1041 2008-002

City of Colorado Springs
Stormwater Enterprise

Stormwater Control Program
Inter-Governmental Agreement (IGA)
Annual Report of Final Expenditures

Calendar Year 2019

Prepared for:

Pueblo County

Submitted by:

City of Colorado Springs

Colorado Springs Utilities

June 2020

Contents

Table of Figures

Definitions and Acronyms

BMPs	Best Management Practices
Capital Project	A project for the construction of facilities and infrastructure undertaken primarily to provide stormwater control (e.g., stormwater detention ponds, or channel preservation, restoration, or stabilization), with a monetary value of at least $50,000 and long life (at least five years), and which results in the creation of a fixed asset or a significant revitalization that upgrades and extends the useful life of a fixed asset.
CDOT	Colorado Department of Transportation
CDPHE	Colorado Department of Public Health and Environment
City	City of Colorado Springs
CIP	Capital Improvements Program
CIP List	Capital Improvements Project List
CMP	Corrugated Metal Pipe
Construction	Activities including studying, land acquisition, planning, engineering, bidding, permitting, construction, construction management, project management, testing and commissioning.
DBPS	Drainage Basin Planning Study
DCM	City of Colorado Springs Drainage Criteria Manual
DM	Fountain Creek Watershed Flood Control and Greenway District Design Manual
Drainage Operations Program	City of Colorado Springs Public Works Operations and Maintenance Division, Drainage Operations Program
Encumbered Funds	Monies which are appropriated and placed into a fund or account restricted (I) for payment of an authorized Stormwater Control Program activity and cannot be obligated or used for any other purpose, and (2) for payment of capital construction projects for which appropriate steps are being undertaken in a timely manner to advance towards physical construction.
Expenditures	Both actual expenditures and encumbered funds.
FCWFCGD	Fountain Creek Watershed Flood Control and Greenway District
FEMA	Federal Emergency Management Agency
HBA	Home Builders Association
IGA	Intergovernmental Agreement between Pueblo County and the City of Colorado Springs and its Utility Enterprise (entered as of April 27th, 2016)

MDBPS	Master Drainage Basin Planning Study
MMFAC	FCWFCGD Monetary Mitigation Fund Advisory Committee
MS4	Municipal Separate Storm Sewer System
MS4 Permit	Authorization under the Colorado Discharge Permit System to discharge stormwater and from emergency firefighting activities from the municipal separate storm sewer system (MS4) owned and operated by the City of Colorado Springs
NOAA	National Oceanic and Atmospheric Administration
O&M	Operations and Maintenance
Parties	Parties to the IGA to include Pueblo County and the City of Colorado Springs and its utility enterprise, Colorado Springs Utilities.
PDM	FEMA Pre-Disaster Mitigation Grant Program
PPRTA	Pikes Peak Rural Transportation Authority
SCM	City of Colorado Springs Stormwater Construction Manual
SIMP	Stormwater Infrastructure Master Plan
Stormwater Capital Improvements Program (CIP)	An annually updated plan of expenditures for Capital Projects for stormwater control with estimated costs, sources of funding, and schedule of work over a five-year period, including those Capital Projects required by the IGA.
Stormwater Control Program	City and Utilities' program to control and mitigate the rate, volume, and quality of stormwater flows and associated erosion and sedimentation in or near the City, and includes a CIP, provisions for operation and maintenance of the City's stormwater facilities, compliance with the City's MS4 Permit, and protection of Utilities infrastructure from stormwater.
SSCC	Colorado Springs Utilities Sanitary Sewer Creek Crossing Program
SWENT	City of Colorado Springs Stormwater Enterprise
TAC	Fountain Creek Watershed Flood Control and Greenway District, Technical Advisory Committee
TMDL	Total Maximum Daily Load
UDFCD	Urban Drainage Flood Control District
USACE	United States Army Corps of Engineers
USEPA/EPA	United States Environmental Protection Agency
USGS	United States Geological Survey
Utilities	Colorado Springs Utilities
WWE	Wright Water Engineers

Executive Summary

The City of Colorado Springs (City), Colorado Springs Utilities (Utilities), and Pueblo County (together referred to as the Parties) entered into an Inter-Governmental Agreement (IGA) on April 27, 2016. Pursuant to the terms of the IGA, the City and Utilities agreed to invest $460 million dollars on the City's Stormwater Control Program over a 20-year period. The IGA describes the responsibilities of the City and Utilities associated with these stormwater management and control efforts.

The purpose of this annual report is to provide appropriate details concerning the timing, amount, and nature of expenditures made by the City and Utilities during the prior year (2019) for Capital Projects included as part of the IGA, stormwater-related operations and maintenance activities, Municipal Separate Storm Sewer System (MS4) Permit compliance, and protection of waterways adjacent to Utilities infrastructure.

Reporting Requirements

Each year the City has committed to file with Pueblo County a report containing an estimate of expenditures on or before January 31 of the year following the expenditures, followed by the filing of a preliminary audited report on or before March 31, and with a final report to be filed on or before June 30 of that year based on audited financial information.

The following contains a summary of Stormwater Control Program activities and a report of Final audited expenditures for the 2019 calendar year. Per the IGA, for the purpose of this report, "…expenditures mean both actual expenditures and encumbered funds. 'Encumbered funds' shall mean monies which are appropriated and placed into a fund or account restricted (1) for payment of an authorized Stormwater Control Program activity and cannot be obligated or used for any other purpose, and (2) for payment of capital construction projects for which appropriate steps are being undertaken in a timely manner to advance towards physical construction."

Summary of Final Expenditures for the 2019 Calendar Year

The City and Utilities are required collectively to invest a minimum of $16.5 million per year on the City's Stormwater Control Program. The minimum expenditure requirement (actual and encumbered) has been met for the 2019 Calendar Year reporting period as outlined below. As of December 31, 2019 the City and Utilities have invested (through either expenditures or encumbrances) a total of **$20.7 million dollars** on the City's Stormwater Control Program in 2019. This includes actual expenditures and/or annual encumbrances of:

- $ 9.1 million associated with the City's Drainage O&M and MS4 program (Annual Encumbrance)
- $ 7.5 million associated with the City's Stormwater Capital Projects program (Annual Encumbrance)
- $ 4.1 million by Utilities Sanitary Sewer Creek Crossing Program (Actual Expenditure)

Expenditures for the 2019 Calendar Year

IGA Requirement	Minimum Total Expenditures	Average Annual Expenditures	Minimum Annual Expenditures
First Five Years (2016-2020)	$100 Million	$20 Million	$16.5 M/yr.

Claimed Expenditures

(Actual Expenditures and Encumbered Funds)	2016	2017	2018	**2019**	**Total (2016-2019)**
Drainage O&M/MS4 Program	$5,833,812	$7,160,556	$9,408,626	**$9,080,041**	$31,483,035
Stormwater Capital Projects	$14,982,145	$13,100,000	$12,819,206	**$7,478,927**	$48,380,278
Colorado Springs Utilities (SSCC Program)	$4,713,024	$3,340,083	$3,700,166	**$4,093,307**	$15,846,580
Total	$25,528,981	$23,600,639	$25,927,998	**$20,652,275**	**$95,709,893**

Summary of Stormwater Control Program Activities

Below is a summary of actual expended dollars between the 2016 and 2019 calendar years:

Program Dollars Spent	2016	2017	2018	**2019**	**Total (2016-2019)**
Drainage O&M	$2,176,780	$3,766,691	$4,029,563	**$4,523,710**	$14,496,744
Stormwater MS4 Program	$2,772,986	$3,753,575	$4,652,951	**$4,553,479**	$15,732,991
Stormwater Capital Projects	$8,743,880	$7,878,724	$9,997,414	**$12,189,439**	$38,809,457
Colorado Springs Utilities (SSCC Program)	$4,713,024	$3,340,083	$3,700,166	**$4,093,307**	$15,846,580
Total	$18,406,670	$18,739,073	$22,380,094	**$25,359,935**	**$84,885,772**

Capital Projects Undertaken During the Reporting Period

- IGA Projects – A total of sixteen (16) IGA projects were scheduled to continue, be completed, or commence in 2019. This included a continuation of Emergency Projects, Grant Projects, Water Quality Projects, four (4) specifically negotiated 2016 IGA projects, three (3) specifically negotiated 2017 IGA projects, five (5) specifically negotiated 2018 IGA projects, and commencement of one (1) specifically negotiated 2019 IGA project as outlined below. At the completion of the reporting period, the scheduled 2019 IGA projects were generally in the engineering phase of the projects, while the 2016, 2017, and 2018 IGA projects had been completed, were under construction, or were continuing through the engineering phase.

  Of the $12,189,439 expended, a total of $8,688,886 was spent on specifically negotiated IGA projects during the reporting period, with an additional $3,500,553 invested on other Stormwater related projects during the period. The table below details project expenditures related to the IGA projects.

IGA CAPITAL PROJECTS

IGA Project No.	Project Name	Actual Spent ($)
11	Camp Creek Phase I (2018)	354,499
15	Citadel Mall Neighborhood Improvements (2018)	3,765
65	Cottonwood Creek Detention Basins (2017)	170,251
1	Emergency Stormwater Projects (2019)	2,371,301
0	FEMA Grant Projects (City Funds) (2016)	312,654
7	Fairfax Tributary Detention Pond (2016)	122,006
105	Flying Horse Pond 1 Retrofit (2019)	127,458
8	King Street Detention Pond (2016)	1,270
23	North Chelton Road (CS-057) (2018)	67,702
31	Rangewood Tributary Detention Pond (2017)	1,020,326
100	Pine Creek Drainage Corridor Detention Pond (2018)	1,178,125
103	Pine Creek Channel Improvements Phase I (2018)	269,356
26	Sand Creek S. of Platte (CS-018) Grant Match (2016)	894,681
101	Scarborough Dr. Detention Facility (2017)	807,429
6	USAFA Drainages (Monument Branch) (2016)	107,004
13	Water Quality Projects (2016-2019)	836,255
Various	Project Scoping and Definition	44,804
	(IGA-31) Rangewood Tributary Detention Pond (2017)	
	(IGA-21) Sand Creek - Karr to W. Fork (2021)	
	(28) Shooks Run Phase I (2021)	
	(106) Cottonwood Creek Channel Improvements (2021)	
	Total IGA Projects	**8,688,886**

Other Stormwater Capital Projects

	Total Non-IGA Negotiated Stormwater Capital Projects	**3,500,553**

Total Stormwater Capital Projects Expenditures

	Total 2019 Stormwater Capital Projects Expenditures	**12,189,439**

- Engineering Studies - The Stormwater Enterprise continued to work on several significant and important engineering studies during the course of 2019, including finalization of the Cottonwood Creek Drainage Basin Planning Study (DBPS), the City's Stormwater Infrastructure Master Plan (SIMP), and the Sand Creek DBPS. These studies will be used to further develop capital lists, plan future maintenance and capital projects, and manage stormwater related infrastructure.

- Grant Applications – During the reporting period the Stormwater Enterprise submitted three grant applications for proposed projects located along North Douglas Creek, Bear Creek and Cottonwood Creek.

Utilities Sanitary Sewer Creek Crossing Program Activities

In parallel with the City's stormwater capital program efforts, Utilities has an ongoing effort to construct stormwater projects to protect stream channels and floodplains adjacent to Utilities' infrastructure crossings. Utilities' Sanitary Sewer Creek Crossing (SSCC) Program implements capital projects that are specifically targeted to protect waterways near facilities which are in danger of failing due to stormwater related events or other impacts.

The Utilities SSCC Program was established to systematically inspect, evaluate, prioritize, repair and/or replace Utilities infrastructure that cross or extend adjacent to minor and major drainages, and to provide long-term creek stabilization for crossings and adjacent longitudinal sewer systems. Utilities and City staff closely coordinate their efforts to provide maximum benefits to meet the overall Water Resources Engineering Program objectives.

In 2019, the SSCC Program included design, repair, or rehabilitation of 10 creek crossing locations, at a cost of $4,093,307.

Drainage Operations and Maintenance Activities Undertaken During the Reporting Period

During the 2019 calendar year, the Drainage Operations and Maintenance (O&M) Program completed the following activities:

- Completed inspections of all 104 publicly maintained regional and sub-regional detention ponds/facilities
- Completed identified maintenance activities within 90 publicly maintained regional and sub-regional detention facilities (including debris removal, sediment removal, mowing, tree trimming, and minor structure maintenance), resulting in removal of 4,583 cubic yards of sediment and debris
- Performed maintenance activities through 19.16 miles of concrete-lined and natural channels, including removal of 3,075 cubic yards of sediment, vegetation, and debris
- Completed 8,096 separate storm sewer maintenance/vacuum-truck operations (including cleaning of storm sewer inlets and storm sewer pipe cleaning), resulting in removal of 817.75 cubic yards of debris
- Repaired, replaced, or installed 2,084 linear feet of stormwater conveyance pipe
- Performed street sweeping operations on 24,359 lane miles of city streets, removing 29,667 cubic yards of debris

2019 MS4 Permit Compliance Activities

The City's MS4 Permit requires the implementation and operation of several specific programs and program components, including public outreach activities, commercial/residential management, illicit discharge management, construction site management, yearly reporting and compliance tracking, wet and dry weather monitoring, and the municipal facilities runoff control program. Several highlights of program compliance are described below, with additional information located in Section 4 of this report:

- Illicit Discharge Detection
    - Responded to 180 suspected Illicit Discharge calls, of which only 73 incidents were confirmed as illicit discharges.
    - Provided online training to 279 field staff; classroom training to 125 additional field staff; and CCTV training to over 500 firefighters and first responders.
- Public education activities to promote proper management and disposal of potential pollutants conducted during the reporting period included:
    - Presentations provided (i.e., schools, community events): 122
    - Number of students and citizens reached (i.e., schools, community events): 2,938
    - Regional Stormwater Advertising Campaign reaching multiple counties and jurisdictions: 10,395,997 impressions (visual and audial)

  - Storm Drain Art Project: 12 direct impressions and over 300,000 estimated indirect impressions
  - Educational distributions: 1,364 brochures and 21,487 school related items
  - Adopt-A-Waterway Program: 102 events with 3,321 volunteers

- Industrial facilities program education and outreach activities during the reporting period included:
  - Identification of 67 new businesses to receive education and outreach material.
  - Collaboration with Utilities Industrial Pretreatment staff to inspect and identify industrial facilities with sand interceptors and oil-water separators.
  - Inspection of 76 industrial facilities related to stormwater compliance.

- Construction Site Inspection:
  - Total inspections: 7,067 associated with 344 active sites
  - Participated in the following professional events:
    - Hazardous Waste Operations (Hazwoper) 24-hour training course and 8-hour refresher training for on-call response staff

- Private Permanent BMP Structure Inspections: 1,493
  - 1,021 construction inspections; 472 compliance inspections

- Stormwater Development Review:
  - Completed reviews of over 3,800 drainage related development submittals
  - Participated in the following professional events:
    - City Stormwater University Presentations (Permanent Control Measure Spreadsheets and DCM Policy Clarifications)
    - Colorado Association of Stormwater and Floodplain Managers (CASFM) Annual Conference
    - Colorado State University BMP Design and Design Review Workshop
    - Urban Drainage Flood Control District Annual Seminar
    - USEPA SWMM Training Class

<u>Other Relevant Activities Undertaken During the Reporting Period</u>

- <u>Stormwater Ballot Issue 2</u> – In April 2017, Colorado Springs voters approved Ballot Issue 2, which asked voters whether the City may retain and spend up to $6 million of revenues each year which may exceed amounts otherwise authorized for retention in 2016 and 2017 under TABOR. A total of 26 proposed stormwater projects were identified within the City limits using the Ballot Issue 2 funds. Work on these projects continued through the reporting period, with 18 completed between 2017 and 2018, and the remainder completed in 2019.

- <u>City-Specific Drainage Criteria Design Spreadsheets</u> – The City finalized City-specific drainage related design spreadsheets similar to design spreadsheets developed and used by the Mile High Flood Control District (formerly Urban Drainage Flood Control District) for use in the design of stormwater related infrastructure and facilities in accordance with the City's DCM. The new spreadsheets are scheduled to be fully implemented in 2020.

- <u>City Stormwater Construction Manual (SCM)</u> – The City finalized the draft Stormwater Construction Manual intended to set forth the minimum requirements and processes for obtaining a permit authorizing the discharge of stormwater from a construction site

within the limits of the City. This manual explains the types of construction activities requiring such a permit, who obtains the permit, and how the permit is obtained, including project design phase requirements. In addition, this manual describes the requirements and process for complying with the permit during construction, as well as the City's inspection and enforcement procedures, and the process for closeout of the permit. The SCM is scheduled to be finalized and implemented in 2020.

- Stormwater University – In September 2017, the City's Stormwater Program held its inaugural Stormwater University classroom training session. The intent of the Stormwater University is to provide clarification to developers, engineers, contractors, and consultants on the City's requirements and regulations related to the conditions of the City's MS4 Permit and DCM. The Stormwater University is also designed to promote interaction and engagement with the City's regulated community and its representatives for improved compliance and understanding of stormwater-related issues. Three Stormwater University classroom training sessions were held in 2019 by City Stormwater Enterprise personnel.
- Fountain Creek Watershed Flood Control and Greenway District (FCWFCGD) Participation – The City and Utilities have continued participation in the FCWFCGD District Board, Technical Advisory Committee, Monetary Mitigation Fund Advisory Committee (MMFAC), and Citizens Advisory Group.
- District Capital Improvement Plan - Utilities supported the FCWFCGD MMFAC in the development of a draft 10-year Capital Improvement Plan in 2017 and in 2019 participated in the annual Plan update for recommended projects to commence in 2020.

1.0 Introduction

The City of Colorado Springs (City), Colorado Springs Utilities (Utilities), and Pueblo County (together referred to as the Parties) entered into an Inter-Governmental Agreement (IGA) on April 27, 2016 committing the City and Utilities to invest $460 million dollars over a 20-year period on stormwater management and control activities. The IGA describes the City's responsibilities relative to the provision of stormwater services, including a commitment to construct certain identified capital projects.

The purpose of this annual report is to provide appropriate details concerning the timing, amount, and nature of expenditures made by the City and Utilities during the prior year (2019) for Capital Projects included as part of the IGA, stormwater-related operations and maintenance activities, Municipal Separate Storm Sewer System (MS4) Permit compliance, and protection of waterways adjacent to Utilities infrastructure.

1.1 Reporting Requirements

The IGA requires the City to file with Pueblo County, on or before June 30 of the year following the expenditures, a report containing final audited expenditures on the City's and Utilities' Stormwater Control Programs. The IGA also specifies the minimum annual, average annual, and minimum total expenditures, which must be met or exceeded each year. This Final Expenditures report serves as an update to the Annual Report of Preliminary Expenditures for the 2019 Calendar Year, submitted on March 25, 2020 and the Annual Report of Estimated Expenditures for the 2019 Calendar Year, submitted on January 30, 2020.

The following contains a summary of Stormwater Control Program activities and report of final audited expenditures for the 2019 calendar year. Per the IGA, for the purpose of this report, "…expenditures mean both actual expenditures and encumbered funds. 'Encumbered funds' shall mean monies which are appropriated and placed into a fund or account restricted (1) for payment of an authorized Stormwater Control Program activity and cannot be obligated or used for any other purpose, and (2) for payment of capital construction projects for which appropriate steps are being undertaken in a timely manner to advance towards physical construction."

1.2 Background

The City of Colorado Springs is located in El Paso County and the Fountain Creek watershed. The boundaries of the City cover 195 square miles, making Colorado Springs the largest municipality in Colorado by area. With this extensive area, and the significant elevation changes found therein, comes a significant stormwater challenge as the City oversees runoff from 32 different subwatersheds within the city limits.

City Stormwater Enterprise Program

In 2016, the City created a separate dedicated Water Resources Engineering Division within the City's Public Works Department. As part of this effort, City staff dedicated to stormwater work, as expressed in full time equivalents (FTEs), increased from 28 FTEs present at the end of 2015 to 52.25 FTEs at the end of 2016. In 2017, City staff dedicated to stormwater work further increased to a total of 66.25 FTEs, and by then end of 2019 was fully staffed at 73 FTEs.

In November 2017, Colorado Springs voters approved Ballot Issue 2A which authorized the collection of stormwater service fees beginning July 1, 2018 and ending July 1, 2038, for the sole purpose of funding through a City enterprise, the construction, improvement, and operation and maintenance of public stormwater facilities and infrastructure. The fees are assessed on all developed or improved real property within the City limits at an amount of $5.00 per residential dwelling unit/month, and $30.00 per acre/month for non-residential properties. The City conducts a thorough review and uses strict criteria to evaluate all non-residential parcels to ensure fees are calculated accurately in accordance with the Stormwater Enterprise Ordinance (Ordinance No. 17-69). The City partnered with Utilities to administer the monthly residential fee on individually metered residential customer Utility bills on behalf of the City. For non-residential properties and for multi-metered or non-Utility-metered residential properties, the City partnered with a third-party company to assist with billing and collection of the monthly fees. Collection of the stormwater service fees by the Stormwater Enterprise began on July 1, 2018. Prior the July 1, 2018, the City's Stormwater Program was funded through the City's general fund as a division of Public Works.

As described in previous annual expenditure reports, the overall Stormwater Enterprise Program consists of three primary functions:

- Management of activities required by the City' MS4 permit.
- Operation and Maintenance (O&M) of current drainage and water quality infrastructure;
- Engineering and construction of new stormwater capital projects to address flooding; erosion, and water quality concerns;

MS4 permit compliance activities are organized under three groups:

- Water Quality
- Stormwater Development Review
- Stormwater Projects Delivery

The organizational chart below illustrates the current structure of the City Stormwater Enterprise.

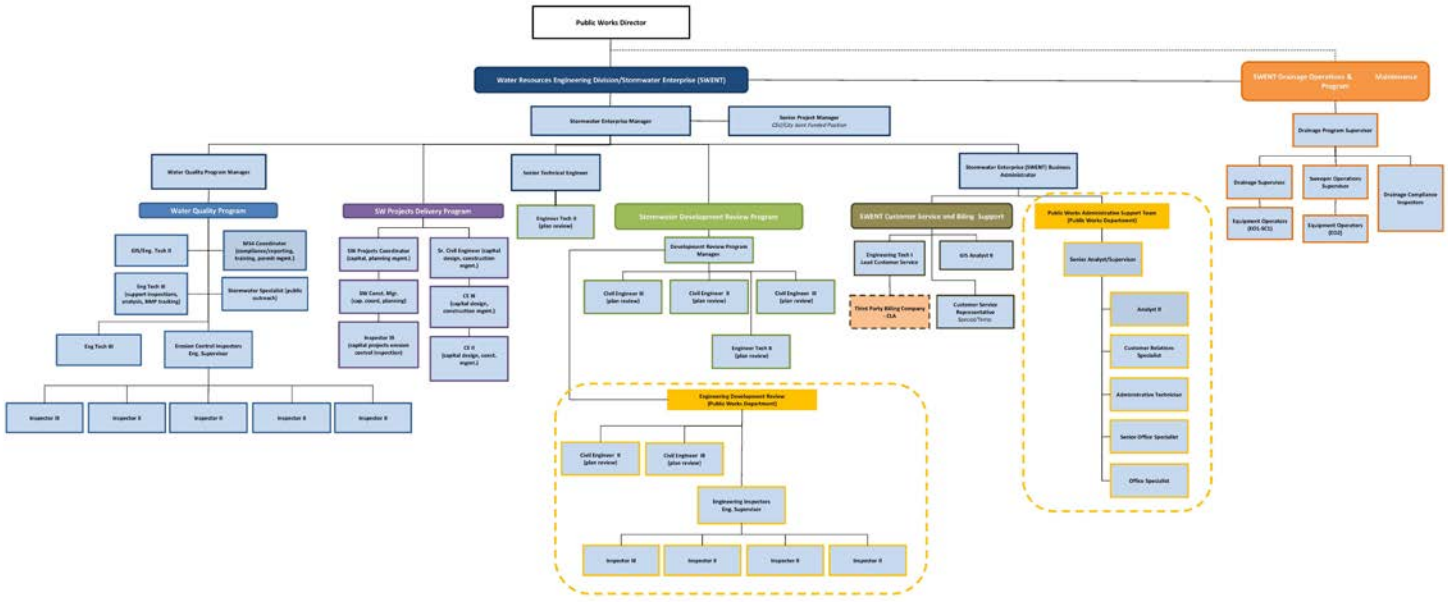


Figure 1: City Stormwater Enterprise Organizational Chart

Stormwater Advisory Committee – In accordance with City Ordinance No. 17-69, the Colorado Springs City Council appointed seven (7) community members to form a Stormwater Advisory Committee in February 2018. The Stormwater Advisory Committee provides City Council with citizen input on the stormwater system and operation of the Stormwater Enterprise, along with advice and recommendations on the projects to be undertaken. In 2019 the committee met quarterly on February 21, May 16, August 15, and November 21.

City Stormwater Capital Improvement Projects Program

The IGA calls out specific projects to be completed between 2016 and 2035 (20-year period). This list is referred to as the IGA Capital Improvements Project List (IGA CIP List). The projects in the IGA CIP List are delivered through the City's Stormwater Projects Delivery group. The City worked closely with Wright Water Engineers (WWE), representing Pueblo County, in prioritizing a significant portion of the IGA CIP List.

Paragraph III.B(2)a of the IGA states that beginning with the 2016 calendar year and extending through the term of the IGA, the Engineering Representatives of the Parties shall meet on or before March 31 of each year in order to prepare, review, discuss and update, as necessary, a five-year CIP for the City and a three-year CIP for Utilities, which shall include a list of Capital Projects, the construction of which will commence in the upcoming years. Staff members from the City, Utilities, and WWE met on March 27, 2019 and again on October 18, 2019 to review, discuss and update the five-year CIP for the City and the three-year CIP for Utilities' Sanitary Sewer Creek Crossing (SSCC) Program. A copy of the updated IGA project list is included in Attachment A.

In parallel with the City's stormwater capital program efforts, Utilities has an ongoing effort to construct stormwater projects to protect stream channels and floodplains adjacent to infrastructure crossings. Utilities' SSCC Program implements capital projects with a total average expenditure of approximately $3 million annually. These are projects that are specifically targeted to protect waterways near facilities that are in danger of failing due to stormwater related events or other impacts (e.g., buried sanitary sewers that cross creeks that have eroded, exposing the sanitary sewers to potential failure). Utilities' stream crossing projects often have significant stormwater protection features.

The Utilities SSCC Program was established to systematically inspect, evaluate, prioritize, repair and/or replace Utilities infrastructure that cross or extend adjacent to minor and major drainages, and to provide long-term creek stabilization for crossings and adjacent longitudinal sewer systems. The objective of the SSCC Program is to provide the benefits of stream stability, reduced erosion and sedimentation, and floodplain reconnection, resulting in improved water quality and storm flow attenuation while simultaneously providing protection of utility infrastructure. Utilities and City staff closely coordinate their efforts to provide maximum benefits to meet the overall Stormwater Control Program objectives.

City Stormwater Program Budget

As outlined in the IGA, the City and Utilities have committed to invest an average of $20 million per year on the stormwater program (core MS4 requirements, Drainage O&M, and stormwater capital projects) for the first 5 years beginning in 2016. City and Utilities budgets will be escalated according to the IGA with a total commitment of $460 million to be spent between 2016 and 2035.

City Stormwater Ballot Issue 2

In April 2017, Colorado Springs voters approved Ballot Issue 2, which asked voters whether, without any increase in taxes, the City may retain and spend up to $6 million of revenues each year which may exceed amounts otherwise authorized for retention in 2016 and 2017 under TABOR. A total of 26 proposed stormwater projects were identified within the City limits using the Ballot Issue 2 funds. Work on these projects continued through the reporting period, with 18 of the projects completed between 2017 and 2018, and the remainder completed in 2019.

City Stormwater University and Best Management Practices (BMP) Field Academy

In September 2017, the City's Stormwater Program held its inaugural Stormwater University classroom training session. The intent of the Stormwater University is to provide clarification to developers, engineers, contractors, and consultants on the City's requirements and regulations related to the conditions of the City's MS4 Permit and DCM. The Stormwater University is also designed to promote interaction and engagement with the City's regulated community and its representatives for improved compliance and understanding of stormwater-related issues. Three Stormwater University classroom training sessions were held in 2019 by Stormwater Enterprise personnel.

Concurrently in September 2017, the City of Colorado Springs opened a stormwater BMP field training site that allows attendees in the stormwater construction industry to receive hands on, real time BMP installation and maintenance experience. Three BMP field academy training sessions were held in 2019.

City-Specific Drainage Criteria Design Spreadsheets and Stormwater Construction Manual

The City finalized City-specific drainage related design spreadsheets similar to design spreadsheets developed and used by the Mile High Flood Control District (formerly Urban Drainage Flood Control District) for use in the design of stormwater related infrastructure and facilities in accordance with the City's DCM. Additionally, the City finalized the draft Stormwater Construction Manual (SCM) intended to set forth the minimum requirements and processes for obtaining a permit authorizing the discharge of stormwater from a construction site within the limits of the City. This manual explains the types of construction activities requiring such a permit, who obtains the permit, and how the permit is obtained, including project design phase requirements. In addition, this manual describes the requirements and process for complying with the permit during construction, as well as the City's inspection and enforcement procedures, and the process for closeout of the permit. Both the new spreadsheets and the SCM are scheduled to be implemented in 2020.

2.0 IGA Compliance Activities Undertaken During the Reporting Period

Section III of the IGA outlines special provisions agreed to by the IGA Parties. The following provides a summary of compliance activities taken by the City and Utilities during this reporting period related to Section III of the IGA.

Paragraph III.A – Stormwater Expenditures

Paragraph III.A(1) - Expenditures by the City and Utilities

For the 2019 calendar year, the City and Utilities were required to expend a minimum of $16.5 million dollars on its Stormwater Control Program.

- As of December 31, 2019, the City and Utilities have invested (through either expenditures or encumbrances) a total of $20.7 million dollars on the City's Stormwater Control Program in 2019. This includes expenditures and encumbrances of:
  - $ 9.1 million associated with the City's Drainage O&M and MS4 program (Annual Encumbrance)
  - $ 7.5 million associated with the City's Stormwater Capital Projects program (Annual Encumbrance)
  - $ 4.1 million by Utilities Sanitary Sewer Creek Crossing Program (Actual Expenditure)
- Between 2016 and 2019, the City and Utilities have invested (through either expenditures or encumbrances) a total of $95.7 million dollars on the City's Stormwater Control Program with a total of $84.9 million dollars expended to date.
- A more detailed summary of final expenditures for the 2019 calendar year is provided in Section 3.0 of this report.

Paragraph III.A(2) - Annual Report of Expenditures

The IGA requires that in order to verify whether the City's and Utilities' expenditures on the Stormwater Control Program meet or exceed the requirements of paragraph III.A(1), each year the City and Utilities shall file with Pueblo County a report containing an estimate of expenditures on or before January 31 of the year following the expenditures, followed by the filing of a preliminary report on or before March 31, and with a final report to be filed on or before June 30 of that year based on audited financials. These reports are to provide appropriate details concerning the timing, amount and nature of all such expenditures made by the City and Utilities during the prior year for Capital Projects, O&M, MS4 Permit compliance, protection of Utilities infrastructure from stormwater, and any other relevant categories.

- This report serves to document the final expenditures for the 2019 calendar year and provide a summary of the associated Stormwater Control Program activities.
- This Final Expenditures report serves as an update to the Annual Report of Estimated Expenditures for the 2019 Calendar Year, submitted on January 30, 2020 and the Annual Report of Preliminary Expenditures for the 2019 Calendar Year, submitted on March 25, 2020.

Paragraph III.B – Stormwater Capital Improvement Program

Paragraph III.B(2) - Identification of Capital Projects

Paragraph III.B(2)a. states that beginning with the 2016 calendar year and extending through the Term of the IGA Agreement, the Engineering Representatives of the Parties shall meet on or before March 31 of each year in order to prepare, review, discuss and update, as necessary, a five-year CIP for the City and a three-year CIP for Utilities, which shall include a list of Capital Projects, the construction of which will commence in the upcoming years.

- Staff from the City, Utilities, and WWE met on March 27, 2019 and again on October 18, 2019 to review, discuss, and update the five-year CIP for the City and the three-year CIP for Utilities' SSCC Program. A copy of the updated IGA project list is included in Attachment A.

  At the completion of the March 27, 2019 meeting, the participating representatives agreed to the following modifications to the original IGA project list:

  - Galley Road Channel (2020 IGA Project #19) – Agreed to move the Galley Road Channel project from 2020 to 2023 to allow for completion of the City's Platte Avenue bridge replacement project across Sand Creek.
  - Shooks Run Channel – Cache La Poudre St. to Patty Jewett Golf Course (2021 IGA Project #28) – Agreed to move the Shooks Run Channel - Cache La Poudre St. to Patty Jewett Golf Course project to coincide with the other Shooks Run Channel projects identified together later in the IGA project listing (consolidate with IGA Project #12, #27 and #29).

  At the completion of the October 18, 2019 meeting, the participating representatives agreed to the following modifications to the original IGA project list:

  - Grade Control Palmer Park Channel – Galley Road to Palmer Park (2021 IGA Project #39) – Agreed to move the Grade Control Palmer Park Channel – Galley Road to Palmer Park project to the 2026-2035 project grouping in the location of IGA Project #12 (Shook Run Improvements) to allow for the insertion of the Cottonwood Creek Channel Improvements Project – Austin Bluffs Parkway to Powers Blvd Phase 1 project (IGA Project #106) in 2021.
  - Shooks Run Improvements (2026-2035 IGA Project #12) and Cottonwood Creek Channel Improvements Project – Austin Bluffs Parkway to Powers Blvd Phase 1 (IGA Project #106) – Agreed to remove and replace the Shooks Run Improvements IGA Project #12 with the Cottonwood Creek Channel Improvements Project – Austin Bluffs Parkway to Powers Blvd Phase 1 project (IGA Project #106). The Grade Control Palmer Park Channel – Galley Road to Palmer Park project (IGA Project #39) was then agreed to be moved from 2021 to the 2026-2035 project grouping in the location of the former Shooks Run Improvements project, and the Cottonwood Creek Channel Improvements Project – Austin Bluffs Parkway to Powers Blvd Phase 1 project was inserted into the place of the Grade Control Palmer Park Channel – Galley Road to Palmer Park project in 2021.

- Shooks Run Channel – Cache La Poudre St. to Patty Jewett Golf Course (2021 IGA Project #28) and
  Cottonwood Creek Channel Improvements Project – Austin Bluffs Parkway to Powers Blvd Phase 2 (IGA Project #107) – Agreed to remove and replace the Shooks Run Channel - Cache La Poudre St. to Patty Jewett Golf Course project with the Cottonwood Creek Channel Improvements Project – Austin Bluffs Parkway to Powers Blvd Phase 2 project (IGA Project #107) in 2021.

- Channel/Grade Control East Fork of Sand Creek (2023 IGA Project #62) – Agreed to move the Channel/Grade Control East Fork of Sand Creek project to the 2026-2035 project grouping in the location of IGA Project #27 (Shooks Run Channel – Bijou Street Culvert & Channel Stabilization) and IGA Project #29 (Shooks Run Improvements Phase 3) to allow for the insertion of the Cottonwood Creek Channel Improvements Project – Austin Bluffs Parkway to Powers Blvd Phase 3 project (IGA Project #108) in 2023.

- Shooks Run Channel – Bijou Street Culvert & Channel Stabilization (2026-2035 IGA Project #27);
  Shooks Run Improvements – Phase 3 (2026-2035 IGA Project #29); and
  Cottonwood Creek Channel Improvements Project – Austin Bluffs Parkway to Powers Blvd Phase 3 (IGA Project #108) – Agreed to remove and replace both the Shooks Run Channel – Bijou Street Culvert & Channel Stabilization IGA Project #27 and the Shooks Run Improvements – Phase 3 IGA Project #29 with the Cottonwood Creek Channel Improvements Project – Austin Bluffs Parkway to Powers Blvd Phase 3 project (IGA Project #108). The Channel/Grade Control East Fork of Sand Creek project (IGA Project #62) was then agreed to be moved from 2023 to the 2026-2035 project grouping in the location of the two former Shooks Run Improvements projects, and the Cottonwood Creek Channel Improvements Project – Austin Bluffs Parkway to Powers Blvd Phase 3 project was inserted into the place of the Channel/Grade Control East Fork of Sand Creek project in 2023.

Paragraph III.B(2)c. states that Utilities shall reimburse Pueblo County up to $10,000 each year (commencing in 2016) to defray the actual cost incurred by Pueblo County of using any outside engineering consultants to conduct these yearly reviews and any associated inspections, payable within 30 days of Utilities' receipt of a statement from Pueblo County evidencing such costs.

- As of December 31, 2019, a statement from Pueblo County evidencing such costs for reimbursement was not received by Utilities.

Paragraph III.B(4) – Contingency for Stormwater Emergencies

Paragraph III.B(4) states that should an unanticipated emergency stormwater event occur, such as a flood, which event causes or threatens to cause property damage or create a threat to human health or safety which must be addressed in an immediate manner utilizing funds previously allocated for the listed Capital Projects, the City and Utilities shall promptly notify Pueblo County of such situation, and the Engineering Representatives of the Parties shall confer and reach agreement promptly on any required postponement and modification to the stormwater construction priorities in the CIP.

- No unanticipated emergency stormwater events as outlined in the above paragraph occurred during the reporting period.

Paragraph III.C – Regional Cooperation on Fountain Creek

Paragraph III.C states in part that the Parties are to coordinate and cooperate in regional initiatives designed to address such concerns, including:

(1) *By coordinated support of the initiatives undertaken by the Fountain Creek Watershed, Flood Control and Greenway District ("FCWFCGD") to obtain federal and state assistance for stormwater, flood control and water quality projects within the Fountain Creek basin, including federal and state grants;*

- No new activities were performed in 2019 which required support by the City or Utilities.

(2) *By regional land use planning efforts where feasible and practicable;*

- The City and Utilities are active participants in the FCWFCGD Board of Directors, the FCWFCGD Technical Advisory Committee (TAC), and Monetary Mitigation Fund Advisory Committee (MMFAC). Respectively, the TAC and MMFAC provide input to the Board of Directors regarding technical matters including land use policies, land use project applications, and funding priorities for project work on Fountain Creek.
- Utilities supported the FCWFCGD MMFAC in the development of a draft 10-year Capital Improvement Plan in 2017 and in 2019 participated in the annual Plan update for recommended projects to commence in 2020.

(3) *By regional water quality improvement and water quality regulatory initiatives, as determined appropriate and subject to each Party's reservation of its regulatory authority.*

During the reporting period:

- Utilities supported the FCWFCGD MMFAC in the development of a draft 10-year Capital Improvement Plan in 2017 for the purpose of ensuring that the Monetary Mitigation Funds provided through Condition 6 of the Pueblo County SDS 1041 Permit are allocated in congruence with the terms outlined in the SDS 1041 Permit. Utilities further participated in the selection of projects in 2019 to be commenced in 2020 with appropriate updates to the District's Capital Improvements Plan.
- The City and Utilities continued to participate through the Arkansas and Fountain Coalition for Urban River Evaluation (AF CURE) to develop United States Environmental Protection Agency (USEPA) Watershed Based Plan (WBP) to address *E. coli* concentrations in the Fountain Creek stream segments listed as "impaired" in the CDPHE Regulation #93 (303 d list). Additionally, though AF CURE, Utilities participated in regional water quality efforts including nutrient sampling and modelling, PFC-related groundwater issues, and the revision of the regulatory classification of Fountain Creek tributaries.
- The City completed the design of Phases II and III of the Monument Branch Channel Stabilization project (Phase I was designed and constructed in 2016 and 2017). The project is located on Monument Branch, a tributary of Monument Creek, between North Gate Boulevard and the confluence with Monument Creek on the Air Force Academy property east of Interstate-25. This project will restore and stabilize the creek by constructing drop structures and installing flood mitigation measures. The project

was identified as a high priority project within the *Monument Creek Watershed Restoration Master Plan, October 3, 2016* and is a joint effort between the City, Utilities, the United States Air Force Academy, CDOT, and the FCWFCGD.

(4) *By coordinated support of acquisition of land or conservation easements by the FCWFCGD or other entities to preserve or enhance the Fountain Creek corridor below the City and through the City of Pueblo.*

- No known activities were conducted by the FCWFCGD or other entities during the reporting year.

(5) *By exploring opportunities for such coordination and cooperation on these Fountain Creek initiatives beyond the term of the IGA Agreement.*

- During the reporting period, the City continued to complete the final phase of a Stormwater Infrastructure Master Plan (SIMP) which incorporates information from the *Upper Fountain Creek and Cheyenne Creek Flood Restoration Master Plans* and the *Monument Creek Watershed Restoration Master Plan,* which were prepared in a joint effort with the FCWFCGD.

Paragraph III.D – Payments to FCWFCGD

Paragraph III.D(2) – Commencement of Payments under Condition 6 of the SDS 1041 Permit

Paragraph III.D(2) states that within 30 days of the execution of the IGA Agreement, Utilities shall, on behalf of the SDS Participants, make the first annual payment (together with the additional annual indexing amounts) due under Condition 6 of the SDS 1041 Permit for the purposes stated therein to the FCWFCGD or its Enterprise in the amount of $9,578,817.00. The remaining annual payments shall be made on or before January 15 of the years 2017, 2018, 2019 and 2020 respectively.

- A check dated January 10, 2019 in the amount of $10,564,361.00 payable to the Fountain Creek Watershed Water Activity Enterprise was delivered by Utilities to the FCWFCGD Executive Director on January 15, 2019. The payment was made in accordance with Condition 6 of the Southern Delivery System (SDS) 1041 Permit and as outlined in Pueblo County Resolution No. P&D 14-15 (confirming the commencement date for the annual indexing and approving the annual indexing methodology for purposes of calculating monetary mitigation).

  As outlined in Resolution No. P&D 14-15 and the associated attachment, "*On or before March 31 of each year, CSU staff shall meet with Pueblo County Staff for purposes of confirming the PPIs for each of the November to November twelve month periods used in the calculation and reaching agreement upon the index-based amount to be paid by CSU utilizing the calculation methodology (described)….*" This meeting was postponed until April 2019 when the originally reported "Preliminary" November 2018 Producer Price Index (PPI) for Finished Goods (WPUFD49207) value of 203.7 was updated to a "Finalized" published value of 204.4 (0.7 points greater than the original published "Preliminary" value).

  Based on the increase in the index value, it was calculated that the Total Annual Payment Amount with Indexing for the 2019 payment to the FCWFCGD should have been $10,600,664, which resulted in an underpayment of $36,303 in the January

disbursement as it relates to interest payments associated with Condition 6 of the SDS 1041 Permit. Both Pueblo County and Utilities agreed that the $36,303 underpayment would be added to the January 2020 SDS Condition 6 payment.

Paragraph III.D(3) – Cooperation on Future Funding

Paragraph III.D(3) states that to ensure long-term funding of FCWFCGD's annual operating budget, the City, Utilities and Pueblo County will work cooperatively and in good faith to establish a proportional formula by which each of the Parties and the other participating stakeholders in the FCWFCGD, will agree to contribute funds to ensure the long-term funding of FCWFCGD's operating budget.

- The City and Utilities are committed to the long-term funding of the FCWFCGD's operating budget and continues to support efforts to work cooperatively and in good faith with Pueblo County to establish a proportional operating budget funding formula with the participating stakeholders in the FCWFCGD.

Paragraph III.F – Grant of DCM Variances

Paragraph III.F states in part that to the extent the granting of DCM variances is not precluded by the EPA or CDPHE, the City shall provide Pueblo County with notice of, and an opportunity to comment upon, any DCM variance request before a decision is made on the variance request.

- Seventy (70) minor DCM variance requests were received by the City during the reporting period. The requests were submitted to the Pueblo County Engineering Department following review and acceptance by the City to allow the County the opportunity to review and comment on the requests. None of the variance requests resulted in an adverse impact to water quality or an increase of peak flows into Fountain Creek. Pueblo County representatives did not provide objection to any of the requests following their review. The City took the Pueblo County responses under advisement and responded to any questions Pueblo County representatives presented.

3.0 Final Expenditures for the 2019 Calendar Year

The following contains a report of final audited expenditures for the 2019 calendar year. Per the IGA, for the purpose of this report, "…expenditures mean both actual expenditures and encumbered funds. 'Encumbered funds' shall mean monies which are appropriated and placed into a fund or account restricted (1) for payment of an authorized Stormwater Control Program activity and cannot be obligated or used for any other purpose, and (2) for payment of capital construction projects for which appropriate steps are being undertaken in a timely manner to advance towards physical construction." Further, the IGA states: The City and Utilities combined expenditures shall comply with the minimum total expenditures and minimum average annual expenditure during each five-year period. For the first five-year period (2016-2020), the minimum annual expenditure requirement is $16.5 million, and the average annual expenditure requirement is $20 million for an overall expenditure of $100 million for the period between 2016 and 2020. In addition, the city has committed to complete at least the projects included in the Capital Projects list identified per the agreement by December, 31, 2035.

The minimum expenditure requirement (actual and encumbered) has been met for the 2019 calendar year reporting period. As of December 31, 2019, the City and Utilities have invested (through either expenditures or encumbrances) a total of **$20.7 million** dollars on the City's Stormwater Control Program and expended $24.3 million dollars.

Expenditures for the 2019 Calendar Year

IGA Requirement	Minimum Total Expenditures	Average Annual Expenditures	Minimum Annual Expenditures
First Five Years (2016-2020)	$100 Million	$20 Million	$16.5 M/yr.

Claimed Expenditures (Actual Expenditures and Encumbered Funds)	2016	2017	2018	**2019**	**Total (2016-2019)**
Drainage O&M/MS4 Program	$5,833,812	$7,160,556	$9,408,626	**$9,080,041**	$31,483,035
Stormwater Capital Projects	$14,982,145	$13,100,000	$12,819,206	**$7,478,927**	$48,380,278
Colorado Springs Utilities (SSCC Program)	$4,713,024	$3,340,083	$3,700,166	**$4,093,307**	$15,846,580
Total	$25,528,981	$23,600,639	$25,927,998	**$20,652,275**	**$95,709,893**

Actual Expenditures Only	2016	2017	2018	**2019**	**Total (2016-2019)**
Drainage O&M	$2,176,780	$3,766,691	$4,029,563	**$4,523,710**	$14,496,744
Stormwater MS4 Program	$2,772,986	$3,753,575	$4,652,951	**$4,553,479**	$15,732,991
Stormwater Capital Projects	$8,743,880	$7,878,724	$9,997,414	**$12,189,439**	$38,809,457
Colorado Springs Utilities (SSCC Program)	$4,713,024	$3,340,083	$3,700,166	**$4,093,307**	$15,846,580
Total	$18,406,670	$18,739,073	$22,380,094	**$25,359,935**	**$84,885,772**

Additional Unclaimed Stormwater Expenditures in 2019

City Indirect Costs Related to Administrative Overhead	$ 863,419
Other Capital Project Stormwater/Channel Related Work (Excluded expenditures related to PPRTA and roadway/bridge construction or maintenance projects per IGA paragraph III.A(5)b.)	$3,991,150

Capital Project Summary of Expenditures

Of the actual expended total listed above, $11,367,007 has been invested in Capital Projects, of which $8,175,662 has been invested on IGA projects, and $3,191,345 has been invested on other stormwater related projects.

IGA CAPITAL PROJECTS

IGA Project No.	Project Name		Actual Spent ($)
11	Camp Creek Phase I (2018)		354,499
15	Citadel Mall Neighborhood Improvements (2018)		3,765
65	Cottonwood Creek Detention Basins (2017)		170,251
1	Emergency Stormwater Projects (2019)		2,371,301
0	FEMA Grant Projects (City Funds) (2016)		312,654
	HMGP 4145 Camp Creek Flood Mitigation	168,904	
	NRCS 4145 Chuckwagon Phase II	143,750	
7	Fairfax Tributary Detention Pond (2016)		122,006
105	Flying Horse Pond 1 Retrofit (2019)		127,458
8	King Street Detention Pond (2016)		1,270
23	North Chelton Road (CS-057) (2018)		67,702
31	Rangewood Tributary Detention Pond (2017)		1,020,326
100	Pine Creek Drainage Corridor Detention Pond (2018)		1,178,125
103	Pine Creek Channel Improvements Phase I (2018)		269,356
26	Sand Creek S. of Platte (CS-018) Grant Match (2016)		894,681
101	Scarborough Dr. Detention Facility (2017)		807,429
6	USAFA Drainages (Monument Branch) (2016)		107,004
13	Water Quality Projects (2018)		836,255
Various	Project Scoping and Definition		44,804
	(IGA-31) Rangewood Tributary Detention Pond (2017)	14,317	
	(IGA-21) Sand Creek - Karr to W. Fork (2021)	8,050	
	(IGA-28) Shooks Run Phase I (2021)	150	
	(IGA-106) Cottonwood Creek Channel Improvements (2021)	15,679	
	(IGA-6) USAFA Drainages (Monument Branch Phase II - 2016)	6,609	
	Total IGA Projects		**8,688,886**

Other Stormwater Capital Projects

	Project Name	Actual Spent ($)
	Comprehensive Drainage Master Plan	10,417
	Dam Repairs	11,997
	Drainage Criteria Manual Updates	71,205
	Drainage Studies	417,264
	Channel Inspection and Restoration	91,109
	TABOR16 001-Falcon Estates	2,186
	TABOR16 002-Rustic Hills Drainage Imps	907,276
	TABOR16 006-Doherty HS Channel	594,744
	TABOR16 009 Sommerlyn Hills	269,006
	TABOR16 083 Moreno At Weber	79,950
	TABOR16 086 Pikes Peak At Academy	99,865
	TABOR16 119-Galley Road/N Murray	412,751
	TABOR16 137-Teal Court-Spring Creek	292,059
	TABOR16 178-Dale-Prospect St.	25,033
	TABOR16 198 Ranch Lane Garden Way	83,439
	TABOR16 199-Asbury & Vanguard Dr.	2,547
	TABOR16 224 Southgate Channel	129,705
	Total Non-IGA Stormwater Capital Projects	**3,500,553**

Total Stormwater Capital Projects Expenditures

Total 2018 Stormwater Capital Projects Expenditures	**12,189,439**

Colorado Springs Utilities SSCC Program Activities

Work Order No.	Project Name	Actual Spent ($)
2973829	Monument Creek Stream Stabilization Upstream of Pikeview - Permitting Closeout	$23,540
3321685	Revegetation Services for Monument Creek Upstream of Pikeview (Wetlands)	$34,522
3303876	CSR Sludgeline Bank Protection - Construction	$1,548,122
3129020	Dry Creek Stream Stabilization Downstream of Dawson Drive - Phase I Construction	$292,559
3527938	Monument Creek at Uintah Street Bank Stabilization - Design	$35,189
3411481	North Pulpit Rock Creek at Monument Creek Stream Stabilization - Construction	$170,725
3221519	Sand Creek Upstream of Constitution Pond Stream Stabilization - Construction	$1,039,675
3221652	Sand Creek Upstream of Chelton Road Stream Stabilization - Construction	$484,203
3526106	Cottonwood Creek Austin Bluffs to Powers Stream Stabilization, Design	$401,277
3331348	Owen Hall Dam Diversion Fountain Creek Access at Clear Spring Ranch	$62,578
3221972	Sand Creek Downstream of West Fork Confluence Bank Stabilization	$917
	Total Utilities SSCC Program 2019 Project Costs to Date:	**$4,093,307**

4.0 Stormwater Control Program Activities Undertaken in 2019 Calendar Year

2016 Capital Projects Carried Over Into the 2019 Reporting Period

2016 FEMA/ GRANT PROJECTS (IGA PROJECT #0)
Projects arising from the 2013 and 2015 flooding

Garden of the Gods Detention Pond – Camp Creek 2013 Flood Mitigation
Location: Garden of the Gods, just west of 30th Street and south of Glen Eyrie

Description: Flash floods following the Waldo Canyon Fire caused increased flood flows, massive erosion and sediment deposition onto Garden of the Gods. The Hazard Mitigation Grants Program funded the construction of this large detention basin to contain sediment and slow flows into Garden of the Gods. Due to archeological findings within the proposed project site, FEMA had requested further study and mitigation of the area before commencing with construction. Construction activities commenced and were completed in 2019.

Engineer/Contractor:	Wilson and Company/Mortenson Company
Status:	Construction 90% Complete

USAFA DRAINAGE-MONUMENT BRANCH – PHASE 2 & 3 (IGA PROJECT #6)

Location: The project is located on Monument Branch, a tributary of Monument Creek, between North Gate Blvd and Interquest Parkway and starts at Voyager Parkway (just north of The Classical Academy school) and continues west past I-25 to the confluence with Monument Creek on the United States Air Force Academy (USAFA).

Description: The Monument Branch tributary of Monument Creek has become highly eroded. This project was constructed to restore and stabilize the creek by constructing drop structures and installing flood mitigation measures. The project has been broken up into 3 phases. Phase 1 (completed in 2017) is a small section of highly eroded channel between Voyager Parkway and I-25. Phase 2 consists of the remaining section outside of Phase 1 between Voyager parkway and I-25. Phase 3 will be the section of Monument Branch from the confluence with Monument Creek to the Santa Fe Regional Trail on the west side of I-25. The project is identified as a high priority project within the Monument Creek Watershed Restoration Master Plan, October 3, 2016 and is a joint effort between the City, Utilities, the United States Air Force Academy, CDOT, and the FCWFCGD.

Phase 1:	Complete (2016-2017)
Phase 2:	
Engineer/Contractor:	Matrix/TBD
Status:	Phase 2 Engineering – 100% Complete, NEPA in process Phase 2 Construction to begin in Fall 2020 or Fall 2021 Pending FEMA PDM Grant
Phase 3:	
Engineer/Contractor:	Matrix/Construction to be performed by a private developer
Status:	Phase 3 Engineering – Complete

FAIRFAX TRIBUTARY DETENTION POND (IGA PROJECT #7)

Location: Proposed pond to be located on the northwest corner of Powers Boulevard and Research Parkway.

Description: This project will construct a new full spectrum detention facility. The initial budget identified was not enough to cover the anticipated project costs. Therefore, a $2,863,472 grant application through the CDOT Water Quality Mitigation Fund was applied for and awarded to the City. The City recently completed IGA negotiations with CDOT for the project. The design of the pond is scheduled to be completed in January 2020 and construction is expected to begin in early 2020. In addition, Matrix Design Group completed a 10% design for the installation of a stand-alone facility, independent of the CDOT grant, as part of the Cottonwood DBPS Project.

Engineer/Contractor:	FHU/TBD
Status:	IGA negotiations with CDOT complete; Design 95% Complete Construction planned for early 2020

ENGINEERING STUDIES

Cottonwood Creek Drainage Basin Planning Study (DBPS)

Location: Cottonwood Creek Drainage Basin (northeast section of the City)

Description: The Cottonwood Creek DBPS had started to be revised several times over the past several years; however, was not completed and finalized. This project reassessed the previous revision and provides updates as needed. The DBPS was completed and finalized in 2019.

Engineer:	Matrix
Status:	Complete

Stormwater Infrastructure Master Plan (SIMP)

Location: City Wide

Description: The purpose of the SIMP is to collect, standardize, and integrate information on stormwater capital and operations and maintenance (O&M) projects needed to address current and future stormwater conditions in the City. The City has numerous sources of information on existing and proposed stormwater capital projects to address stormwater, flood control, channel stability, and water quality conditions in the City's drainage ways and urban area. The initial working version of the SIMP was completed 2019 with implementation of the SIMP scheduled in early 2020.

Engineer:	Matrix/Wilson & Company/HDR
Status:	Complete

2017 Capital Projects Carried Over Into the 2019 Reporting Period

2017 FEMA/ GRANT PROJECTS (IGA PROJECT #0)

Projects arising from the 2013 and 2015 flooding

East Fork Sand Creek Erosion – Site 1

Location: South of Airport Road and west of Powers Boulevard

Description: Flooding during the FEMA declared disaster has incised the channel and caused side slope damage. Project is designed to repair approximately 900 linear feet of channel. Beginning approximately 1,000 feet west of Powers Boulevard, design includes installation of new drop structures and raising of the channel bottom approximately 5 feet.

Engineer/Contractor: Respec/Frontier Environmental
Status: Complete

Flying W Ranch/ Chuckwagon-Phase II

Location: Chuckwagon Road

Description: Flash floods following the Waldo Canyon fire caused massive erosion and damage to private property on the Wolfe Ranch/Chuckwagon. The NRCS grant program funds additional stabilization of about 1,500 feet of drainage channels throughout the property.

Engineer/Contractor: Matrix/BMH Development
Status: Complete

WATER QUALITY PROJECTS (2017) - SIERRA MADRE POND (IGA PROJECT #13)

Location: West side of South Sierra Madre Street near intersection with West Cucharras Street.

Description: This project is designed to provide water quality to the southwest downtown redevelopment area. The current area does not have regional water quality facilities installed to collect storm flows before discharging into Monument Creek. The project will address water quality before entering Monument Creek just upstream of Fountain Creek by installing a regional underground water quality facility west of the Sierra Madre and Cucharras Street intersection.

Engineer/Contractor: AECOM/Wildcat Construction
Status: Complete

COTTONWOOD CREEK DETENTION BASINS (IGA PROJECT #65)

Pond Projects arising from preliminary 2017 Cottonwood Creek DBPS

Tutt Pond (PR-2)

Location: Cottonwood Creek upstream of Tutt Boulevard

Description: Design and construction of a regional in-line detention pond for flood control purposes to attenuate flows in the upper reaches of Cottonwood Creek.

Engineer/Contractor: Kiowa/TBD
Status: Engineering 100% Complete
Construction to be completed in 2020

RANGEWOOD TRIBUTARY DETENTION POND (IGA PROJECT #31)

Location: The project is located in a tributary of Cottonwood Creek immediately upstream of the Dublin Boulevard crossing between Rangewood Drive and Austin Bluffs Parkway.

Description: The project is designed to create an in-line detention pond within the city owned property for flood control purposes in order to attenuate flows downstream in Cottonwood Creek. The pond is also designed to eliminate a deep incised channel in the area of the pond.

Engineer/Contractor:	RESPEC/American West Construction
Status:	Complete

SCARBOROUGH DRIVE SUB-REGIONAL DETENTION FACILITY (IGA PROJECT #101)

Location: The project is located off line on the north side of the main stem of Cottonwood Creek, south of the intersection of Scarborough Drive and Potomac Drive

Description: The project will install a full-spectrum detention pond capturing off line flows from the neighborhoods to the north before discharging into Cottonwood Creek. This project is a replacement for the Storage at Bridle Pass Drive detention project (former IGA Project #52)

Engineer/Contractor:	Merrick/Blue Ridge Construction
Status:	Complete

2018 Capital Projects Carried Over Into the 2019 Reporting Period

WATER QUALITY PROJECTS (2018) - RIDGE ROAD POND (IGA PROJECT #13)

Location: Southeast corner of Ridge Road and Colorado Boulevard

Description: This project will provide water quality to a large section of the previously developed west side, old annexed area within the City. The current area does not include regional water quality features before discharging into Fountain Creek. The project is designed to address water quality before entering Fountain Creek by installing a regional full-spectrum water quality facility.

Engineer/Contractor:	FHU/TBD
Status:	Engineering 90% Complete Construction to be completed in 2020

PINE CREEK DRAINAGE CORRIDOR DETENTION POND (IGA Project #100)

Location: Within the Pine Creek channel just south of the golf course pond and northeast of Pine Knoll View

Description: The project will create an in-line detention pond within the Pine Creek channel for flood control purposes where head-cutting and erosion have been occurring. This project is being designed in conjunction with improvements to the downstream channel and will be constructed by the same contractor selected for Phase I of the channel improvements project.

Engineer/Contractor:	WaterVation/Iron Woman Construction
Status:	Engineering 100% Complete Construction 90% Complete

PINE CREEK CHANNEL IMPROVEMENTS PHASE I (IGA PROJECT #103)

Location: Pine Creek natural channel alignment from Chapel Hill Drive east to the planned Pine Creek Drainage Corridor Detention Pond

Description: The scope of this project is to restore the natural channel using natural and hardened structures to mitigate against further erosion and loss of vegetation within the drainage way. The project will help reconnect the floodway and create new riparian areas downstream of the planned Pine Creek Drainage Corridor Detention Pond IGA project.

Engineer/Contractor:	HDR/Iron Woman Construction
Status:	Engineering 100% Complete Construction 90% Complete

CITADEL MALL NEIGHBORHOOD IMPROVEMENTS (IGA PROJECT #15)

Location: Santa Rosa Street and Chelton Road

Description: Installing below grade storm system along Santa Rosa and Chelton north up to Bowser Drive. New inlets will also be installed at the intersection of Santa Rosa and Chelton to prevent the flooding of this intersection.

Engineer/Contractor:	HDR/TBD
Status:	Engineering 100% Complete Construction to be completed in 2020

NORTH CHELTON ROAD (IGA PROJECT #23)

Location: North Chelton Road from Sturgis Road south to Maizeland Road

Description: Install new stormwater inlets, curb, gutter and below ground stormwater pipe network to capture storm flows and direct flows to the existing nearby storm system. Project will mitigate against the flooding of residences immediately down gradient of Chelton Road.

Engineer/Contractor:	SEH/TBD
Status:	Engineering 100% Complete Construction to be completed in 2020

CAMP CREEK PHASE I (IGA PROJECT #11)

Location: Camp Creek within the Rockledge Ranch near the intersection of 31st Street and Chambers Way

Description: Install erosion control vanes in the Camp Creek natural channel and rip-rap stabilization of the stream banks and channel bottom upstream of Chambers Way to prevent further scouring of the stream bed and banks.

Engineer/Contractor:	Wilson & Co/Langston
Status:	Engineering 100% Complete Construction to be completed in 2020

US24/COLORADO DETENTION FACILITY (IGA PROJECT #102)

Location: Northwest corner of Ridge Road and US Highway 24

Description: The scope of this project is to acquire the existing property, raze all structures and install a full-spectrum water quality pond that will treat areas of City property and well as CDOT, Manitou and El Paso County.

Engineer/Contractor:	HDR/TBD
Status:	Planning 10% Complete

TABOR PROJECTS (2016-2017)

Projects arising from April 2017 "Voter Approved Retention of TABOR funds" (Ballot Issue 2)

Doherty High School Channel

Location: Hybrid concrete/natural channel along east side of Doherty High School

Description: The purpose of this project is to design and construct channel improvements as well as repair the degraded channel.

Engineer/Contractor:	AECOM/Ability
Status:	Complete

Galley Road and North Murray Boulevard

Location: Intersection of Galley Road and Murray Boulevard

Description: Design and construct a below ground storm water system to convey flows to the adjacent Sand Creek tributary. Construction commenced in 2018 and was completed in 2019.

Engineer/Contractor:	SEH/K.R. Swerdfeger
Status:	Complete

TABOR PROJECTS (2016-2017) – Continued

Projects arising from April 2017 "Voter Approved Retention of TABOR funds" (Ballot Issue 2)

Rustic Hills

Location: (Old Annexation Neighborhood) Bounded by Constitution Avenue, Murray Boulevard and the Rock Island Trail.

Description: Design of roadway drainage improvements (to be constructed by the City Streets Division in 2019) and design of new water quality pond (to be constructed by Water Resources Engineering Division) at southeast edge of site.

Engineer/Contractor: Drexell Barrell/Dwire Earthmoving
Status: Complete

Teal Court, Phase I and II

Location: Cul-de-Sac on north end of Teal Court (Phase I) and Mallard Drive just west of Teal Court (Phase II)

Description: Improve both above and below ground stormwater conveyance to reduce flooding of area streets and private lots.

Engineer/Contractor: In-House Design/ICS
Status: Complete

GRANT APPLICATIONS

2018 Pre-Disaster Mitigation (PDM) Grant Applications

Location: Two separate project areas.

Description: Applications were submitted to FEMA in an effort to acquire funding for the design and construction of two mitigation projects in the Pine Creek and Cottonwood Creek drainage basins.

Engineer: HDR
Status: Complete

ENGINEERING STUDIES

Sand Creek Drainage Basin Planning Study (DBPS)

Location: Sand Creek Drainage Basin (east section of the City)

Description: The Sand Creek DBPS was last performed and adopted into use in 1996. This project reassesses the previous DBPS and will provide updates as needed. The DBPS is scheduled to be completed and finalized in 2020. Many of the future IGA projects are located in this basin and will rely on the updated DBPS once complete.

Engineer: Stantec
Status: Engineering 50% Complete

Capital Projects Undertaken During the 2019 Reporting Period

EMERGENCY STORMWATER PROJECTS (IGA PROJECT #1)

Projects arising from 2019 prioritized needs

118 E. Brookside

Location: North side of Brookside Street at Iliff Court.

Description: Reconstruct existing curb and gutter and intersection pan at Iliff Court to convey flows eastward to Cheyenne Creek and prevent private residence from flooding.

Contractor: ECC
Status: Complete

Rockrimmon Channel Pipe Repair

Location: Southwest of Tamarron drive and Anaconda Drive intersection in the Rockrimmon open Space.

Description: Repairs to Headwall and replacement of about 300 feet of 84″ Duramax pipe that was damaged due to fire.

Contractor: Tezak Heavy Equipment
Status: Complete

Channel at Lexington and Bordeaux

Location: North side of Lexington Drive both west and east of Bordeaux Drive.

Description: Repairs to concrete trapezoidal channel.

Contractor: ICS
Status: Complete

Van Buren Channel at Horace Mann Phase I and II

Location: Concrete channel on west side of Templeton Gap Road adjacent to Horace Mann Middle School.

Description: Repairs to concrete trapezoidal channel.

Contractor: Ability/Tasmarr
Status: Complete

Chelton and Bailey

Location: Concrete channel along the north side of Bailey Drive between Chelton Road and Newton Drive.

Description: Repairs to concrete trapezoidal channel.

Contractor: CMS
Status: Complete

EMERGENCY STORMWATER PROJECTS (IGA PROJECT #1) – Continued

Projects arising from 2019 prioritized needs

4850 Whimsical Drive

Location: Concrete channel and channel confluence that borders the north and west sides of 4850 Whimsical Drive.

Description: Repairs to concrete chase and trapezoidal channel outfall.

Contractor: ECC
Status: Complete

Van Buren Channel at Cascade

Location: Concrete channel on north side of UPRR tracks near Cascade Avenue and West Harrison Street.

Description: Repairs to concrete trapezoidal channel.

Contractor: Tasmarr
Status: Complete

Arrowswest Easements

Location: Concrete channel along 4420 Arrowswest Drive.

Description: Hired Real Estate consultant to procure required easements for future repairs to the concrete trapezoidal channel.

Contractor: HDR
Status: Complete

Mount Woodmen Court Easements

Location: Private property between Mount Woodmen Court and Cedar Valley Lane.

Description: Hired Real Estate consultant to procure required easements for future pipeline project across private properties that will alleviate erosion from storm water onto private property.

Contractor: HDR
Status: Complete

Vista Ridge H.S. Inlet Protection Grate

Location: Southeast corner of Vista Ridge H.S. lot off Black Forest Road.

Description: Installed a grate over the existing pipe inlet to prevent students from entering the pipe.

Contractor: Peak Custom Fabrication
Status: Complete

EMERGENCY STORMWATER PROJECTS (IGA PROJECT #1) – Continued

Projects arising from 2019 prioritized needs

Perkins Motors

Location: 1205 Motor City Drive

Description: Installed additional inlets and pipeline to capture flows that were flooding the Perkins Service Center.

Contractor: CMS
Status: Complete

Palmer Park Erosion Behind Ball Field

Location: Northwest corner of North Academy Boulevard and Maizeland Road.

Description: Stabilized drainage that flows behind ball field to prevent erosion of ball diamond outfield.

Contractor: Langston
Status: Complete

2235 Conservatory Point

Location: Drainage between Seton Hall Road cul-de-sac and Conservatory Point.

Description: Installed pipeline to carry flows from Seton Hall Road down to storm system in Conservatory Point to prevent erosion of hillside and flooding of private lots adjacent to the drainage.

Contractor: Langston
Status: Complete

15 Penrose Phase I and II

Location: East roadway edge at intersection of Penrose Boulevard and El Pomar Road.

Description: Installed new curb and gutter to prevent storm flows in street from entering the private properties to the north and east.

Contractor: Ability
Status: Complete

Bennington Drive Inlet Modification

Location: East end of Bennington Drive.

Description: Installed larger throated inlet to replace surface grate that was clogging and causing private properties to flood.

Contractor: CMS
Status: Complete

Pine Grove Inlet

Location: 1700 Pine Grove Avenue.

Description: Installed new inlet to replace unsafe sump hole at pipe opening.

Contractor: ECC
Status: Complete

EMERGENCY STORMWATER PROJECTS (IGA PROJECT #1) – Continued

Projects arising from 2019 prioritized needs

Siferd and Date Gates

Location: Southern intersection of Siferd Boulevard and Date Street.

Description: Installed road closure gates to protect traveling public from low water crossing condition at intersection.

Contractor: Peak Custom Fabrication
Status: Complete

8787 Meadow Wing Circle

Location: Intersection of Meadow Wing Circle and Tahoe Rim Drive.

Description: Installed inlet to capture sump flows coming from adjacent property that was causing unsafe allege on sidewalk.

Contractor: CMS
Status: Complete

1429 Kern Street

Location: West side of Kern Street and Wooten Road intersection.

Description: Repaired concrete cross pan and installed new handicap ramps to improve flow of stormwater through intersection.

Contractor: CMS
Status: Complete

Van Buren/Patrician Way

Location: Intersection of Van Buren Street and Patrician Way.

Description: Improved drainage around intersection to protect pedestrians from dangerous flood conditions.

Contractor: CMS
Status: Complete

Cresta and Cheyenne Boulevard

Location: Both sides of the road right-of-way near 1308 Cheyenne Boulevard.

Description: Install new curb and gutter to direct flows away from residence at 1308 Cheyenne Boulevard and re-establish swale on north side of Cheyenne Boulevard to direct street flows into Cheyenne Creek tributary.

Contractor: ECC
Status: Complete

EMERGENCY STORMWATER PROJECTS (IGA PROJECT #1) – Continued

Projects arising from 2019 prioritized needs

Chapel Hills Mall Pipe Repair

Location: Northwest corner of Chapel Hills Mall in front of closed Sears Store.

Description: Replaced collapsed section of 84" pipe, lined about 300' of failing pipe and lined the invert of about 1,050 feet of existing pipe.

Contractor:	C&L Water Solutions/Ability
Status:	Complete

Kiowa and Iowa

Location: South side of Kiowa Street for about a half block south of Iowa Street.

Description: Installed curb and gutter to prevent flooding of private residences.

Contractor:	CMS
Status:	Complete

WATER QUALITY PROJECTS (2019) – LOW-IMPACT DEVELOPMENT (LID) ALONG VERMIJO STREET (IGA PROJECT #13)

Location: West Vermijo Avenue from Cascade Avenue to Sahwatch Street

Description: This project is a full reconstruction of streetscaping along Vermijo Avenue as part of the City's PPRTA redevelopment of this area. The Stormwater Enterprise is contributing the funding to install LID for this section of Vermijo Avenue as the 2019 Water Quality Project Downtown.

Engineer/Contractor:	AECOM/Wildcat
Status:	Construction to be completed in 2020

FLYING HORSE POND #1 (IGA PROJECT #105)

Location: Detention Pond located along Monument Branch just south of Crystal Basin Drive.

Description: The scope of this project is to retrofit the existing pond to a water quality facility to treat the area drainage and drainage from the future Powers Boulevard extension that will be constructed along the south side of the pond.

Engineer/Contractor:	Merrick/TBD
Status:	Engineering 50% Complete Construction planned fall of 2020

NORTH DOUGLAS CHANNEL (IGA PROJECT #16)

Location: North Douglas Creek from Sinton Road outfall to the UPRR right-of-way

Description: The scope of this project is to restore the natural channel using natural and hardened structures to mitigate against further erosion and loss of vegetation within the drainage way. The project will help reconnect the floodway and create new riparian areas downstream of the existing hardened concrete channel.

Engineer/Contractor:	Merrick/TBD
Status:	Engineering 50% Complete

TABOR PROJECTS (2016-2017)

Projects arising from April 2017 "Voter Approved Retention of TABOR funds" (Ballot Issue 2)

Ranch Lane and Garden Way

Location: Just west of Garden Ranch Drive and Garden Way intersection.

Description: Continue storm pipe coming along lot lines from Ranch Lane cul-de-sac into existing storm pipe on Garden Way

Engineer/Contractor: In House Design/ICS
Status: Complete

Asbury Place

Location: Asbury Place just northeast of Warren Avenue.

Description: Construct concrete crosspan on Asbury place to better convey flows into existing concrete chase to the east. Remove electric pole from the center of the chase and add sidewalk overpass of chase section.

Engineer/Contractor: In House Design/Ability
Status: Complete

Moreno and Weber

Location: Empty lot at east side of Moreno Avenue and Weber Street intersection.

Description: Replace and upsize existing broken storm pipes in vacant lot.

Engineer/Contractor: In-House Design/ECC
Status: Complete

Cheyenne Creek at Southgate

Location: Concrete channel on east side of Southgate Road just north of Lake Avenue.

Description: Repairs to concrete trapezoidal immediately east of Southgate Road.

Contractor: CMS
Status: Complete

Pikes Peak at Academy

Location: Intersection of Pikes Peak Avenue and Delaware Drive to Spring Creek just west of Academy Boulevard.
Description: Installed inlets and below ground conveyance to alleviate localized flooding.

Engineer/Contractor: In-House Design/CMS
Status: Complete

Sommerlynn Hills Drainage Improvements

Location: Cheyenne Creek and Woodburn Street south to southern curve of El Sereno Drive.
Description: Install below ground conveyance to capture flows in the Sommerlynn Hills neighborhood and convey north to Cheyenne Creek.

Engineer/Contractor: Kimley-Horn/Pate Construction
Status: Construction 50% Complete

GRANT APPLICATIONS

2019 Pre-Disaster Mitigation (PDM) Grant Applications

Location: Three separate project areas.

Description: Applications are being submitted to FEMA in an effort to acquire funding for the design and construction of three mitigation projects in the North Douglas Creek, Bear Creek, and Cottonwood Creek drainage basins. The funding determination is scheduled to be made later in 2020.

Engineer:	Various
Status:	95% Complete

Utilities Sanitary Sewer Creek Crossing (SSCC) Program Activities

In 2019, Utilities SSCC Program included design, repair, or rehabilitation of 10 creek crossing locations, at a cost of $4,093,307.

The following is a summary of Utilities SSCC Program projects undertaken during the reporting period.

Monument Creek Stream Stabilization Upstream of Pikeview Intake - Permitting Closeout

The Monument Creek Stream Stabilization Upstream of the Pikeview Intake project began construction in Fall 2017 and was completed in Spring 2018. Project design was initiated in 2016 and completed in 2017. The project was designed to reduce risk to infrastructure by stabilizing a 4,450-foot reach of Monument Creek where a 54-inch sanitary sewer interceptor parallels the creek, a 36-inch sanitary sewer main crosses Monument Creek, and an upstream drop structure is threatened by channel erosion. Stabilization was achieved by reconnecting Monument Creek to its historic floodplain through the installation of sculpted concrete drop structures, rock riffles, W-weirs, and channel fill. During 2019, a Letter of Map Revision (LOMR) was completed in order to satisfy floodplain regulation requirements from FEMA. A monitoring report for the USACE 404 permit was also created to document the status of the wetland mitigation.

Engineer/Contractor:	Matrix Design Group/Wildcat Construction
Notice to Proceed:	May 2016/August 2017
Completion date:	November 2019
Status:	Complete

Revegetation Services for Monument Creek Upstream of Pikeview - Wetlands

Utilities stabilized a degrading reach of Monument Creek upstream of the Pikeview Intake to protect a 36-inch sanitary sewer main crossing Monument Creek and a 54-inch sanitary sewer main paralleling Monument Creek. The revegetation project consisted of upland seeding to restore staging and access areas, willow staking along banks and boulder walls, and wetland seeding and plug planting to create wetlands permanently disturbed by the stabilization project. Professional wetland vegetation services and wetland cell maintenance along the project reach were procured to ensure proper establishment of riparian seeding, plants, and erosion control material.

Contractor:	Western States Reclamation, Inc.
Notice to Proceed:	November 2017
Construction/Maintenance Completion:	November 2020
Status:	90% Complete

Clear Spring Ranch Bank Protection - Construction

The Clear Spring Ranch Sludge Line Bank Protection Project is designed to protect Utilities sanitary sewer sludge line that runs longitudinally adjacent to Fountain Creek. The project site is located approximately 1,000 feet upstream of the Utilities' Owen Hall Diversion on the north end of the Clear Spring Ranch property. Fountain Creek has meandered towards the outside of the bend with the erosion creating a large vertical bank that has placed the infrastructure at risk. The project design consists of grouted boulder bank protection.

Engineer/Contractor:	Matrix Design Group/Tezak Heavy Equipment
Notice to Proceed:	May 2016/October 2019
Completion date:	April 2018/Scheduled April 2020
Status:	Construction 40% Complete

Utilities SSCC Program Activities (Continued)

Dry Creek Downstream of Dawson Drive Stream Stabilization – Phase 1 Construction

This project is designed to reduce risk to Utilities infrastructure by stabilizing a reach of Dry Creek in the northwestern portion of the City. A 12-inch sanitary sewer main extends down the Dry Creek drainage, crossing Dry Creek itself at several locations. The crossings of Dry Creek are encased in concrete; however, the encasements are exposed due to ongoing channel degradation. The project design consists of several small sculpted concrete drop structures that reconnect Dry Creek to its floodplain and prevent future channel degradation. Phase I construction consists of the portion of the project between Mark Dabling Road and the BNSF railroad. Construction of Phase I began in Fall 2019 with completion planned for Spring 2020. Phase II construction is planned for late 2020.

Engineer/Contractor:	Jacobs Engineering Group/Tezak Heavy Equipment
Notice to Proceed:	June 2017/October 2019
Completion Date:	April 2018/Scheduled March 2020
Status:	Design 100% Complete; Phase 1 Construction 80% Complete

Monument Creek at Uintah Street Bank Stabilization - Design

Bank erosion of Monument Creek has resulted in the need to install bank protection to prevent erosion and lateral migration from impacting a wastewater pipeline parallel to Monument Creek. The bank protection is anticipated to include the installation of a grouted stacked boulder wall. Design is to be completed in December 2019 with construction to begin in early 2020.

Engineer/Contractor:	Ayres Associates/TBD
Notice to Proceed:	November 2019
Completion Date:	December 2019
Status:	Design 100% Complete

North Pulpit Rock Creek at Monument Creek Stream Stabilization

Project designed to include stabilization of a portion of North Pulpit Rock Creek just upstream of its confluence with Monument Creek. The existing ungrouted riprap rundown had failed. Project consisted of reconstructing rundown with a grouted boulder rundown.

Contractor:	Tezak Heavy Equipment
Notice to Proceed:	October 2019
Completion Date:	December 2019
Status:	Complete

Sand Creek Upstream of Constitution Pond Stream Stabilization - Construction

Channel degradation on Sand Creek has resulted in three vertical concrete cutoff walls beginning to be compromised. This project converted the concrete cutoff walls to grouted sloping boulder drop structures and restored the channel invert. Bank protection and vegetative establishment were also included as part of the project.

Contractor:	Wildcat Construction
Notice to Proceed:	January 2019
Completion Date:	May 2019
Status:	Complete

Utilities SSCC Program Activities (Continued)

Sand Creek Upstream of Chelton Road Stream Stabilization - Construction

A Utilities installed drop structure with a stilling basin had the toe exposed 3-4' due to channel degradation on Sand Creek. This project restored the channel invert by constructing a new grouted boulder drop structure downstream of the existing one. Additionally, a cutoff wall was installed downstream of the new drop structure to prevent future degradation.

Contractor:	Tezak Heavy Equipment
Notice to Proceed:	January 2019
Completion Date:	May 2019
Status:	Complete

Cottonwood Creek Austin Bluffs Pkwy to Powers Blvd Stream Stabilization - Design

Project consists of design of approximately 8,500 feet of stream stabilization on Cottonwood Creek from Austin Bluffs Parkway to just east of Powers Boulevard. This project is being funded jointly by Utilities and the City Stormwater Enterprise. Due to the length and vertical relief of the reach, it is anticipated to be a multi-year project with several design and construction phases. Planned activities for 2019 include procurement of a 30% design of the entire reach and final design of the first construction phase of the project, with the design elements commencing in 2020. The design will result in multiple grade control structures and bank protection elements in order meet design goals.

Engineer:	TBD
Notice to Proceed:	February 2020
Completion Date:	TBD
Status:	Procurement of the Design Engineer

Owen Hall Dam Diversion Fountain Creek Access at Clear Spring Ranch

Project designed to harden and stabilize the existing Fountain Creek access point downstream of the Colorado Springs Utilities Owens and Hall Diversion structure and to place armoring along the eroded banks adjacent to the access point to ensure that future maintenance activities can be performed at the diversion structure. The bank protection and access apron consisted of ungrouted boulder walls, riprap, and erosion control matting.

Contractor:	Tezak Heavy Equipment Co. Inc.
Notice to Proceed:	April 2019
Construction Completion:	May 2019
Status:	100% Complete

Sand Creek Downstream of West Fork Confluence Bank Stabilization

Project designed to include stabilization of a portion of Sand Creek downstream of the confluence with the West Fork of Sand Creek to protect a 30-inch sanitary sewer pipeline. Project consisted of realignment of the low flow channel, repairing tape coating on the pipeline, and constructing a boulder wall to protect the sanitary sewer. Lateral migration and erosion of the low flow channel of Sand Creek, that occurred in the summer of 2017, caused the sanitary sewer pipeline (which had been previously lined and secured to concrete caissons) to become exposed.

Contractor:	Tezak Heavy Equipment Co. Inc.
Notice to Proceed:	February 2018
Construction Completion:	May 2018
Status:	100% Complete (Final Pay Application Paid in 2019)

Drainage Operations and Maintenance Activities Undertaken During the Reporting Period

The essential functions of the Public Works Operations and Maintenance Division, Drainage Operations and Maintenance Program are critical to maintaining the City's drainage infrastructure. These functions primarily include:

- Permanent Public BMP Inspections
- Permanent Public BMP Maintenance
- Open Channel Inspections
- Open Channel Maintenance
- Storm Sewer Maintenance/Vacuum-Truck Operations
- Stormwater Pipe Repair/Replacement
- Street Sweeping Operations
- Illicit Discharge Responses

To assist with consistent performance of these activities, Standard Operating Procedures (SOPs) for each of the above functions have been developed. The SOPs define, among other things, the purpose of the activity, scope, number and type of equipment required, minimum number of personnel required, training requirements, responsibilities and the standard procedures to be followed.

During the 2019 calendar year, the Drainage O&M Program completed the following activities:

- Completed inspections of all 104 publicly maintained regional and sub-regional detention ponds/facilities
- Completed identified maintenance activities within 90 publicly maintained regional and sub-regional detention facilities (including debris removal, sediment removal, mowing, tree trimming, and minor structure maintenance), resulting in removal of 4,583 cubic yards of sediment and debris
- Performed maintenance activities through 19.16 miles of concrete-lined and natural channels, including removal of 3,075 cubic yards of sediment, vegetation, and debris
- Completed 8,096 separate storm sewer maintenance/vacuum-truck operations (including cleaning of storm sewer inlets and storm sewer pipe cleaning), resulting in removal of 817.75 cubic yards of debris
- Repaired, replaced, or installed 2,084 linear feet of stormwater conveyance pipe
- Performed street sweeping operations on 24,359 lane miles of city streets, removing 29,667 cubic yards of debris

2019 MS4 Permit Compliance Summary

The City's MS4 Permit requires the implementation and operation of several specific programs and program components, including public outreach activities, commercial/residential management, illicit discharge management, construction site management, yearly reporting and compliance tracking, wet and dry weather monitoring, and the municipal facilities runoff control program. Several highlights of program compliance are described below.

Public Outreach Activities

The City's MS4 Permit requires public education and outreach activities related to the following:

Educational activities to promote reporting of illicit discharges and improper disposal activities conducted during the reporting period included:

- Illicit Discharge Detection
    - Provided online training to 279 field staff; classroom training to 125 additional field personnel; and CCTV training to over 500 firefighters and first responders.
    - Collaborated with Utilities Industrial Pretreatment staff to inspect and identify industrial facilities with sand interceptors and oil-water separators.

Public education activities to promote proper management and disposal of potential pollutants conducted during the reporting period included:

- Presentations provided (i.e., schools, community events): 122
    - Number of students and citizens reached (i.e., schools, community events): 2,938
    - Regional Stormwater Advertising Campaign reaching multiple counties and jurisdictions, including advertising on public buses, benches, and radio and television spots (i.e., pet waste, used oil, and illicit discharge related advertising on billboards and other signs): 10,395,997
    - Storm Drain Art Project
        - Walking Tours (facilitated by The Downtown Partnership): 12
        - Estimated indirect impressions to the downtown Colorado Springs area (i.e., special events, parades, tourism): 300,000
    - Adopt-A-Waterway Program: 102 events with 3,321 volunteers
- Educational materials distributed:
    - Brochures: 1,364
      (i.e., schools, auto body and repair shops, oil recycling facilities, carwash locations, carpet cleaners, concrete contractors, landscaping companies, veterinarians, pet grooming facilities)
    - School Items: 21,487
      (i.e., droplet figurines, pencils, magnets, activity guides and crayons, tattoos, post cards, bracelets)

Household chemical waste collection program education and outreach activities during the reporting period included:

- The City continued to participate in the El Paso County Household Hazardous Waste Collection Program in a continued commitment to make reasonably available to residents the means to recycle or properly dispose of the more common household chemical wastes.

- Distributed brochures related to the participation in the El Paso County Household Hazardous Waste Collection Program to local oil recycling facilities.

Industrial facilities program education and outreach activities during the reporting period included:

- 67 new businesses targeted to receive education and outreach material.
- 76 industrial facilities were inspected for stormwater compliance, including facilities that hold No Exposure certifications with CDPHE, facilities that received a complaint, and facilities inspected in conjunction with Utilities Industrial Pretreatment inspections.

Training and education for construction site operators during the reporting period included:

- The City conducted three outdoor Stormwater Best Management Practices (BMP) Field Academy trainings to members of the construction community to provide hands-on training on proper installation and maintenance of construction BMPs.
- The City participated in "Wet Wednesdays" stakeholder meetings held at the area Home Builder's Association (HBA) offices. The City prepared a number of stormwater related presentations at these meetings detailed for the construction industry in the City of Colorado Springs and El Paso County.

Private BMP Inspection and Tracking

City inspectors conduct inspections at various points of construction projects for conformance with construction specifications and compliance with MS4 related stormwater regulations. Additionally, the City completes required annual inspections of existing private permanent BMPs in accordance with issued private BMP maintenance agreements. The constructed permanent private BMPs (i.e., extended detention basins, porous landscape detention basins) are tracked in a database maintained by the City to ensure private BMPs are inspected and maintained appropriately. Approximately 1,493 inspections of private BMPs were conducted by the City in 2019, either during construction phases or associated with annual compliance requirements, which resulted in 51 enforcement actions.

- Private Structures Operation and Maintenance (O&M) Program Sites: 319
    - Structures Within Private Structures O&M Program: 460
- Total Private BMP Inspections: 1,493
    - Construction Inspections: 1,021
    - Compliance Inspections: 472
- Total Permanent BMP Enforcement Actions: 51

Construction Site Inspections

In 2019, six full-time MS4 inspectors were dedicated to the MS4 Program. During the 2019 reporting year, the City MS4 Program construction inspection team completed the following:

- Total inspections: 7,067
- Active construction sites through the year: 344
- Initial Inspections: 180
- Final Inspections: 130
- Routine Inspections: 4,983
- Complaint Inspections: 16
- Follow-up Inspections, reconnaissance/indicator, storm event inspections: 1,454
- Operations and Maintenance Inspections: 138

Construction Site Enforcement:

- Notice and Order: 0
- Letter of Non-compliance: 153
- Stop Work Orders: 13

Continuing Education:
The City MS4 Program construction inspectors respond to after-hours emergency spill calls that are received through the City's Spill Hotline. The inspection team has received the following training to assist with their safety while responding to emergency spill calls:

- Hazardous Waste Operations (Hazwoper) 24-hour training course (2 inspectors)
- Hazwoper 8-hour refresher training (4 inspectors)

Illicit Discharge Detection and Elimination (IDDE) Program

In 2019 the IDDE Program received 180 reports of illicit discharges. Of those reported, only 73 incidents were classified as an illicit discharge that reached the City's MS4 or Waters of the State.

IDDE Enforcement:

- Verbal Warnings Issued: 81
- Educational Brochures Distributed: 83
- Notice of Violation Issued: 14
- Letter of Non-Compliance Issued: 4

IDDE Training Presented to Field Staff:

- IDDE training was provided to both City and Utilities field staff with an emphasis on how to identify and respond to illicit discharges in the field. City and Utilities personnel who received the training included:
  - Code Enforcement Officers
  - Engineers
  - Engineering Technicians
  - Engineering Inspectors
  - Sworn Fire Department Employees
  - Fire Code Inspectors

Stormwater Development Review:

In 2019, the Stormwater Development Review team completed reviews of over 3,800 drainage related development submittals (e.g., drainage reports, grading and erosion control plans, drainage related design plans) and participated in the following professional events during the reporting period:

- City Stormwater University Presentations (Permanent Control Measure Spreadsheets and DCM Policy Clarifications)
- Colorado Association of Stormwater and Floodplain Managers (CASFM) Annual Conference
- Colorado State University BMP Design and Design Review Workshop
- Urban Drainage Flood Control District Annual Seminar
- USEPA SWMM Training Class

Yearly Reporting and Compliance Tracking

Annual reporting related to the City's MS4 Permit is required to be submitted in April of each year. The report is created from data and tracking of that data throughout the year. A copy of the 2018 annual report was submitted to the Colorado Department of Health and Environment (CDPHE) on March 22, 2019.

Wet Weather Monitoring

The Wet Weather Monitoring report is an additional requirement of the City's MS4 Permit that is required to be submitted in June of each year. The majority of this data comes from monitoring and testing conducted throughout the City by the United States Geological Survey (USGS) under a joint funding agreement with USGS and Utilities. A copy of the 2018 annual monitoring report was submitted to the CDPHE on May 29, 2019.

Municipal Facilities Runoff Control Program (MFRCP)

The MFRCP program is administered by the City's Stormwater Quality Coordinator along with various representatives from the City vehicle maintenance group (SERCO), City Public Works Operations and Maintenance Division, City Parks and Recreation Department, City Fire Department and the City Police Department. There are currently 40 MFRCP sites within the City's MS4 jurisdiction. Each year site plans for each MFRCP site are updated, inspections of the facilities are conducted, and MFRCP related training is administered.

E. Coli TMDL

In 2019, the City and Utilities continued to work with other local area governmental agencies/regional stakeholders on the finalization of a Fountain Creek Watershed Environmental Protection Agency Nine-Element Plan for the Management of *Escherichia Coli (E-coli)*. These efforts were in preparation of the anticipated implementation of a Total Maximum Daily Load (TMDL) standard for *E. coli* affecting the Fountain Creek watershed in the immediate future by the CDPHE. As part of USEPA's new national vision for the Clean Water Act (CWA) 303(d) program (Impaired Water Listing and TMDL Program), States are required to identify priority areas for TMDL development through 2022. The purpose of the regional watershed planning group was to preemptively create a plan in preparation for this anticipated requirement. To date, the City/Utilities have dedicated $25,000 to the Arkansas and Fountain Coalition for Urban River Evaluation (AF CURE) for these efforts.

5.0 Planned 2020 IGA Related Activities

Section III of the IGA outlines special provisions agreed to in the agreement by the IGA Parties. The following provides a summary of planned compliance activities by the City and Utilities for the upcoming reporting period related to Section III of the IGA.

Paragraph III.A – Stormwater Expenditures

Paragraph III.A(1) - Expenditures by the City and Utilities

For the 2020 calendar year, the City and Utilities are required to invest a minimum of $16.5 million dollars on the City's Stormwater Control Program.

- The approved 2020 City of Colorado Springs budget titled *Annual Budget, 2020,* describes the 2020 Stormwater Enterprise budget. The document can be downloaded at:

  https://coloradosprings.gov/sites/default/files/inline-images/2020pbudget-30-01-stormwaterenterprisenew.pdf

  https://coloradosprings.gov/budget/page/city-budget

- The 2020 Utilities budget allocates $3,000,000 as part of Utilities' SSCC Program.

- Planned IGA related activities in 2020 include, but are not limited to:
  - 10% conceptual engineering for IGA capital projects (2022-2023);
  - Coordination and delivery of ongoing IGA capital projects;
  - Completion of 2019 engineering studies;
  - Implementation of the City of Colorado Springs Stormwater Construction Manual and design spreadsheets;
  - Implementation of the Stormwater Infrastructure Master Plan.

Paragraph III.A(2) - Annual Report of Expenditures

The IGA requires that in order to verify whether the City's and Utilities' expenditures on the Stormwater Control Program meet or exceed the requirements of paragraph III.A(1), each year the City and Utilities shall file with Pueblo County a report containing an estimate of expenditures on or before January 31 of the year following the expenditures, followed by the filing of a preliminary report on or before March 31, and with a final report to be filed on or before June 30 of that year based on audited financials. These reports are to provide appropriate details concerning the timing, amount and nature of all such expenditures made by the City and Utilities during the prior year for Capital Projects, O&M, MS4 Permit compliance, protection of Utilities infrastructure from stormwater, and any other relevant categories.

- The City and Utilities will prepare and file a report to document the expenditures for the 2020 calendar year and provide a summary of the associated Stormwater Control Program activities accordingly.

Paragraph III.B – Stormwater Capital Improvement Program

Paragraph III.B(2) - Identification of Capital Projects

Paragraph III.B(2)a. states that beginning with the 2016 calendar year and extending through the Term of the IGA Agreement, the Engineering Representatives of the Parties shall meet on or before March 31 of each year in order to prepare, review, discuss and update, as necessary, a five-year CIP for the City and a three-year CIP for Utilities, which shall include a list of Capital Projects, the construction of which will commence in the upcoming years.

- Staff members from the City, Utilities, and WWE plan to meet prior to March 31, 2020.

Paragraph III.B(2)c. states that Utilities shall reimburse Pueblo County up to $10,000 each year (commencing in 2016) to defray the actual cost incurred by Pueblo County of using any outside engineering consultants to conduct these yearly reviews and any associated inspections, payable within 30 days of Utilities' receipt of a statement from Pueblo County evidencing such costs.

- Utilities plans to meet the obligation accordingly.

Attachment A

City of Colorado Springs Stormwater Program
Updated Project List (2016-2035)

City Stormwater IGA Capital Project Status (2016-2035)

Colorado Springs Stormwater Enterprise

		Prioritization Criteria (see notes below)									Priority Ranking				
Project Name	Total Estimated Capital Cost (2016$) [6) 7)]	Protect Public Safety/Property	Improve Failing Infrastructure	Enhance Community	Distribute Within the City	Enhance Sediment/Debris Capture	Reduce Sediment Generation/ Enhance Soil Stewardship	Improve Water Quality	Provide Detention	Downstream Priority Score	Critical City Project	WWE "Down-stream Benefit" Ranking	City Priority Ranking	Comments	Projected Project Dates
2. Sand Creek Pond 3	$3,076,000			X		X	X	X	X	4	Yes	1	1	Complete	2015-2017
0. FEMA Projects [1)]	$2,081,000	X	X	X		X	X	X		3	Yes	6	2	Originally scheduled to be completed in 2018; additional FEMA grants received extend the City matching program to at least 2021.	2016-2021
8. King Street Detention Pond **(WWE CS-013)**	$250,000			X	X	X		X	X	3	Yes	7	3	Complete	2016-2018
13. Water Quality Project (1 of 5)--America the Beautiful Park Detention Basin [2)]	$500,000			X		X		X	X	3	Yes	9	4	Complete	2016-2018
6. USAFA Drainages (Northgate Area)	$2,000,000	X		X			X			1	Yes	16	5	To be constructed in 3 phases. Phase 1 complete. Phase 2 scheduled to begin construction Fall 2020.	2016-2021
1. Emergency Stormwater Projects [3)]	$7,500,000	X	X	X						0	Yes		6	On-going annual budget.	2016-2020
7. Fairfax Tributary Detention Pond **(WWE CS-330)**	$398,000			X	X	X	X	X	X	4		5	7	CDOT grant; pending design; estimated construction start date Fall to late 2019	2016-2020
5. Downtown Drainage Improvements	$2,250,000	X	X							0	Yes		8	Complete	2016-2018
26. Sand Creek Stabilization south of Platte **(WWE CS-018)** [5)]	$5,290,000	X		X			X			1		22	9	Complete	2016-2018
13. Water Quality Project (2 of 5)--Sierra Madre Water Quality Pond [2)]	$500,000			X		X		X	X	3	Yes	9	4	Under construction	2017-2019
65. Cottonwood Creek Detention Basins (PR-2,PR-7,PR-14,YellowWood)	$2,740,000					X	X	X	X	4		2	10	Modified from original IGA list of sites in 2017. Replaced PR-6 and PR-9 with YellowWood Regional Pond in same genearal area; PR-11 removed with PR-2 moved slightly to the west and increased in size. YellowWood pond currently complete; PR-2 scheduled to start construction late 2019; PR-7 and PR-14 in evaluation phase.	2017-2021
31. Rangewood Tributary Detention Pond **(WWE CS-333)**	$750,000			X	X	X	X	X	X	4		3	11	Complete	2017-2019

Project Name	Total Estimated Capital Cost (2016$) [6] [7]	Protect Public Safety/Property	Improve Failing Infrastructure	Enhance Community	Distribute Within the City	Enhance Sediment/Debris Capture	Reduce Sediment Generation/ Enhance Soil Stewardship	Improve Water Quality	Provide Detention	Downstream Priority Score	Critical City Project	WWE "Down-stream Benefit" Ranking	City Priority Ranking	Comments	Projected Project Dates
		Prioritization Criteria (see notes below)										**Priority Ranking**			
~~52. Storage Bridle Pass Drive Construct new pond to improve 2 yr flows (CS-332)~~	~~$1,591,000~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~4~~		~~4~~	~~12~~	~~Include channel improvements.~~ **Replaced with Project #101: Scarborough Drive Sub-Regional Detention Pond**	~~2017-2019~~
101. Scarborough Drive Sub-Regional Detention Pond	$1,100,000			X	X	X	X	X	X	4		4	12	Located northeast of original Storage Bridle Pass Drive location, on the north side of Cottonwood Creek. Replacement project for Storage Bridle Pass Drive. **Complete**	2017-2019
13. Water Quality Project (3 of 5)--- Ridge Road at Colorado Boulevard Water Quality Pond [2]	$500,000			X		X		X	X	3	Yes	9	4	Being coordinated with on-going Colorado Avenue construction project. Construction planned to begin Fall 2019	2018=2020
~~9. South Pine Creek Detention Pond (WWE CS-335)~~	~~$461,000~~			~~X~~	~~X~~			~~X~~	~~X~~	~~2~~		~~14~~	~~13~~	**Located on private land. Replaced with Project #100: Pine Creek Drainage Corridor Detention Pond.**	~~2018-2019~~
100. Pine Creek Drainage Corridor Detention Pond	$500,000			X	X	X	X	X	X	4			13	Located in the Pine Creek Drainage Basin. Replacement project for South Pine Creek. Under construction.	2018-2019
15. Citadel Mall Neighborhood Improvements (CS-374)	$1,270,000	X	X	X						0	Yes		14	Localized flooding. Design to evaluate detention retrofit. Orginal IGA Budget $1,053,000. Anticipated 2020 construction	2018-2020
23. North Chelton Road (CS-057)	$1,370,000		X	X	X					0	Yes		15	Localized flooding. Anticipated 2020 construction.	2018-2020
~~11. Camp Creek- Phase 1 (WWE CS-002 and CS-003)~~ (Redefined) [4]	~~$4,356,000~~	~~X~~	~~X~~	~~X~~				~~X~~		~~1~~	~~Yes~~	~~18~~	~~16~~	~~**Readiness for Implementation.** Channel improvements. Cost shown is for downstream structure and channel restoration/lining removal.~~ **Project Redefined to Rockledge Ranch Channel Area**	~~2018-2019~~
11. Camp Creek--Phase I (Redefined) [4] (Rockledge Ranch channel)	$1,500,000	X	X	X			X	X		2	Yes	18	16	Channel improvements. Cost shown is for natural channel improvements upstream of Chambers Street along Camp Creek. Construction scheduled Fall 2019.	2018-2019
~~41. Storage Wagner Park Detention - downstream of Bijou Detention Storage Required (CS-360)~~	~~$704,000~~			~~X~~	~~X~~	~~X~~		~~X~~	~~X~~	~~3~~		~~8~~	~~17~~	~~Spring Creek drainage~~ **Replaced with Project #102: US24/Colorado Detention Facility**	~~2018-2019~~
102. US24/Colorado Detention Facility	$704,000			X	X	X		X	X	3		8	17	Work being performed in conjuction with a CDOT and El Paso County sponsored project along Colorado Avenue.	2018-2020
~~35. Side Channel Sand Creek - segment 107, reach SC-5 1700lf channel stabilization (CS-261)~~	~~$1,242,000~~	~~X~~		~~X~~			~~X~~			~~1~~		~~20~~	~~26~~	~~Work previously completed.~~ **Replaced with Project #103: Pine Creek Channel Improvements Phase 1**	~~2018-2019~~
103. Pine Creek Channel Improvements Phase 1	$1,242,000	X		X			X	X		2		20	26	Moving project up from 2021 to begin in 2018 due to degredation of Pine Creek Channel. Under construction	2018-2020

		Prioritization Criteria (see notes below)									Priority Ranking				
Project Name	Total Estimated Capital Cost (2016$) [6] [7]	Protect Public Safety/Property	Improve Failing Infrastructure	Enhance Community	Distribute Within the City	Enhance Sediment/Debris Capture	Reduce Sediment Generation/ Enhance Soil Stewardship	Improve Water Quality	Provide Detention	Downstream Priority Score	Critical City Project	WWE "Down-stream Benefit" Ranking	City Priority Ranking	Comments	Projected Project Dates
13. Water Quality Project (4 of 5)--- Low Impact Development (LID) Along Vermijo Street Between Cascade and Sierra Madre [2]	$500,000			X		X		X	X	3	Yes	9	4	Construction scheduled to begin Fall 2019.	2019-2020
~~38. Storage Austin Bluffs Parkway upstream of Research (CS-331)~~	~~$754,000~~			~~X~~	~~X~~	~~X~~		~~X~~	~~X~~	~~3~~		~~10~~	~~18~~	~~Cottonwood Creek drainage~~ **Replaced with Project #105: Flying Horse Pond #1**	~~2019-2020~~
105. Flying Horse Pond #1	$754,000			X	X	X		X	X	3		10	18	Monument Branch existing regional detention pond retrofit in accordance with current standards.	2019-2020
~~51. Storage Cottonwood Park (west side) (CS-334)~~	~~$3,768,000~~			~~X~~	~~X~~	~~X~~		~~X~~	~~X~~	~~3~~		~~11~~	~~19~~	~~Cottonwood Creek drainage~~ **(Moved to 2020)**	~~2019-2021~~
16. North Douglas Natural Channel	$3,500,000	X	X				X	X		2	Yes	15	23	Redefine project to address reach between I-25 and railroad to east. **(Moved Up From 2020)**	**2019-2021**
34. Storage Sand Creek Detention Pond 2 Complete Detention Pond 2 on Sand Creek south of Barnes (CS-105)	$1,025,000					X		X	X	3		12	20	Currently have 50 year protection. Build out to 100-year capacity. **Design pending Sand Creek DBPS completion.**	2019-2021
13. Water Quality Project (5 of 5)--- City-wide Low-Impact Development (LID) Manual [2]	$500,000			X		X		X	X	3	Yes	9	4	Manual to guide LID throughout Colorado Springs	2020-2021
~~24. Park Vista (Siferd Low Water Crossing) (CS-232)~~	~~$3,750,000~~	~~X~~		~~X~~						~~0~~	~~Yes~~		~~21~~	~~**Localized flooding.** Evaluate property acquistion and detention storage.~~ **Replaced with Project #104: Pine Creek Channel Improvements Phase 2**	~~2020-2022~~
104. Pine Creek Channel Improvements Phase 2	$3,750,000	X		X			X	X		2	Yes		21	Pine Creek drainage basin.	2020-2022
70. CS-239 Grade Control Upper Hancock Channel - Hancock to Academy, 78+33 to	$1,236,000					X	X			2		13	22	~~Desire for provision for regular sediment removal.~~ **Utilities installed two drop structures in the project area in 2017. WWE and the City visited the IGA project site on October 12, 2018 and determined the project to be complete.**	2017
~~16. North Douglas Natural Channel~~	~~$3,500,000~~	~~X~~	~~X~~				~~X~~	~~X~~		~~2~~	~~Yes~~	~~15~~	~~23~~	~~Redefine project to address reach between I-25 and railroad to east. City has conceptual design for channel stabilization project.~~ **(Moved Up To 2019)**	~~2020-2021~~
51. Storage Cottonwood Park (west side) (CS-334)	$3,768,000			X	X	X		X	X	3		11	19	Cottonwood Creek drainage **(Moved From 2019)**	2020-2022
~~19. Galley Road Channel (WWE CS-258) Sand Creek between Galley and Platte Avenue~~	~~$2,000,000~~	~~X~~		~~X~~			~~X~~			~~1~~		~~19~~	~~24~~	~~Portions of original scope have been completed by CSU. Additional reach to be improved.~~ **(Moved to 2023; Pending Platte Avenue Bridge Replacement Project Completion)**	~~2020-2022~~
21. Monument Creek at Talemine (CS-011)	$1,778,000	X		X			X			1		17	25	Scheduled for construction in 2020 or 2021	2020-2021

Project Name	Total Estimated Capital Cost (2016$) [6] [7]	Protect Public Safety/Property	Improve Failing Infrastructure	Enhance Community	Distribute Within the City	Enhance Sediment/Debris Capture	Reduce Sediment Generation/ Enhance Soil Stewardship	Improve Water Quality	Provide Detention	Downstream Priority Score	Critical City Project	WWE "Down-stream Benefit" Ranking	City Priority Ranking	Comments	Projected Project Dates
	Prioritization Criteria (see notes below)											**Priority Ranking**			
~~25. Side Channel Sand Creek - segment 107, reach SC-5 1700lf channel stabilization (CS-261)~~	~~$1,242,000~~	~~X~~		~~X~~			~~X~~			~~1~~		~~20~~	~~26~~	~~Work previously completed. Project replaced with Pine Creek Channel Improvements Phase 1 and moved up to 2018 due to degredation of Pine Creek Channel.~~ **(Moved to 2018)**	~~2021-2025~~
~~39. Grade Control Palmer Park Channel - Galley Rd. to Palmer Park, 300+00 to (CS-259)~~	~~$6,594,000~~	~~X~~		~~X~~			~~X~~			~~1~~		~~21~~	~~27~~	~~On Sand Creek drainage.~~ **Moved to 2026-2035 Project Grouping**	~~2021-2024~~
106. Cottonwood Creek Channel Improvements Project - Austin Bluffs Pkwy to Powers Blvd (Phase 1)	$3,000,000	X		X			X			1		21	27	**Cottonwood Creek Improvments - Replaced Former Project #12 - Shooks Run Improvements**	2021-2025
~~28. Shooks Run Channel - Cache La Poudre St. to Patty Jewett Golf Course (CS-326)~~	~~$3,500,000~~	~~X~~	~~X~~	~~X~~				~~X~~		~~1~~		~~23~~	~~28~~	~~Bundled and phased with other Shooks Run.~~ **(Deleted from IGA Project List and Replaced with New Project #107: Cottonwood Creek Channel Improvement Project - Austin Bluffs Pkwy to Powers Blvd Phase 2)**	~~2021-2023~~
107. Cottonwood Creek Channel Improvements Project - Austin Bluffs Pkwy to Powers Blvd (Phase 2)	$3,500,000	X		X			X			1		23	28	**Cottonwood Creek Improvments - Replaced Former Project #28 - Shooks Run Channel)**	2021-2025
77. CS-265 Grade Control Sand Creek Upper West Fork - Maizeland to South Carefree 3 drop structures	$420,000						X			1		24	29		2022-2024
76. CS-254 Channel/Grade Control Sand Creek Upper West Fork - Galley to Murray 1730lf channel stabilization, 2 drop structures	$2,006,000						X			1		25	30		2022-2024
75. CS-262 Channel/Grade Control Upper Sand Creek - W. Fork to Palmer Park Blvd. 1550lf channel stabilization, w/drop structures	$1,192,000						X			1		26	31		2022-2024
74. CS-252 Channel Sand Creek Lower West Fork - Emory to Platte Ave. 1000lf channel stabilization	$2,383,000						X			1		27	32		2022-2024
73. CS-025 Channel/Grade Control Sand Creek West Fork - Main stem to Wooten Construct drop structures & streambank protection	$2,206,000						X			1		28	33		2022-2024
19. Galley Road Channel (WWE CS-258) Sand Creek between Galley and Platte Avenue	$2,000,000	X		X			X			1		19	24	Portions of original scope have been completed by CSU. Additional reach to be improved. **(Moved From 2020; Pending Platte Avenue Bridge Replacement Project Completion)**	2023-2025
71. CS-246 Channel/Grade Control Sand Creek Lower Center Tributary - No Name to East Fork	$458,000						X			1		31	36	Shifted up from original 2024 project schedeule to 2023 project schedule.	2023-2025

		Prioritization Criteria (see notes below)									Priority Ranking				
Project Name	Total Estimated Capital Cost (2016$) [6] [7]	Protect Public Safety/Property	Improve Failing Infrastructure	Enhance Community	Distribute Within the City	Enhance Sediment/Debris Capture	Reduce Sediment Generation/ Enhance Soil Stewardship	Improve Water Quality	Provide Detention	Downstream Priority Score	Critical City Project	WWE "Down-stream Benefit" Ranking	City Priority Ranking	Comments	Projected Project Dates
~~62. Channel/Grade Control East Fork of Sand Creek (CS-041)~~	~~$7,464,000~~	~~X~~		~~X~~			~~X~~			~~1~~		~~32~~	~~37~~	~~Shifted up from original 2024 project schedeule to 2023 project schedule.~~ **Moved to 2026-2035 Project Grouping**	~~2023-2025~~
108. Cottonwood Creek Channel Improvements Project - Austin Bluffs Pkwy to Powers Blvd (Phase 3)	$3,000,000	X		X			X			1		32	37	**Cottonwood Creek Improvments - Replaced Former Project #27 and #29 - Shooks Run Channel (Bijou Street Culvert & Channel Stabilization) and Shooks Run Improvements Phase 3**	2023-2025
61. Channel/Grade Control Sand Creek (CS-040)	$3,507,000	X		X			X			1		29	34	Shifted down from original 2023 project schedeule to 2024 project schedule.	2024-2026
60. Channel/Grade Control Sand Creek (CS-039)	$3,908,000	X		X			X			1		30	35	Shifted down from original 2023 project schedeule to 2024 project schedule.	2024-2026
55. Grade Control Fountain Blvd. Channel - Chelton Rd. to Fountain Blvd., (CS-243)	$2,553,000	X		X			X			1		33	38	Portions of original scope have been completed by CSU	2026-2035
54. Grade Control Chelton Road Channel - Academy to Chelton, 96+97 (CS-241)	$1,593,000	X		X			X			1		34	39	On main stem of Sand Creek.	2026-2035
69. CS-240 Channel/Storm Drain Lower Sand Creek Tributaries 2,3, and 4 - Main Stem to Academy	$867,000						X			1		35	40		2026-2035
67. CS-238 Channel/Grade Control Lower Hancock Channel - Downstream 1500lf channel stabilization, 2 drop structures	$1,247,000						X			1		36	41		2026-2035
66. CS-268 Channel/Grade Control Las Vegas St. Channel - ATSF RR to Peterson Fld Trib. 700lf channel stabilization, 2 drop structures	$1,545,000						X			1		37	42		2026-2035
72. CS-247 Channel/Grade Control Sand Creek Middle Center Tributary - Powers to No Name 300lf channel stabilization, 3 drop structures	$175,000						X			1		38	43		2026-2035
68. CS-130 Channel Hancock Expressway Channel East of Astrozon Undermining of infrastructure.	$72,000						X			1		39	44		2026-2035
20. Gold Medal Point Channel **(WWE CS-339)**	$750,000	X		X			X			1		40	45	Cottonwood Creek. Could bundle with Project 31 (located next to each other)	2026-2035
57. Channel/Grade Control Cottonwood Creek - Academy to Union Construct flood control and stream restoration projects (CS-004)	$5,840,000	X		X			X			1		41	46	Portions of original scope may have been completed by CSU	2026-2035
59. Channel/Grade Control Cottonwood Creek - Monument Creek to Academy Construct flood control and stream restoration projects. (CS-005)	$13,232,000	X		X			X			1		42	47		2026-2035
58. Channel/Grade Control Rangewood Channel - Main Stem to Balsam 7400lf channel stabilization, w/drop structures (CS-343)	$5,066,000	X		X			X			1		43	48		2026-2035

		Prioritization Criteria (see notes below)									Priority Ranking				
Project Name	Total Estimated Capital Cost (2016$) [6) 7)]	Protect Public Safety/Property	Improve Failing Infrastructure	Enhance Community	Distribute Within the City	Enhance Sediment/Debris Capture	Reduce Sediment Generation/ Enhance Soil Stewardship	Improve Water Quality	Provide Detention	Downstream Priority Score	Critical City Project	WWE "Down-stream Benefit" Ranking	City Priority Ranking	Comments	Projected Project Dates
63. Channel/Grade Control Cottonwood Creek - Rangewood to Woodmen 5300lf channel stabilization, w/drop structures (CS-337)	$3,768,000	X		X			X			1		44	49		2026-2035
45. Channel/Grade Control Fountain Creek - W. Cimmaron St. to N end of Drake Power (CS-306)	$1,298,000	X		X			X			1		45	50		2026-2035
46. Channel/Grade Control Fountain Creek - N end Drake Power Plant to south end of (CS-307)	$1,941,000	X		X			X			1		46	51		2026-2035
18. Fountain Creek - Drake Power Plant to Shooks Run (WWE CS-308 and CS-309)	$2,250,000	X		X			X			1		47	52		2026-2035
43. Channel/Grade Control Fountain Creek - Shooks Run to Fountain Mutual Canal Channel stabilization, 2 drop structures (CS-310)	$11,854,000	X		X			X			1		48	53		2026-2035
53. Channel/Grade Control Fountain Creek - Fountain Mutual Canal to US 24 Bypass Channel stabilization, 2 drop structures (CS-311)	$9,921,000	X		X			X			1		49	54		2026-2035
36. Channel/Grade Control Fountain Creek - US 24 Bypass to Spring Creek Channel stabilization, 2 drop structures (CS-312)	$4,636,000	X		X			X			1		50	55		2026-2035
50. Channel/Grade Control Fountain Creek - Spring Creek to Mobile Home Park Channel stabilization, 3 drop structures (CS-313)	$3,803,000	X		X			X			1		51	56		2026-2035
32. Channel/Grade Control Fountain Creek - Mobile Home Park to N end El Pomar Sports (CS-314)	$4,235,000	X		X			X			1		52	57	Fountain Creek.	2026-2035
33. Channel/Grade Control Fountain Creek - N end El Pomar Sports Park to S end El (CS-315)	$4,551,000	X		X			X			1		53	58	Fountain Creek.	2026-2035
22. Monument Creek Mobile Home Park (CS-139)	$478,000	X		X			X			1		54	59	CSU has done partial work in the area, but not the complete project.	2026-2035
64. Channel/Grade Control Chelton Dr. Channel - Chelton Dr to Airport Rd 2400lf channel stabilization, 2 drop structures (CS-359)	$1,487,000	X		X			X			1		55	60		2026-2035
25. Pine Creek Outfall into Monument Creek (CS-047)	$1,250,000	X		X			X			1		56	61		2026-2035
49. Channel/Grade Control Templeton Gap Rd. Channel - Powers to Tutt 4400lf channel stabilization, w/drop structures (CS-342)	$3,077,000	X		X			X			1		57	62		2026-2035
40. Storage Mount Woodmen Court Drainage Sedimentation pond outfalls directly onto private property (CS-064)	$515,000	X	X					X		1		58	63		2026-2035

		Prioritization Criteria (see notes below)									Priority Ranking				
Project Name	Total Estimated Capital Cost (2016$) [6] [7]	Protect Public Safety/Property	Improve Failing Infrastructure	Enhance Community	Distribute Within the City	Enhance Sediment/Debris Capture	Reduce Sediment Generation/ Enhance Soil Stewardship	Improve Water Quality	Provide Detention	Downstream Priority Score	Critical City Project	WWE "Down-stream Benefit" Ranking	City Priority Ranking	Comments	Projected Project Dates
39. Grade Control Palmer Park Channel - Galley Rd. to Palmer Park, 300+00 to (CS-259)	$6,594,000	X		X			X			1		59	64	On Sand Creek drainage. **(Moved From 2021 For Addition of Cottonwood Creek Channel Improvements Projects - Austin Bluffs Pkwy to Powers Blvd)**	2026-2035
~~12. Shooks Run Improvements (CS-319 through CS-329 minus CS-326)~~	~~$3,000,000~~	~~X~~	~~X~~	~~X~~				~~X~~		~~1~~		~~59~~	~~64~~	~~Bundled and phased with other Shooks Run~~ **(Deleted from IGA Project List and Replaced with New Project #106: Cottonwood Creek Channel Improvement Project -Austin Bluffs Pkwy to Powers Blvd Phase 1)**	~~2026-2035~~
62. Channel/Grade Control East Fork of Sand Creek (CS-041)	$7,464,000	X		X			X			1		60	65	Replaced with Project #108: Cottonwood Creek Channel Improvements Project Phase 3 in 2023	2026-2035
~~27. Shooks Run Channel - Bijou Street Culvert & Channel Stabilization (CS-054a)~~	~~$1,500,000~~	~~X~~	~~X~~	~~X~~				~~X~~		~~1~~		~~60~~	~~65~~	~~Bundled and phased with other Shooks Run~~ **(Deleted from IGA Project List and Replaced with New Project #108: Cottonwood Creek Channel Improvement Project -Austin Bluffs Pkwy to Powers Blvd Phase 3)**	~~2026-2035~~
~~29. Shooks Run Improvements - Phase 3 (CS-054b)~~	~~$1,500,000~~	~~X~~	~~X~~	~~X~~				~~X~~		~~1~~		~~61~~	~~66~~	~~Bundled and phased with other Shooks Run~~ **(Deleted from IGA Project List and Replaced with New Project #108: Cottonwood Creek Channel Improvement Project -Austin Bluffs Pkwy to Powers Blvd Phase 3)**	~~2026-2035~~
4. Old Annexation Drainage Improvements	$2,800,000	X	X	X	X					0			67	Five neighborhoods experiencing significant flooding.	2026-2035
14. Briargate Drainage Improvements (CS-344)	$1,641,000	X	X	X						0			68	Replacing failing infrastructure.	2026-2035
30. Skyway Area Improvements (CS-235 & CS-296)	$457,000	X	X		X					0			69		2026-2035
48. Channel/Storm Drain Columbia Road Drainage (CS-045)	$2,088,000	X	X	X						0			70		2026-2035
17. Dry Creek Channel **(WWE CS-007)**	$1,386,000	X		X	X					0			71	Increasing channel capacity.	2026-2035
~~42. Channel/Grade Control Sand Creek Main Stem Phase III - Fountain Creek Confluence (CS-106)~~														Not on the SNA "Validated" project list-- Appears to overlap with other validated SNA projects and may be redundant.	

Project Name	Total Estimated Capital Cost (2016$) [6) 7)]	Prioritization Criteria (see notes below): Protect Public Safety/Property	Improve Failing Infrastructure	Enhance Community	Distribute Within the City	Enhance Sediment/Debris Capture	Reduce Sediment Generation/ Enhance Soil Stewardship	Improve Water Quality	Provide Detention	Downstream Priority Score	Priority Ranking: Critical City Project	WWE "Down-stream Benefit" Ranking	City Priority Ranking	Comments	Projected Project Dates
~~47. Channel Templeton Gap Floodway Reconstruct levee and floodway (CS-021)~~														Delete - Channel Lining; Replacement of Existing Facilities. Removed from list, per WWE (12/16/15).	
~~78. CS-264 Channel Sand Creek Upper West Fork – Raindrop to North Carefree 2200lf channel stabilization~~														Remove from list, per WWE (12/16/15).	
~~56. Grade Control Palmer Park Channel - Galley Rd. to Palmer Park, 300+00 to (CS-259)~~														Redundant with Project 39. Delete.	
~~10. Erindale Drainage Improvements~~														Change to an "Emergency "project. Likely a maintenance effort. Remove from this capital projects list.	
~~44. Storage Spring Run Detention Ponds (CS-051)~~														Not on the SNA "Validated" project list--remove.	
~~3. Dam Repairs~~														Remove from list, per WWE (03/30/16). To be completed with Emergency Stormwater Projects funding.	
~~37. Channel Rockrimmon Channel at Rockrimmon/Pro Rodeo Int. Repair damage to channel at outlet (CS-222)~~														Area identified in previous MS4 inspections. Project being completed with Emergency Stormwater Project funding in 2016. Removed from list following 03/30/16 Meeting with WWE.	

Prioritization Criteria:

1. Protect local property and public safety
2. Repair/replace failing infrastructure
3. Improve appearance and/or enhance community
4. Distribute projects within the City

Downstream benefits:

5. Enhance sediment/debris capture and control (e.g., debris basins)
6. Reduce sediment generation/Enhance soil stewardship (e.g., bank stabilization, channel stabilization, channel grade control, floodplain preservation/enhancement)
7. Improve water quality
8. Provide detention (i.e., reduce downstream flows)

		Prioritization Criteria (see notes below)									Priority Ranking				
Project Name	Total Estimated Capital Cost (2016$) [6) 7)]	Protect Public Safety/Property	Improve Failing Infrastructure	Enhance Community	Distribute Within the City	Enhance Sediment/Debris Capture	Reduce Sediment Generation/ Enhance Soil Stewardship	Improve Water Quality	Provide Detention	Downstream Priority Score	Critical City Project	WWE "Down-stream Benefit" Ranking	City Priority Ranking	Comments	Projected Project Dates

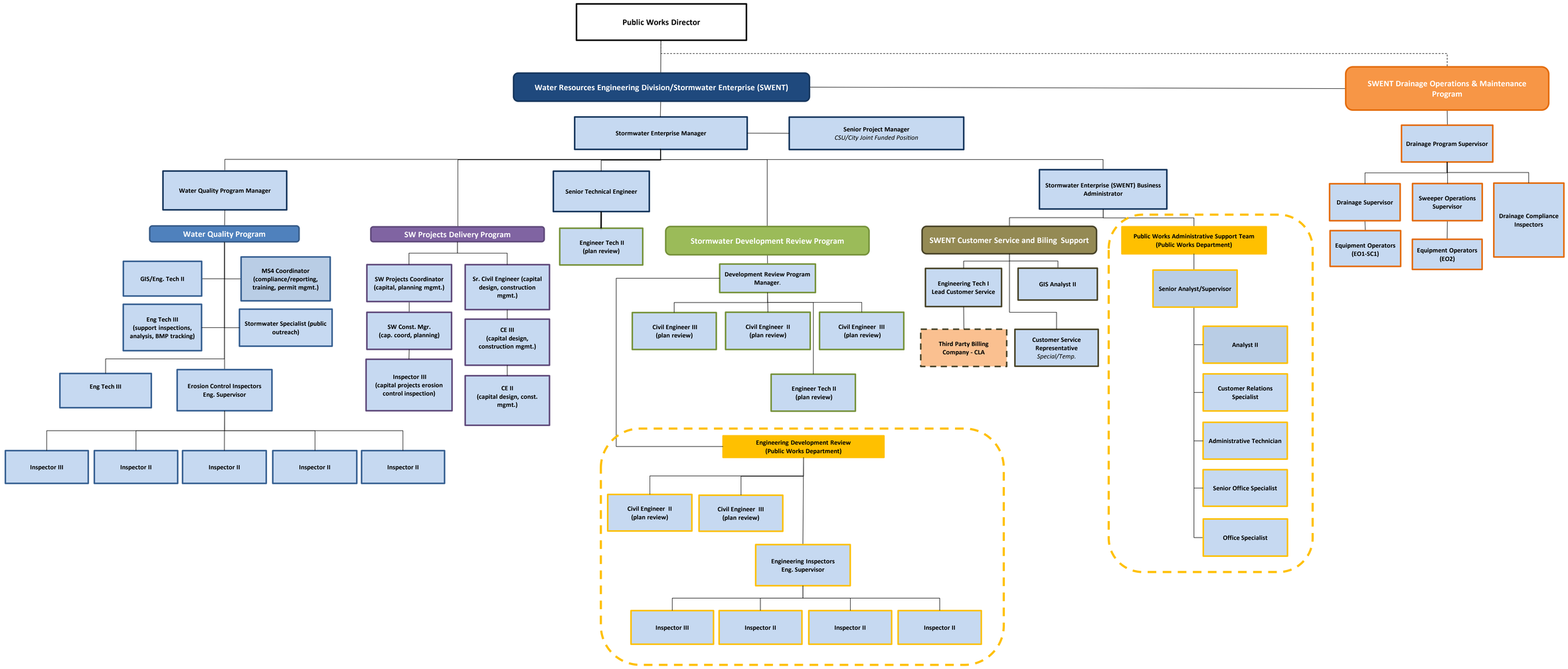
Footnotes:

1) Total anticipated FEMA Grant City match portion through 2018: Budgeted $1,081,000 (2016); $500,000 (2017); $500,000 (2018).
2) Total Capital Cost includes 5 detention ponds, one per year at $500,000 each between 2016-2020. First pond to be intiated with America the Beautiful Park detention basin in 2016.
3) Emergency Stormwater Projects list total capital cost (2016-2020); budgeted at $1.5 Million per year ongoing.
4) Additional channel lining removal projects along Camp Creek channel may be done as funding becomes available.
5) Funding for capital cost shown is FEMA grant funding and City grant match encumbered in 2015. No 2016 City capital contribution for this project.

6) See 2016 and 2016-2020 Project lists for additional detail on project funding.
7) Total estimated project capital cost is shown for each project. Total Stormwater Control Program yearly capital expenditures depend on the number of projects underway and the project phase(s) performed in a given year. Total yearly capital

Attachment B

City of Colorado Springs
Stormwater Enterprise Organizational Chart


Public Works Director
Water Resources Engineering Division/Stormwater Enterprise (SWENT)
SWENT Drainage Operations & Maintenance Program
Stormwater Enterprise Manager
Senior Project Manager
CSU/City Joint Funded Position
Drainage Program Supervisor
Water Quality Program Manager
Senior Technical Engineer
Stormwater Enterprise (SWENT) Business Administrator
Drainage Supervisor
Sweeper Operations Supervisor
Drainage Compliance Inspectors
Equipment Operators (EO1-SC1)
Equipment Operators (EO2)
Water Quality Program
SW Projects Delivery Program
Engineer Tech II (plan review)
Stormwater Development Review Program
SWENT Customer Service and Billing Support
Public Works Administrative Support Team (Public Works Department)
GIS/Eng. Tech II
MS4 Coordinator (compliance/reporting, training, permit mgmt.)
SW Projects Coordinator (capital, planning mgmt.)
Sr. Civil Engineer (capital design, construction mgmt.)
Development Review Program Manager.
Engineering Tech I Lead Customer Service
GIS Analyst II
Senior Analyst/Supervisor
Eng Tech III (support inspections, analysis, BMP tracking)
Stormwater Specialist (public outreach)
SW Const. Mgr. (cap. coord, planning)
CE III (capital design, construction mgmt.)
Civil Engineer III (plan review)
Civil Engineer II (plan review)
Civil Engineer III (plan review)
Third Party Billing Company - CLA
Customer Service Representative Special/Temp.
Analyst II
Eng Tech III
Erosion Control Inspectors Eng. Supervisor
Inspector III (capital projects erosion control inspection)
CE II (capital design, const. mgmt.)
Engineer Tech II (plan review)
Customer Relations Specialist
Administrative Technician
Senior Office Specialist
Office Specialist
Engineering Development Review (Public Works Department)
Civil Engineer II (plan review)
Civil Engineer III (plan review)
Engineering Inspectors Eng. Supervisor
Inspector III
Inspector II
Inspector II
Inspector II
Inspector III
Inspector II
Inspector II
Inspector II
Inspector II