinfar.org or through their social media.



"When we try to pick out anything by itself, we find it hitched to everything else in the Universe." – John Muir

Please feel free to direct any concerns or questions to Glenda DeBekker, City of Cañon City Stormwater Program at either 719.276.5265 or grdebekker@canoncity.org.

Spring Clean-Up of Irrigation Laterals and Ditches

Irrigation ditches will soon come on in Cañon City which means the lateral pipes and ditches along property boundaries will be flowing with water. Please take the time to make sure these pipes and ditches, including Right-of-Way ditches, along your property are clear of any debris and sediment. Cañon City Municipal Code, Title 19, assigns this responsibility to the property owner or resident. Regardless of whether you have water shares or use the irrigation water or not, it is your responsibility to ensure the water flows unobstructed. Downstream users depend upon it.

Irrigation water is used to water crops, gardens and yards within the City, so it is also important to keep the water as clean as possible. The water eventually returns to the Arkansas River or Four Mile Creek. Any items, such as trash, grass clippings and sediment have the potential to be washed into the river or creek. These items can also cause blockages of culverts or pipes, leading to water overflowing, flooding the street or adjacent properties. Please do not dump any trash, yard waste, pet waste or other substances into these laterals or into the mainstem of the irrigation ditches.





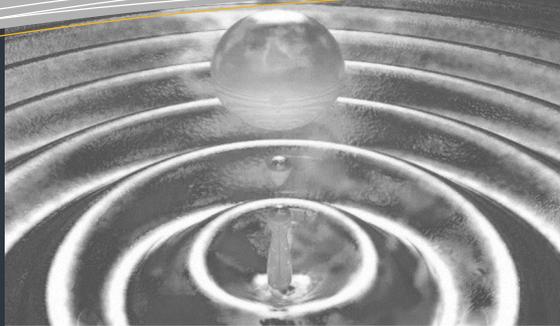
Stormwater Management Program News

Second Edition 2023

Stormwater Pollution Prevention Tips

Follow these tips to minimize potential impacts to stormwater runoff during this fall and winter.

- When performing fall fertilizing use fertilizers sparingly and only as the manufacturer directs. Excess fertilizer will just wash off the lawn and into the storm system, potentially causing water quality problems in the Arkansas River and possibly other drainages. Excess fertilizer in our waterbodies can lead to algae blooms which impact wildlife, recreation and drinking water.
- Make sure to use drip pans or cloths to capture any spills or drips when performing maintenance to get your vehicle winter-ready. Drips and spills can be absorbed by sand or cat litter then swept up and placed in the garbage for disposal.
- Dispose of left over chemicals, paint and material from yard care and home improvement projects properly. If possible donate left over items to places such as Habitat for Humanity's ReStore or check with local paint stores about recycling left over paint. Try a neighborhood swap for unused materials. Cat litter or sand can be added to cans to absorb the paint; once dry it can be placed in the garbage for disposal.
- Place shoveled snow back on your lawn to provide extra moisture as it melts, rather than placing it in the street.

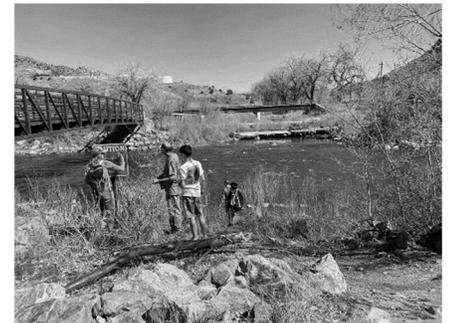


City of Cañon City

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(719) 276-5265

Spring/Summer Updates:

City personnel participated in the Rec District's annual Clean Up Green Up event at the end of April. The event concentrated on removing trash along the Arkansas River and Riverwalk through town. Fifty-three volunteers helped remove almost 5,000 pounds of trash and debris!



City personnel also participated in the Royal Gorge RIO's annual Arkansan River clean-up in May. Volunteers rafted the river or walked along the river, picking up trash and debris. Thanks to all who participated, over 500 pounds of trash and debris were removed.



The City of Cañon City held a Dumpster and Electronics Recycling event in April. Ten large dumpsters were filled and two truckloads of electronics were collected for recycling.



The Cañon City Community Service Office and Stormwater Program had a joint booth at the 2023 Fremont County Safety Jam in June. Almost 300 people stopped by to learn about keeping their pets safe while on walks from the CSO Officers and to learn about stormwater pollution prevention by the City's Stormwater Program.



Upcoming Events:

The City of Cañon City will be hosting a paper shredding event in October. Only paper will be accepted for shredding – no newspaper or other type of media will be accepted during this event. Paper will be accepted from the public at City Hall in the downstairs foyer on Tuesday, October 10th from 7 am to 10 am and on Thursday, October 12th from 11:30 am to 1:30 pm. The cost is \$0.50 per pound, cash only. All paper collected will be shredded on October 24th.

The City Streets Department will be conducting its annual leaf pick up beginning in November. Specific dates will be announced later this fall.

Notes from the Field:

City personnel have been conducting annual inspections of City drainages and stormwater infrastructure such as detention basins. We have noticed more debris and trash in the channels than we normally do. Many of the items appear to be wind-blown items that end up in the channels. We'd like to take this opportunity to remind our residents to keep dumpster and trash tote lids closed to prevent trash from being blown into the streets and drainages and possibly end up in the river. It seems like wind storms are becoming more common in the area so we also recommend that yard items such as patio furniture cushions, garden fencing and wading pools be secured when high winds are in the forecast. These types of items have been found in drainages; if not retrieved by the owner, the City will remove and dispose of them.

Grass clippings and other yard waste have also been found in drainages during inspections. Please remember that dumping yard waste or other items into the street, drainages or detention basins is against City Code. Yard waste can be washed into storm drains or culverts which may cause them to become clogged and lead to localized flooding. If the yard waste makes it to the river or other drainages, it could cause algae blooms as it decays. Please bag all yard waste for pick up by your waste disposal company or compost it.



Please feel free to direct any concerns or questions to Glenda DeBekker, City of Cañon City Stormwater Program at either 719.276.5265 or grdebekker@canoncity.org.

Stormwater and Street Projects Update

N. Reynolds Ave/Pear/Field Ave: Construction is on-going. Crews are placing the remaining sections of curb and gutter and prepping for pavement installation. New irrigation pipes, clean-outs and storm drains have been installed.

Franklin Ave – 19th St to Orchard: Work will begin soon and will be focused first on installing irrigation and drainage features prior to new pavement, curb and gutter, and sidewalks.

College Ave – 3rd St to 9th St: Work is anticipated to begin in early October and will include full reconstruction of pavement. Spot repairs of curbs and sidewalk ramp upgrades will also be done.

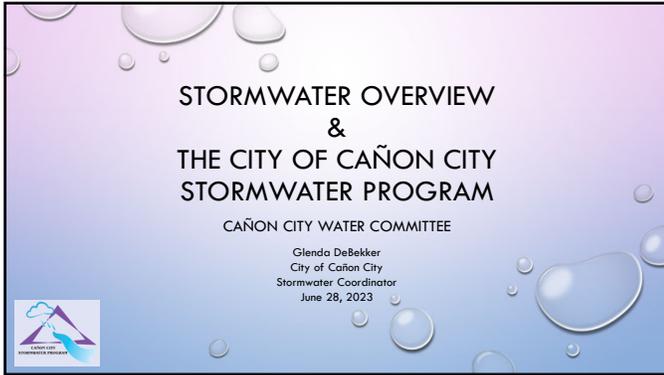
Rhodes Ave: Completion of the stormwater improvement project is anticipated to commence mid- to late November and be finished by April, 2024. Work will include relocation of existing utilities and installation of new utilities under the railroad, stormwater and irrigation improvements, and restoration of the impacted roadway.



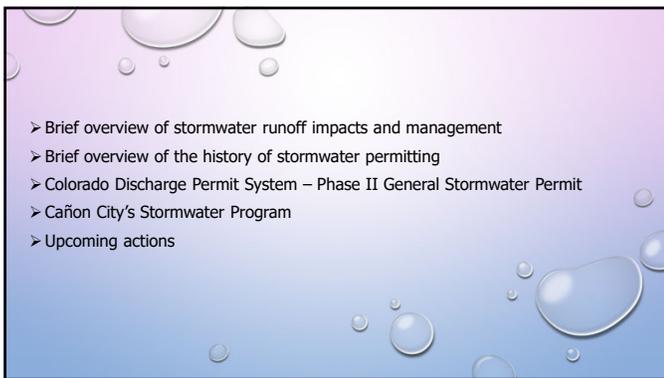
Tidbits

Cañon City's official rainfall total for May, 2023, was 2.97" which is the second highest for May since 2000. The total for June, at 1.86", is also the second highest for that month since 2000. And as of September 18, our rainfall total is at 1.7", making it the fifth highest for September since 2000.

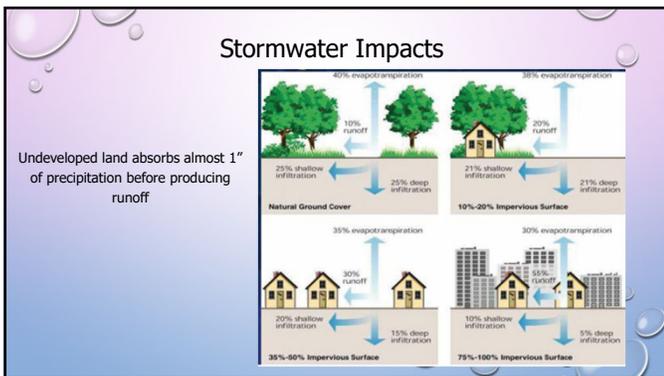
Thanks to our Stormwater Maintenance crew the City's storm sewer system appeared to handle these storms better than it had in previous years.



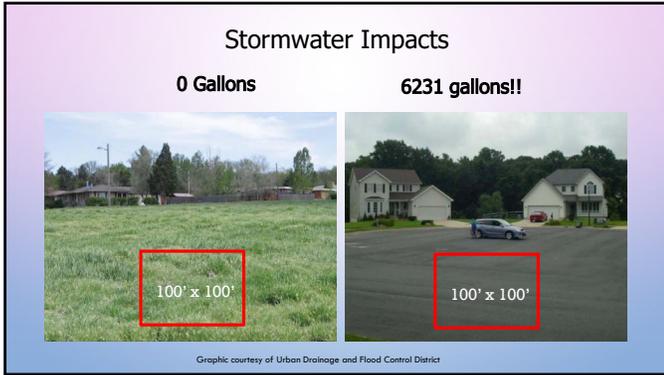
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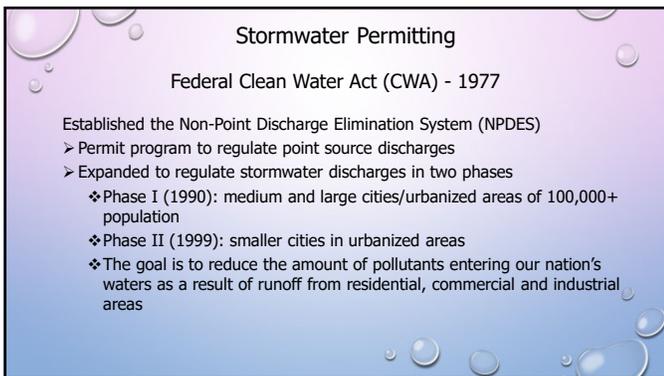
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6

SRD01

Stormwater Permitting

Colorado Discharge Permit System

- Administers the NPDES Permits for the EPA in Colorado
- Colorado Department of Public Health and Environment (CDPHE)
- Phase I Individual Permits and Phase II General Permits
- Colorado Regulation 61: Permittees must "develop, implement, and enforce a stormwater management program designed to reduce the discharge of pollutants from the MS4"
 - ❖ MS4: "A conveyance or system of conveyances (including: roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains)...designed or used for collecting or conveying stormwater."
 - ❖ Cañon City was issued its first permit in 2003

7

Stormwater Permitting

Colorado Phase II General Stormwater Discharge Permit "Stormwater Discharges Associated with Municipal Separate Storm Sewer Systems (MS4s)"

The permit contains six areas that the permittee (MS4) must develop programs for in order to meet the goal of reducing pollutants in stormwater runoff:

- Public Involvement/Participation
- Public Education and Outreach
- Illicit Discharge Detection and Elimination
- Construction Sites
- Post-construction Stormwater Management in New Development and Redevelopment
- Pollution Prevention/Good Housekeeping for Municipal Operations

8

Stormwater Permitting

Public Involvement/Participation

The goal is to provide a method for the public to be involved with the City's Stormwater Program by providing feedback through a variety of methods.

- Public Notices of meetings concerning stormwater
- Availability of contact information for the Stormwater Program
- Response to Citizen concerns
 - ❖ SeeClickFix
 - ❖ Phone
 - ❖ Other modes of contact

9

Education and Outreach

- 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.
- Newsletters
- Stormwater Booth at community events with demonstrations/giveaways
- Presentations to schools and community groups
- Partnering with or supporting local groups in clean-up events
- Social media outreach
- Radio Public Service Announcements
- Web pages on City Web site
- Pet Waste Stations in local parks/trails



10

Illicit Discharge Detection and Elimination (IDDE)

What is an "Illicit Discharge"?

- Anything other than stormwater
- Non-enforceable discharges

Program Elements

- Education
- Ordinances
- Investigations
- Water Sampling
- Enforcement
- Training



11

Construction Sites

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.

Program Elements

- Ordinances
- Site Plan Review
- Local and State Permitting
- Site Inspections
- Education/Training
- Enforcement



12

Post-Construction

Reduce the stormwater impacts from areas of new development and significant redevelopment as much as possible through planning procedures and enforcement mechanisms.

Program Elements

- Ordinances/Regulations
- Design Criteria and Standards
- Site Plan Reviews
- Construction Inspections of Stormwater Quality Control Measures
- Annual Inspections of Permanent Stormwater Control Measures
- Database and Record-keeping



13

Municipal Pollution Prevention/Good Housekeeping

Prevent or reduce water quality impacts from pollutants from facilities and operations that they own, operate or perform within the permit area.

Program Elements

- Employee Training
- Written Standard Operating Procedures
- Inspections of all facilities
- Inspections of drainage channels and other stormwater infrastructure
- Maintenance of stormwater infrastructure
- Database and Record-keeping

14

Upcoming Stormwater/Water Quality Actions

- CDPHE's Biennial 303(d) list
 - ❖ Arkansas River
 - ❖ Cadmium & Zinc already on the list
 - ❖ Will be adding monitoring for Arsenic, Iron (Total and Dissolved)
 - ❖ Change Temperature from monitoring to impaired
 - ❖ Four Mile Creek
 - ❖ Arsenic and Selenium will be changed from monitoring to impaired

15

Upcoming Stormwater/Water Quality Actions

- CDPHE's Total Maximum Daily Load (TMDL) Assessments
 - ❖ Result of listing on the 303(d) list
 - ❖ CDPHE will eventually prepare TMDL's for impairments which could be attached to the City's MS4 Stormwater Permit
 - ❖ CDPHE is hosting a TMDL 101 Informational Webinar
 - ❖ Thursday, June 29, 10 a.m.

To join:
 WQCD Comments - CDPHE is inviting you to a scheduled Zoom meeting. Join Zoom Meeting <https://us02web.zoom.us/j/85666104170> Meeting ID: 856 6610 4170

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Upcoming Stormwater/Water Quality Actions

- CDPHE's Draft Policy "Enforcement of Unpermitted Dredged and Fill Material into State Waters"
 - ❖ Result of recent Supreme Court Ruling on Waters of the US
 - ❖ Aim is to add protections for wetlands and waters now not protected
 - ❖ Colorado Water Congress and Colorado Stormwater Council have submitted comments
- Phase II MS4 General Stormwater Discharge Permit stakeholder process may begin late this year or early next year

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Contact:
 Glenda DeBekker
 Cañon City Stormwater Coordinator
 719-276-5265
grdebekker@canoncity.org

18

Royal Gorge Association of Realtors

Stormwater and Floodplains in Cañon City

November 1st, 2023

Glenda DeBekker (Stormwater Technician)
Leo Evans (DPW Director)

1

Two Components

Water Quality (CDPHE)

Improve the quality of the discharged stormwater from within the City to reduce downstream pollution.

Clean Water Act (1977)

Phase II Non-Point Discharge Elimination System Rules (1999)

Cañon City First MS4 Permit (2003)

1. Public Education & Outreach
2. Public Participation/Involvement
3. Illicit Discharge Detection & Elimination
4. Construction Site Runoff Control
5. Post-Construction Runoff Control
6. Pollution Prevention / Good Housekeeping

Title 20 of City Code

Water Quantity (FEMA)

Minimize the damage caused during flooding, provide access to flood insurance, and provide restoration of services in the event of a flood.

National Flood Insurance Program Act (1968)

Cañon City Joins NFIP (1987)

1. Local control of floodplain development within national standards
2. Provides access to federally backed flood insurance

Cañon City Joins CRS (1991)

1. Provides reduction in flood insurance cost

Title 21 of City Code

2

What should realtors know about Water Quality???

(Part 1)

➤ **New construction / redevelopment will require local and potentially state stormwater construction permits if:**

- Greater than 1 acre disturbance
- Less than 1 acre disturbance but part of a common plan of development > 1Acre
- Almost any commercial or industrial parcel
- Almost any parcel adjacent or near adjacent to a water course

Permits will have application, review, and inspection fees.

Permits will take time to process, and compliance can add cost.

When in question contact us and we can help advise on the applicability and costs.

3

What should realtors know about Water Quality??? (Part 2)

- Many existing parcels in the city already have gone through the process and have existing water quality features on site.

Existing features are inspected by the City and must be preserved

Maintenance of existing features is typically the property owner responsibility

City is working towards implementing maintenance agreements for new water quality features that will be recorded against the property and should appear on title work going forward. Currently they are the seller's responsibility to disclose.

When in doubt contact us. We maintain a database of all the existing water quality features and can provide information on the existing features for a particular site as well as an outline of the expected maintenance requirements.

Typical water quality features are shown on the following slides:

4

Extended Detention Basin



- Detains stormwater for up to 72 hours post-storm
- Allows pollutants such as sediment to settle out
- Releases cleaner water into storm system.
- Helps reduce rate of runoff and flooding

5

Grass Buffer / Grass Swale



- Designed to reduce velocity of flow
- Work best with sheet flow from large paved areas
- Allows sediment and trash to settle out
- Removes some other pollutants such as oil

6

Rain Garden



- Also known as Bioretention or Porous Landscape Detention
- Depressed, engineered landscape area
- Captures, filters or infiltrates runoff
- Can help reduce runoff volume

7

Sand Filter



- Composed of a sand bed with an underdrain system (usually)
- Designed to filter runoff and/or infiltrate it into the ground
- Not specifically designed for vegetative growth

8

Retention Basin



- Typically a wet pond with a permanent pool of water
- Requires water rights or legal right to impound water in Colorado
- Designed to slowly release water over a 12-hour period
- Can also be used to assist in flood control

9

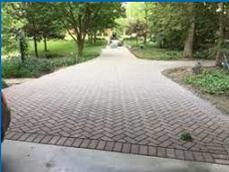
Wetland Ponds / Channels



- Constructed shallow pond or channel
- Promotes growth of wetland vegetation such as willows and cattails
- Slows runoff, allowing time for sediment and pollutant removal

10

Permeable Pavement



- Engineered pavement systems typically with an underdrain
- May be pavers, cell structures with gravel, grass pavers, or other type of pavement
- Designed to allow runoff to enter media below the pavement



- Provides filtration and some runoff reduction
- Often used with other water quality treatment measures

11

Underground Facilities



- Usually used in constrained sites where surface treatment measures are less feasible
- May be used in conjunction with other water quality treatment measures
- Primarily used to settle out sediment, capture trash and to remove oil

- Several different manufacturers and types
- Varying degrees of pollutant removal

12

What should realtors know about Water Quantity??? (Part 1)

- ▶ New construction / redevelopment will require floodplain development permits for properties within the Special Flood Hazard Area.

Permits will have application, review, and inspection fees.

Permits will take time to process, and compliance can add cost.

City maintains an online mapper that shows the SFHA.

When in question contact us and we can help advise on the applicability and costs.

13

City GIS Floodplain Mapper

On the Horizon
Updated SFHAm maps coming for all of Fremont County.
<https://coloradohazardmapping.com/File/3cb7c741-e321-4359-8ed5-79035b4064d5>

14

What should realtors know about Water Quantity??? (Part 2)

- ▶ Federally backed mortgages for properties within the SFHA will require insurance.

Handled outside of the City, but we are happy to help answer questions.

Floodplain mapping is no guarantee of safety from flood risk. Nationally somewhere between 30-50% of flood damage claims come from properties outside the SFHA. Flood insurance is available to anyone in the community that wants to obtain it.

15

One More Thing!!!

➤ The City has an established stormwater utility.

Billing is done based on the square footage of impervious area on a parcel and included on the monthly water bill. Most residential parcels will likely be in the range of \$20-\$30/Month for stormwater billing.

New construction of any impervious area also carries a one-time impact fee of \$0.2469/SFT of newly added impervious area.

The utility funds the routine maintenance and capital construction costs associated with managing the city owned stormwater infrastructure. The utility also funds the programs required to meet our Stormwater Discharge Permit terms from the Colorado Department of Public Health and Environment (CDPHE).

When in question feel free to reach out and staff can provide the current SFT of impervious area on a parcel. If you feel the parcel is incorrectly mapped we are happy to evaluate and update maps as needed.

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Questions / Comments?!?

Glenda DeBekker (Stormwater Coordinator)

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Leo Evans (Director of Public Works)

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laevans@canoncity.org

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APPENDIX B
Illicit Discharge Police Training

Illicit Discharge and Detection Notes for Canon City Police Officers

Introduction:

The City is legally responsible for everything that enters its storm sewer system, which is defined in the permit as a publicly owned conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is designed or used for collecting stormwater. Employees have the opportunity to prevent pollution by keeping an eye out for illegal discharges from businesses, commercial and municipal operations, industry and residential homes and reporting them to the Engineering Department – Stormwater Program so they may be quickly corrected.

Illicit Discharge Defined: Any direct or indirect release of pollutants to the storm drainage system that is not composed entirely of stormwater except discharges specifically authorized by a CDPS permit and discharges resulting from emergency firefighting activities.

Illicit discharges can result in untreated discharges with high concentrations of pollutants (heavy metals, toxics, oil and grease, solvents, nutrients, viruses, and bacteria) to receiving waterbodies. Pollutant levels from these illicit discharges have been shown to significantly degrade receiving water quality and threaten aquatic life, wildlife, and human health. However, not all dry weather storm sewer system flow contains pollutants or pathogens. In some cases flow in these drains may be derived from springs, groundwater seepage, irrigation or leaks from water distribution pipes.

Sources of Illicit Discharges

The following are some examples of potential sources of illicit discharges.

Sanitary wastewater sources such as:

- Sanitary wastewater from improper sewerage connections, exfiltration or leakage
- Effluent from improperly operating and/or designed septic tank systems
- Overflows of sanitary sewerage systems

Automobile maintenance and operation sources such as:

- Commercial car wash wastewaters
- Radiator flushing wastewaters
- Engine degreasing wastes
- Leaks and spills from non-commercial auto care/repair
- Improper oil disposal
- Leaky underground storage tanks

Landscape irrigation sources such as:

- Direct spraying of fertilizers, pesticides or herbicides onto impervious surfaces such as sidewalks
- Over-application of fertilizers, pesticides or herbicides onto landscaping

Other sources such as:

- Laundry wastes
- Non-contact cooling waters
- Metal plating baths
- Dewatering of construction sites
- Washing of concrete ready-mix trucks
- Power washing of buildings and parking lots – if the water enters the storm system or leaves the property
- Contaminated sump pump discharges
- Improper disposal of household toxic wastes
- Spills from roadway and other accidents
- Chemicals and other hazardous materials
- Illegal dumping of garbage and/or debris
- Sediment from construction sites or improperly stored material stockpiles
- Sanitary sludge landfills and disposal sites
- Improper disposal of pet/animal waste

Discharges Excluded from Enforcement Actions

Per the CDPS General MS4 permit the following discharges do not need to be effectively prohibited (i.e. the City is not required to address these discharges as illicit discharges):

- Landscape irrigation

- Lawn watering
- Diverted stream flows
- Irrigation return flow
- Rising ground waters
- Uncontaminated groundwater infiltration
- Uncontaminated pumped ground water – as long as it has not come into contact with construction activity
- Springs
- Flows from riparian habitats and wetlands
- Water line flushing in accordance with the Division’s Low Risk Policy Discharge Guidance: Potable Water.
- Discharges from potable water sources in accordance with the Division’s Low Risk Discharge Guidance: Potable Water
- Foundation drains
- Air conditioning condensation
- Water from crawl space pumps
- Footing drains
- Individual residential car washing
- Dechlorinated swimming pool discharges in accordance with the Division’s Low Risk Discharge Guidance: Swimming Pools
- Water incidental to street sweeping (including associated sidewalks and medians) and that is not associated with construction
- Dye testing in accordance with the manufacturers’ recommendations
- Stormwater runoff with incidental pollutants
- Discharges resulting from emergency firefighting activities
- Discharges authorized by a CDPS or NPDES permit
- Agricultural stormwater runoff

Priority Areas:

The following areas have been determined to be priority areas for watching for illicit discharges based on multiple incidents or reports of illicit discharges and land use.

- NW Canon from 2nd Street to 9th Street; Main Street to Pine Ave
- Businesses along the Water Street channel from S. 12th Street to Rainbow Drive
- Businesses along Fremont Drive and East Main Street

What to do if you see a suspicious discharge or a potential discharge:

- **If it is a potential hazardous substance: call 911**
- For non-hazardous substances: call the Stormwater Coordinator at 719-276-5265 or 719-240-5325
 - Be ready to provide the following information: Location, date and time of discharge, description of discharge any additional information such as person or vehicle description. Photos are welcome.
- **DO NOT ATTEMPT TO CORRECT THE SITUATION ON YOUR OWN**

APPENDIX C
TRACKED COSTS

Tracked Time and Costs from Cartegraph OMS Database						
	Labor (Hrs)	Labor (Cost)	Equipment (Cost)	Material (Cost)	Other (Cost)	Total Cost
Public Involvement/Participation						
Requests - non-Illicit Discharge/Construction	71.94	\$3,416.49	\$742.06	\$0.00	\$16.25	\$4,174.80
Public Education and Outreach	131.00	\$5,949.57	\$945.02	\$0.00	\$2,037.74	\$8,932.33
Illicit Discharge and Detection						
Non-Enforcement Tasks (including site clean-up by City)	39.31	\$1,694.40	\$832.86	\$4.00	\$96.39	\$2,627.65
Enforcement Tasks (Costs are often rolled into inspection costs)	5.59	\$253.99	\$36.13	\$0.00	\$32.55	\$322.67
Construction Sites						
Non-Enforcement Tasks	92.27	\$4,196.96	\$1,511.69	\$0.00	\$0.00	\$5,708.65
Enforcement Tasks (Costs are often rolled into inspection costs)	4.19	\$190.36	\$33.43	\$0.00	\$16.35	\$240.14
Post-Construction Permanent Stormwater Control Measures						
Inspections (Municipal and Private)	13.72	\$616.01	\$272.13	\$0.00	\$0.00	\$888.14
Municipal Pollution Prevention/Good Housekeeping						
Facilities Inspections	8.84	\$401.61	\$181.35	\$0.00	\$0.00	\$582.96
Stormwater Infrastructure and Channel Inspections	91.28	\$4,146.93	\$1,888.61	\$0.00	\$0.00	\$6,035.54
Stormwater Infrastructure Maintenance Crew	847.45	\$30,845.27	\$23,263.15	\$442.62	\$0.00	\$54,551.04
Street Sweeping (Stormwater contribution 55% of cost)						\$88,823.68
Other Permit Compliance Duties, Misc. Projects, Committees	208.25	\$9,445.48	\$0.00	\$0.00	\$0.00	\$9,445.48
Annual Program Review and State Report	49.75	\$2,178.07	\$0.00	\$0.00	\$0.00	\$2,178.07
Public Works Street Dept Stormwater Tasks	1511.18	\$55,839.94	\$22,667.36	\$12,947.79	\$5,470.44	\$96,925.53
City Contractor - Vegetation Management*	44.75	\$2,081.54	\$196.87	\$0.00	\$61,820.00	\$64,098.41
*Labor and Equipment Costs are for City personnel						
Fremont County Weed Control on City Stormwater Properties	5.50	\$249.87	\$0.00	\$0.00	\$2,317.90	\$2,567.77
*Labor and Equipment Costs are for City personnel						
Stormwater Utility Impervious Area Updates	148.00	\$6,697.83	\$1,100.77	\$0.00	\$0.00	\$7,798.60

\$355,901.46 Total

Streets Department Annual Leaf Pick-up Program	308.00	\$11,265.84	\$3,994.05	\$0.00	\$723.25	\$15,983.14
Costs provided through the Streets Department						

Parks Department - Maintaining Pet Waste Stations	104.00	\$3,900.00		\$1,565.00		\$5,465.00
Costs provided through the Parks Department Budget						

This table does not include Capital Improvement Projects costs or budgetary expenditures not tracked in Cartegraph.