

Smith, Sandra

To: Copy to Case File 1041 2008-002
Subject: FW: 2022 Colorado Springs Stormwater Control Program_Final Expenditures Annual Report (Electronic Report Delivery)

From: Binkley, Kevin <Kevin.Binkley@coloradosprings.gov>

Sent: Wednesday, June 28, 2023 5:00 PM

To: Howard, Carmen <howardca@pueblounty.us>

Cc: Mulledy, Richard <Richard.Mulledy@coloradosprings.gov>; Roy, Brenda <Brenda.Roy@coloradosprings.gov>; Easton, Travis W. <Travis.Easton@coloradosprings.gov>; Lisa Barbato <LBarbato@csu.org>; David Padgett <dpadgett@csu.org>; Steve Duling <sduling@csu.org>; Day, Marci <daym@pueblounty.us>; Ian Paton <ipaton@wrightwater.com>

Subject: 2022 Colorado Springs Stormwater Control Program_Final Expenditures Annual Report (Electronic Report Delivery)

Good afternoon, Ms. Howard.

Attached, please find an electronic version of the City of the Colorado Springs Stormwater Control Program IGA Annual Report of Final Expenditures for the 2022 Calendar Year. This is the third and final of the three-report series for the 2022 calendar year. Please note that we have formatted the attached report with appropriate blank pages inserted to allow for proper printing; however, we can also send hard copies if requested.

In summary from the Final Expenditures report,

- As of December 31, 2022, the City and Utilities have invested (through either expenditures or encumbrances) a total of **\$27.7 million dollars** on the City's Stormwater Control Program in 2022. This includes actual expenditures and/or annual encumbrances of:
 - \$ 10.4 million associated with the City's Drainage O&M and MS4 program (Annual Encumbrance)
 - \$ 14.3 million associated with the City's Stormwater Capital Projects program (Annual Encumbrance)
 - \$ 3.0 million by Utilities Sanitary Sewer Creek Crossing Program (Actual Expenditure)
- Between 2021 and 2025, the City and Utilities are expected to invest (through either expenditures or encumbrances) a total of \$110 million dollars at an average of \$22 million dollars per year. In 2022, the City and Utilities have invested a total of **\$27.7 million dollars** on the City's Stormwater Control Program with a total of **\$21.46 million dollars** expended as of December 31, 2022. Between 2021 and 2022 combined, the City and Utilities have invested a total of **\$49.6 million dollars** on the City's Stormwater Control Program with a total of **\$40.0 million dollars** expended as of December 31, 2022.
- Between 2016 and 2022, the City and Utilities have invested (through either expenditures or encumbrances) a total of **\$163 million dollars** on the City's Stormwater Control Program with a total of **\$146.46 million dollars** expended by the end of 2022.

Please let us know if you have any questions regarding the attached 2022 Final Expenditures report, or if we can be of further assistance.

Thank you in advance.

-Kevin.

Kevin Binkley, PMP

Utilities Program Manager

City of Colorado Springs | Stormwater Enterprise

30 S. Nevada Ave., Suite 401 | Colorado Springs, CO 80903

(719) 385-5400 office | (719) 339-3394 cell

kevin.binkley@coloradosprings.gov

(Please Note New Email Address)



Kevin Binkley, PMP | Linear Water & Wastewater Programs Supervisor

Colorado Springs Utilities | System Planning and Projects Division

1521 S. Hancock Expressway | MC: 1821 | Colorado Springs, CO 80903

O (719) 668-3748 | M (719) 339-3394



City of Colorado Springs Stormwater Enterprise

Stormwater Control Program Inter-Governmental Agreement (IGA) Annual Report of Final Expenditures Calendar Year 2022

Prepared for:
Pueblo County

Submitted by:
**City of Colorado Springs
Colorado Springs Utilities**



June 2023

Contents

Section	Page
Definitions and Acronyms	i
Executive Summary.....	I
1.0 Introduction.....	1
1.1 Reporting Requirements.....	1
1.2 Background	1
2.0 IGA Compliance Activities Undertaken During the Reporting Period	5
3.0 Final Expenditures for the 2022 Calendar Year.....	11
4.0 Stormwater Control Program Activities Undertaken in 2022 Calendar Year	14
5.0 Planned 2023 IGA Related Activities	34
Attachment A.....	A
City of Colorado Springs Stormwater Program Project List	A

Definitions and Acronyms

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
CDPS	Colorado Discharge Permit System
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
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 (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.
Expenditures	Both actual expenditures and encumbered funds.
FCWFCGD	Fountain Creek Watershed Flood Control and Greenway District
FEMA	Federal Emergency Management Agency
GIM	City of Colorado Springs Green Infrastructure Guidance Manual
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)
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
O&M	Operations and Maintenance
OLDCC	United States Department of Defense Office of Local Defense Community Cooperation
Parties	Parties to the IGA to include Pueblo County and the City of Colorado Springs and its utility enterprise, Colorado Springs Utilities.
PCM	Permanent Control Measure
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
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 Stormwater Control Program during the prior year (2022) 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 expenditures report on or before March 31, and a final expenditures 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 2022 calendar year. This report represents the second submittal in the seventh annual report series since 2016. 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 2022 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 2022 Calendar Year reporting period as outlined below. Between 2021 and 2025, the City and Utilities are expected to invest a total of \$110 million dollars at an average of \$22 million dollars per year. The 2022 calendar year represents the seventh year of the IGA and the second year of the current 5-year investment period.

As of December 31, 2022, the City and Utilities have invested (through either expenditures or encumbrances) a total of **\$27.7 million dollars** on the City's Stormwater Control Program in 2022. This includes actual expenditures and/or annual encumbrances of:

- \$ 10.4 million associated with the City's Drainage O&M and MS4 program (Annual Encumbrance)
- \$ 14.3 million associated with the City's Stormwater Capital Projects program (Annual Encumbrance)
- \$ 3.0 million by Utilities Sanitary Sewer Creek Crossing Program (Actual Expenditure)

Expenditures for the 2022 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.
Second Five Years (2021-2025)	\$110 Million	\$22 Million	\$16.5 M/yr.

Claimed Expenditures

(Actual Expenditures and Encumbered Funds)	Total (2016-2020)	2021	2022	Subtotal (2021-2025)	Total (2016-2022)
Drainage O&M/MS4 Program	\$41,301,035	\$9,224,194	\$10,437,873	\$19,662,067	\$60,963,102
Stormwater Capital Projects	\$56,280,278	\$9,000,000	\$14,260,634	\$23,260,634	\$79,540,912
Colorado Springs Utilities (SSCC Program)	\$15,846,580	\$3,632,568	\$3,048,284	\$6,680,852	\$22,527,432
Total	\$113,427,893	\$21,856,762	\$27,746,791	\$49,603,553	\$163,031,466

Summary of Stormwater Control Program Activities

Below is a summary of actual expended dollars between the 2016 and 2022 calendar years:

Program Dollars Spent	Total (2016-2020)	2021	2022	Subtotal (2021-2025)	Total (2016-2022)
Drainage O&M	\$18,719,097	\$3,427,366	\$3,553,417	\$6,980,783	\$25,699,880
Stormwater MS4 Program	\$21,010,941	\$6,214,259	\$7,311,271	\$13,525,530	\$34,536,471
Stormwater Capital Projects	\$50,837,527	\$5,316,004	\$7,543,666	\$12,859,670	\$63,697,197
Colorado Springs Utilities (SSCC Program)	\$15,846,580	\$3,632,568	\$3,048,284	\$6,680,852	\$22,527,432
Total	\$106,414,145	\$18,590,197	\$21,456,638	\$40,046,835	\$146,460,980

Capital Projects Undertaken During the Reporting Period

- IGA Projects – A total of twenty-four (24) IGA projects were scheduled to continue, be completed, or commence in 2022. This included a continuation of Emergency Projects, Grant Projects, Water Quality Projects, and twenty-two (22) specifically negotiated IGA project as outlined below. At the completion of the reporting period, the scheduled 2022 IGA projects were generally in the engineering phase of the projects, while the 2016-2021 IGA projects had either been completed, were under construction, or were continuing through the engineering phase.

Of the \$7,543,666 expended, a total of \$7,270,805 was spent on specifically negotiated IGA projects during the reporting period, with an additional \$272,861 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 (\$)
109	Bear Creek Channel Stabilization (2018)	10,341
69	Channel/Storm Drain Lower Sand Creek (2022)	150,000
106	Cottonwood Creek Austin Bluffs to Bus Barn (2021)	57,914
65	Cottonwood Creek Detention Basins (2017)	3,040
59	Cottonwood Creek-Monument Creek to Academy (2020)	168,187
108	Cottonwood Creek-Bus Barn to Pinkerton (2023)	13,210
1	Emergency Stormwater Projects (2022)	1,899,565
0	FEMA Grant Projects	33,780
7	Fairfax Tributary Detention Pond (2016)	71,690
105	Flying Horse Pond 1 Retrofit (2019)	30,983
116	Hancock Training Facility (2025)	3,191
112	Middle Creek Upstream of I-25 (2022)	168,476
16	North Douglas Channel (2019)	200,110
114	Park Vista Drainage Improvements (2022)	70,150
113	Pikes Peak and Academy Detention Facility (2023)	600,000
103	Pine Creek Channel Ph 1 (2018)	31,277
104	Pine Creek Channel Ph 2 (2020)	43,970
115	Sand Creek at Coleman Park (2023)	8,570
61	Sand Creek Karr to West Fork (2024)	11,838
111	South Douglas Sinton Trail Imps. (2022)	95,114
34	Storage Sand Creek Pond 2 (2019)	156,456
75	Upper Sand Creek West Fork to Galley (2022)	135,912
6	USAF A Drainages (Monument Branch) (2016)	3,113,415
110	USAF A Supplemental Black Squirrel Creek (2022)	11,175
13	Water Quality Projects (2016-2020)	61,614
Various*	Project Scoping and Definition	120,827
Total IGA Projects		7,270,805

Other Stormwater Capital Projects

Total Non-IGA Stormwater Capital Projects	272,861
--	----------------

Total Stormwater Capital Projects Expenditures

Total 2022 Stormwater Capital Project Expenditures	7,543,666
---	------------------

- Grant Applications – During the reporting period the Stormwater Enterprise submitted grant applications to the U.S. Army Corps of Engineers (USACE), the Federal Emergency Management Agency (FEMA), and the Federal Office of Local Defense Community Cooperation (OLDCC) for proposed mitigation projects located in the Fountain Creek, Monument Creek, Sand Creek, Cottonwood Creek, and Pine Creek drainage basins. The FEMA and OLDCC grants were not awarded and the USACE application is pending.

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. Utilities and City staff closely coordinate their efforts to provide maximum benefits to meet the overall Stormwater Control Program objectives.

In 2022, the SSCC Program included participation in the design, repair, rehabilitation, or closeout of 19 creek crossing projects, at a cost of \$3,048,284.

Drainage Operations and Maintenance Activities Undertaken During the Reporting Period

During the 2022 calendar year, the Drainage Operations and Maintenance (O&M) Program completed the following activities:

- Completed inspections of all 153 publicly maintained regional and sub-regional detention ponds/facilities
- Completed identified maintenance activities within 60 publicly maintained regional and sub-regional detention facilities (including debris removal, sediment removal, mowing, tree trimming, and minor structure maintenance), resulting in removal of 6,496 cubic yards of sediment and debris
- Completed inspections of 35.87 miles of concrete-lined and natural channels
- Performed maintenance activities through 40.87 miles of concrete-lined and natural channels, including removal of 23,593 cubic yards of sediment, vegetation, and debris
- Completed 6,645 separate storm sewer maintenance/vacuum-truck operations (including cleaning of storm sewer inlets and storm sewer pipe cleaning), resulting in removal of 988 cubic yards of debris
- Repaired, replaced, or installed 341 linear feet of stormwater conveyance pipe
- Performed street sweeping operations on 18,969 lane miles of city streets, removing 25,882 cubic yards of debris

2022 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 112 suspected Illicit Discharge calls, of which only 23 incidents were confirmed as illicit discharges.
 - Provided illicit discharge training to new field employees, firefighters and first responders, and annual refresher training to existing field employees.
- 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): 76
 - Number of students and citizens reached (i.e., schools, community events): 1,773
 - Regional Stormwater Advertising Campaign reaching multiple counties and jurisdictions: 10,810,885 impressions (visual and auidial)

- Storm Drain Art Project: Completed 10 murals
 - Educational distributions: 200 brochures and 12,850 school related items
 - Adopt-A-Waterway Program: 690 volunteers
- Construction Site Inspection:
 - Total inspections: 6,161 associated with 329 active sites
- Private Permanent Control Measure (PCM) Structure Inspections: 2,636
 - 1,926 construction inspections; 353 compliance inspections; 85 final inspections; 272 annual self-inspections
- Stormwater Development Review:
 - Completed various stage reviews of over 980 separate drainage related development submittals

Other Relevant Activities Undertaken During the Reporting Period

- City Stormwater Construction Manual (SCM) – The City continued the implementation of the Stormwater Enterprise’s Stormwater Construction Manual which sets 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. As noted in previous reports, this manual explains the types of construction activities requiring a City stormwater permit, who obtains the permit, and how the permit is obtained. 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. In 2022, a total of 147 permits were issued.
- MS4 Permit Renewal – The City completed the City’s Municipal Separate Storm Sewer System (MS4) permit renewal process with the Colorado Department of Public Health and Environment (CDPHE) for Colorado Discharge Permit System (CDPS) Permit COS000004. The renewal permit was issued on July 29, 2022, with an effective date of September 1, 2022 and an expiration date of August 31, 2027.
- Green Infrastructure Guidance Manual – The City hired Muller Engineering in 2021 to assist in the development of a Green Infrastructure Guidance Manual. The guidance manual is intended to assist engineers in meeting the newly adopted green infrastructure criteria using standardized green infrastructure measures such as planned infiltration areas designed to promote volume reduction prior to formalized water quality treatment. The City’s criteria changes added infiltration metrics to Step 1 of the City’s 4 Step Process. The manual was finalized in March 2022 with a criteria adoption and implementation date of May 1, 2022.
- Fountain Creek Watershed Flood Control and Greenway District (FCWFCDG) Participation – The City and Utilities have continued participation in the FCWFCDG District Board, Technical Advisory Committee (TAC), Monetary Mitigation Fund Advisory Committee (MMFAC), and Citizens Advisory Group (CAG).

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 (2022) 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 2022 Calendar Year, submitted on March 29, 2023, and the Annual Report of Estimated Expenditures for the 2022 Calendar Year, submitted on January 30, 2023.

The following contains a summary of Stormwater Control Program activities and report of final audited expenditures for the 2022 calendar year. This report represents the second submittal in the seventh annual report series since 2016. 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 over 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. In November 2017, Colorado Springs voters approved Ballot Issue 2A to reestablish the City's Stormwater Enterprise, 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. 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.

An increase in stormwater fees from those originally set in 2017 was approved by Colorado Springs City Council Resolution 27-21 effective July 1, 2021. To ease the transition to a sustainable long-term fee, the increase was approved to be implemented in three phases effective July 1 each year between 2021 and 2023, as shown in the following schedule.

Monthly Fee	Phase 1 2021	Phase 2 2022	Phase 3 2023*
Residential / Unit	\$7.00	\$7.50	\$8.00
Non-residential / Acre	\$40.50	\$43.00	\$45.00

*The rates are scheduled to remain fixed at the 2023 rates through 2038.

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

- Management of activities required by the City's 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

Stormwater Advisory Committee

In accordance with the City's Stormwater Enterprise Ordinance (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 2022 the committee met quarterly on February 17, August 18, and November 17. The May 2022 quarterly committee meeting was postponed until August 2022 due to the lack of agenda items.

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 Capital 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 31, 2022 and again on November 22, 2022 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 CIP 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. 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. These projects 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). 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. Because Utilities' stream crossing projects often have significant stormwater protection features, 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 are required collectively to invest a minimum of \$16.5 million on the City's Stormwater Control Program each year between 2016 and 2035. For the first 5 years beginning in 2016 the City and Utilities committed to invest an average of \$20 million per year on the stormwater program (core MS4 requirements, Drainage O&M, and stormwater capital projects), or \$100 million in investments between 2016 and 2020, and an average of \$22 million per year for the second 5 years beginning in 2021, or \$110 million in investments between 2021 and 2025. Between 2016 and 2020 the City and Utilities invested (through either expenditures or encumbrances) a total of \$113 million dollars on the City's Stormwater Control Program with a total of \$106 million dollars expended through 2020. As outlined below in Section 3.0, in 2022 the City and Utilities invested (through either expenditures or encumbrances) a total of \$27.75 million dollars on the City's Stormwater Control Program with a total of \$21.46 million dollars expended in 2022.

MS4 Permit Renewal

In 2022, the City completed renewal of the City's 5-Year Municipal Separate Storm Sewer System (MS4) permit with the Colorado Department of Public Health and Environment (CDPHE) for Colorado Discharge Permit System (CDPS) Permit COS000004. The renewal permit was issued on July 29, 2022, with an effective date of September 1, 2022 and an expiration date of August 31, 2027.

City-Specific Stormwater Construction Manual (SCM)

The City continued the implementation of the Stormwater Enterprise's Stormwater Construction Manual which sets 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. As noted in previous reports, this manual explains the types of construction activities requiring a City stormwater permit, who obtains the permit, and how the permit is obtained. 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. In 2022, a total of 147 permits were issued.

Green Infrastructure Guidance Manual – The City hired Muller Engineering in 2021 to assist in the development of a Green Infrastructure Guidance Manual. The guidance manual is intended to assist engineers in meeting the newly adopted green infrastructure criteria using standardized green infrastructure measures such as planned infiltration areas designed to promote volume reduction prior to formalized water quality treatment. The City's criteria changes added infiltration metrics to Step 1 of the City's 4 Step Process. The manual was finalized in March 2022 with a criteria adoption and implementation date of May 1, 2022.

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 2022 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, 2022, the City invested a total of **\$27.7 million dollars** on the City's Stormwater Control Program in 2022. This includes encumbrances of:
 - \$ 10.4 million associated with the City's Drainage O&M and MS4 program (Annual Encumbrance)
 - \$ 14.3 million associated with the City's Stormwater Capital Projects program (Annual Encumbrance)
 - \$ 3.0 million by Utilities Sanitary Sewer Creek Crossing Program (Actual Expenditure)
- Between 2016 and 2020, the City and Utilities have invested (through either expenditures or encumbrances) a total of **\$113.4 million dollars** on the City's Stormwater Control Program with a total of **\$106.4 million dollars** expended as of December 31, 2020.
- Between 2021 and 2025, the City and Utilities are expected to invest (through either expenditures or encumbrances) a total of \$110 million dollars at an average of \$22 million dollars per year. In 2022, the City and Utilities have invested a total of **\$27.7 million dollars** on the City's Stormwater Control Program with a total of **\$21.46 million dollars** expended as of December 31, 2022.
- Between 2021 and 2022 combined, the City and Utilities have invested a total of **\$49.6 million dollars** on the City's Stormwater Control Program with a total of **\$40.0 million dollars** expended as of December 31, 2022.
- In summary, between 2016 and 2022, the City and Utilities have invested (through either expenditures or encumbrances) a total of **\$163 million dollars** on the City's Stormwater Control Program with a total of **\$146.46 million dollars** expended by the end of 2022.
- A more detailed summary of the final audited expenditures for the 2022 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 audited expenditures for the 2022 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 2022 Calendar Year, submitted on January 30, 2023. and the Annual Report of Preliminary Expenditures for the 2022 Calendar Year, submitted on March 29, 2023.

Paragraph III.B - Stormwater Capital Improvement ProgramParagraph 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 Wright Water Engineers (WWE) met on March 31, 2022 and again on November 22, 2022 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 CIP project list is included in Attachment A.

At the completion of the March 31, 2022 meeting, the participating representatives agreed to the following modifications to the original IGA project list:

- Grade Control Fountain Blvd. Channel – Chelton Rd. to Fountain Blvd. (2026 IGA Project #55) – Utilities completed a mid-reach drop structure in this reach in 2019 which completed a significant portion of this project. As such, it was agreed that the lower section of the project reach will be assessed as part of the adjacent IGA Project #54 (Grade Control Chelton Road Channel – Academy to Chelton) and will be added to the IGA Project #54 project scope. It was further agreed to replace IGA Project #55 with a new project in the Park Vista area near Austin Bluffs Parkway and Academy Boulevard in the northern portion of Colorado Springs (IGA Project #114; Park Vista Drainage Improvements). A version of this project was previously on the IGA list as IGA Project #24, Park Vista (Low Water Crossing) but was replaced. El Paso County has approached the City with a plan to use a portion of the County's ARPA funds towards repairing the channel through this area making this a viable project when combined with City Stormwater Enterprise IGA project

funding. Areas of the project that are currently in the County will be annexed into the City upon completion of the project. Construction is planned for 2024.

- CS-238 Channel/Grade Control Lower Hancock Channel - Downstream 1500lf Channel Stabilization, 2 Drop Structures (2026 IGA Project #67) - Agreed to remove and replace the CS-238 Channel/Grade Control Lower Hancock Channel IGA Project #67 with a new Sand Creek at Coleman Park project (IGA Project #115). The request was based on the project definition associated with IGA Project #67 included channel stabilization and construction of two drop structures; however, this portion of the Lower Hancock Channel had been converted to a trapezoidal concrete channel at some point in the past. Based on an assessment of the existing concrete channel, no maintenance or repairs were identified as required at this time. However, the reach of Sand Creek through Coleman Park in the eastern portion of Colorado Springs has experienced instability, incision and erosion that currently threatens an existing upstream drop structure and Barnes Road. The project will also help stabilize another IGA project currently underway downstream at Sand Creek Pond 2. Construction is planned for 2025.
- CS-268 Channel/Grade Control Las Vegas St. Channel - ATSF RR to Peterson Field Trib. 700lf channel stabilization, 2 drop structures (2026 IGA Project #66) - Agreed to remove and replace the CS-268 Channel/Grade Control Las Vegas St. Channel IGA Project #66 with a new Hancock Training Facility project (IGA Project #116; O&M Training Facility Improvements). The request was based on the project definition associated with IGA Project #66 included channel stabilization and construction of two drop structures; however, this portion of the Las Vegas Street Channel had been converted to a trapezoidal concrete channel at some point in the past. Based on an assessment of the existing concrete channel, no maintenance or repairs were identified as required at this time. Upon this finding, it was agreed to replace IGA Project #66 with the Hancock Training Facility, which will serve as a stormwater construction training facility for the region. This project will develop a current City property to become a training facility for both in-house Operations and Maintenance Staff and outside contractors and agencies. Various training classes will be conducted at the site from pipe inspection and confined space access to maintenance of water quality and detention facilities. Training will also focus on stormwater-related inspections and installation of various stormwater control measures. Additionally, examples of Low-Impact Development (LID) will be installed at the site for developers and contractors to observe proper construction and maintenance. Construction is planned for the Fall of 2023.

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 2022 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), the FCWFCGD Citizen's Advisory Committee (CAG), and the 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 along Fountain Creek.
 - Utilities supported the FCWFCGD MMFAC in the development of a draft Capital Improvement Plan in 2017 and in 2022 participated in the annual Plan update for recommended projects to commence in 2023.
- (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 Capital Improvement Plan in 2017 for the purpose of ensuring that the Monetary Mitigation Funds provided through Condition No. 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 discussions related to the selection of projects in 2022 to be commenced in 2023 and beyond 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 further advance regional water quality efforts including nutrient sampling and modelling, PFAS-related groundwater issues, and water quality policy tracking.
- (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.*
 - The FCWFCGD has continued to explore the potential for compensatory mitigation banking projects and/or in-lieu fee programs within the Fountain Creek basin. The

City and Utilities have participated in and supported these efforts through participation on the FCWFCGD Board of Directors, FCWFCGD TAC, FCWFCGD CAG, and the FCWFCGD MMFAC.

- (5) *By exploring opportunities for such coordination and cooperation on these Fountain Creek initiatives beyond the term of the IGA Agreement.*
- Both the City and Utilities are committed to continuing to work with the FCWFCGD to explore opportunities to coordinate and cooperate on Fountain Creek related initiatives during and beyond the term of the IGA Agreement.

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.

- This condition was completed in 2020. Between 2016 and 2020, a total of \$52 million including interest was provided to the Fountain Creek Watershed Water Activity Enterprise 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).

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.

- Eighty-three (83) 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 each response by Pueblo County under advisement and responded to any questions Pueblo County representatives presented.

- In January 2020, the City and Pueblo County agreed to an alternative method for Pueblo County's review and comment pertaining to certain stormwater criteria variances associated with the City of Colorado Springs' DCM. The alternative method allows Pueblo County to consider certain identified categories of variances to be routine, if, and only if, the variance requests will not lead to any increase in flows, will not result in additional generation of sediment or erosion, will result in no decrease to water quality for Fountain Creek or tributaries to Fountain Creek, and meet the routine variance condition criteria agreed upon by the City and Pueblo County. The routine variances are only related to consistent variances that Pueblo County previously had no concerns or comments historically. All other non-routine variances are sent to Pueblo County for an opportunity to comment upon as per Paragraph III.F of the IGA.

The goal of the alternative method is to help reduce the time Pueblo County uses to review such variances for which consensus has been reached. A total of nine categories of routine variances and associated conditions to meet the routine variance definition were agreed upon. The categories include the following:

- | | |
|--------------------------------|--------------------------------------|
| - Drop Manholes | - Pipe Velocities |
| - Pipe Bends | - Pipe Crowns Matching |
| - Retaining Wall Footings | - Retaining Wall Horizontal Distance |
| - Retaining Wall Circumference | - Minimum Pip Size |
| - Pipe Material | |

A summary of the number and nature of routine variances approved by the City are provided to Pueblo County on a quarterly basis. During the reporting period, a total of 17 individual routine variances (separate from inclusion with other non-routine requests) were approved by the City and reported to Pueblo County.

3.0 Final Expenditures for the 2022 Calendar Year

The following contains a report of final audited expenditures for the 2022 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. For the second five-year period (2021-2025), the minimum annual expenditure requirement is \$16.5 million, and the average annual expenditure requirement is \$22 million for an overall expenditure of \$110 million for the period between 2021 and 2025. 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 2022 calendar year reporting period. As of December 31, 2022, the City and Utilities have invested (through either expenditures or encumbrances) a total of **\$27.7 million** dollars on the City's Stormwater Control Program and expended **\$21.48 million** dollars.

Expenditures for the 2022 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.
Second Five Years (2021-2025)	\$110 Million	\$22 Million	\$16.5 M/yr.

Claimed Expenditures					
(Actual Expenditures and Encumbered Funds)	Total (2016-2020)	2021	2022	Subtotal (2021-2025)	Total (2016-2022)
Drainage O&M/MS4 Program	\$41,301,035	\$9,224,194	\$10,437,873	\$19,662,067	\$60,963,102
Stormwater Capital Projects	\$56,280,278	\$9,000,000	\$14,260,634	\$23,260,634	\$79,540,912
Utilities (SSCC Program)	\$15,846,580	\$3,632,568	\$3,048,284	\$6,680,852	\$22,527,432
Total	\$113,427,893	\$21,856,762	\$27,746,791	\$49,603,553	\$163,031,446

Actual Expenditures	Total (2016-2020)	2021	2022	Subtotal (2021-2025)	Total (2016-2022)
Drainage O&M	\$18,719,097	\$3,427,366	\$3,553,417	\$6,980,783	\$25,699,880
Stormwater MS4 Program	\$21,010,941	\$6,214,259	\$7,311,271	\$13,525,530	\$34,536,471
Stormwater Capital Projects	\$50,837,527	\$5,316,004	\$7,543,666	\$12,859,670	\$63,697,197
Utilities (SSCC Program)	\$15,846,580	\$3,632,568	\$3,048,284	\$6,680,852	\$22,527,432
Total	\$106,429,145	\$18,590,197	\$21,456,638	\$40,046,835	\$146,460,980

Additional Unclaimed Stormwater Expenditures in 2022

Other Capital Project Stormwater/Channel Related Work
(Excluded expenditures per IGA paragraph III.A(5)b.)

\$1,828,079

Capital Project Summary of Expenditures

Of the actual expended total listed above, \$7,565,758 has been invested in Capital Projects, of which \$7,292,897 has been invested on IGA projects, and \$272,861 has been invested on other stormwater related projects.

IGA CAPITAL PROJECTS		
IGA Project No.	Project Name	Actual Spent (\$)
109	Bear Creek Channel Stabilization (2018)	10,341
69	Channel/Storm Drain Lower Sand Creek (2022)	150,000
106	Cottonwood Creek Austin Bluffs to Bus Barn (2021)	57,914
65	Cottonwood Creek Detention Basins (2017)	3,040
59	Cottonwood Creek-Monument Creek to Academy (2020)	168,187
108	Cottonwood Creek-Bus Barn to Pinkerton (2023)	13,210
1	Emergency Stormwater Projects (2022)	1,899,565
0	FEMA Grant Projects	33,780
	South Douglas Design and Grant Match	28,870
	Camp Creek	4,910
7	Fairfax Tributary Detention Pond (2016)	71,690
105	Flying Horse Pond 1 Retrofit (2019)	30,983
116	Hancock Training Facility (2025)	3,191
112	Middle Creek Upstream of I-25 (2022)	168,476
16	North Douglas Channel (2019)	200,110
114	Park Vista Drainage Improvements (2022)	70,150
113	Pikes Peak and Academy Detention Facility (2023)	600,000
103	Pine Creek Channel Ph 1 (2018)	31,277
104	Pine Creek Channel Ph 2 (2020)	43,970
115	Sand Creek at Coleman Park (2023)	8,570
61	Sand Creek Karr to West Fork (2024)	11,838
111	South Douglas Sinton Trail Improvements (2022)	95,114
34	Storage Sand Creek Pond 2 (2019)	156,456
75	Upper Sand Creek West Fork to Galley (2022)	135,912
6	USAFA Drainages (Monument Branch) (2016)	3,113,415
110	USAFA Supplemental Black Squirrel Creek (2022)	11,175
13	Water Quality Projects (2016-2019)	61,614
Various*	Project Scoping and Definition	120,827
	Cottonwood Creek-Powers	36,818
	Pine Creek Grant Scoping	18,491
	Monument Creek Grant Scoping	11,379
	Project Management Software	54,139
Total IGA Projects		7,270,805

Other Stormwater Capital Projects

Project Name	Actual Spent (\$)
Credit Program	30,926
Mitigation Projects/Studies	101,446
Project Scoping and Definition – Non IGA Projects	14,000
Fountain Creek Economic Impact Analysis	14,000
USAFA Black Squirrel Creek	588
USAFA-Elk Horn Creek	125,901
Total Non-IGA Stormwater Capital Projects	272,861

Total Stormwater Capital Projects Expenditures

Total 2022 Stormwater Capital Project Expenditures	7,543,666
---	------------------

Colorado Springs Utilities SSCC Program Activities

Work Order No.	Project Name	Actual Spent (\$)
3526116	Sand Creek Downstream of the East Fork Confluence Stream Stabilization	1,936
3749174	Dry Creek Downstream of Dawson Drive Stream Stabilization	5,310
3731441	Cottonwood Creek Upstream of Academy Blvd Stream Stabilization	348,728
3411434	Templeton Gap at Siferd Blvd Stream Stabilization	289,504
3830497	Fountain Creek SDS Realignment Storm Improvements	77,839
3526106	Cottonwood Creek Austin Bluffs Pkwy to Powers Blvd Stream Stabilization 1 & 1B	1,107,741
3911600	North Douglas Creek Stabilization & Flow-fill – Design & Construction	405,110
3948548	Pine Creek Stream Stabilization Phase II – Design & Construction	350,000
3526082	Monument Creek at Monument Street Stream Stabilization	134,558
3460032	Sand Creek Stabilization KARR to West Fork Confluence & West Fork Stabilization	46,947
3833436	Sand Creek Upstream of Constitution Pond Stream Stabilization Phase II	18,592
3780161	Stratton Creek at Quail Lake Park Stream Stabilization	27,440
3255936	Broadmoor Valley Park Stream Stabilization	1,327
3894846	Sand Creek Stabilization Upstream of Barnes Road	17,108
3819643	Middle Tributary Upstream of I-25 Channel Stabilization	2,859
3872012	Sand Creek Stream Stabilization Downstream of Academy to Upstream of Chelton Rd	122,967
3872015	Cheyenne Creek Stream Stabilization at WW.149350 & WW.161468	41,474
3871741	Upper Dry Creek Stream Stabilization Near Oak Hills Drive	48,844
Total Utilities SSCC Program 2022 Project Costs:		3,048,284

4.0 Stormwater Control Program Activities Undertaken in 2022 Calendar Year

2016 Capital Projects Carried Over Into the 2022 Reporting Period

2016 FEMA/ GRANT PROJECTS (IGA PROJECT #0)

Projects arising from the 2013 and 2015 flooding

South Douglas at Centennial

Location: South Douglas natural channel between Centennial and Chestnut

Description: Flash floods following the Waldo Canyon Fire caused increased flood flows and erosion along this section of channel. The FEMA PAAP Grants Program funded restoration of the channel washout areas. Due to increased erosion after subsequent rain events, the grant dollars are only enough to fund one major washout area. Due to the changes in work scope and hydrology within the proposed project site, FEMA had requested further study and mitigation of the area before commencing with construction. Construction activities commenced in 2021 and were completed in 2022.

Engineer/Contractor:	HDR and Corvus/53-Corp
Status:	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 designed 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 was completed in 2017. Phase 2 consists of the section outside of Phase 1 between Voyager Parkway and I-25. Phase 3 is the section of Monument Branch from the confluence with Monument Creek to the west side of I-25 and was completed in 2020. The project is identified as a high priority project within the Monument Creek Watershed Restoration Master Plan, October 3, 2016, and has been a joint effort between the City, Utilities, USAFA, CDOT, and the FCWFCD.

Phase 2:

Engineer/Contractor:	Matrix Design Group/Tezak Heavy Equipment
Status:	Phase 2 Engineering – 100% Complete Phase 2 Construction – 80% Complete

Phase 1 and Phase 3:

Status:	Complete (2017 and 2020, respectively)
---------	--

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 has completed IGA negotiations with CDOT for the project and the design of the pond was completed in 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 Drainage Basin Planning Study (DBPS) Project. Construction of the Fairfax Tributary Detention Pond commenced in 2022 with 50% of the project completed by the CDOT construction contractor as part of the larger adjacent interchange project.

Engineer/Contractor:	FHU/CDOT Contractor and TBD
Status:	IGA Negotiations with CDOT Complete; Design 100% Complete Construction 50% Complete

2019 Capital Projects Carried Over Into the 2022 Reporting Period

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/Wildcat Construction
Status:	Engineering Complete Construction Complete

NORTH DOUGLAS CHANNEL (IGA PROJECT #16)

Location: North Douglas Creek from Sinton Road outfall to the Union Pacific Railroad (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/Tezak Heavy Equipment
Status:	Engineering 100% Complete Construction 50% Complete

2020 Capital Projects Carried Over Into the 2022 Reporting Period

WATER QUALITY PROJECTS (2020) - LOW-IMPACT DEVELOPMENT (LID) MANUAL (IGA PROJECT #13)

Location: City-wide

Description: The city is developing a green infrastructure manual in an effort to increase the amount of water quality pre-treatment established in development and re-development areas around the City. The manual will include best practices from the industry and have heavy stakeholder involvement from the development community and many other outside stakeholders.

Engineer/Contractor: Muller Engineering
Status: Complete

PINE CREEK CHANNEL IMPROVEMENTS PHASE 2 (IGA PROJECT #104)

Location: Pine Creek natural channel alignment from Chapel Hill Drive west to the detention pond at Voyager Parkway

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.

Engineer/Contractor: HDR/TBD
Status: Design 100% Complete
Construction planned Fall of 2023

STORAGE COTTONWOOD PARK (PR-15) (IGA PROJECT #51)

Location: Detention Pond located along Cottonwood Creek at Montarbor Drive

Description: The scope of this project is to retrofit the existing pond to a larger detention facility that will collect flows from the neighborhood to the south before entering Cottonwood Creek.

Engineer/Contractor: Kimley-Horn/TBD
Status: Engineering 90% Complete
Construction planned Fall of 2023

COTTONWOOD CREEK AUSTIN BLUFFS TO BUS BARN (IGA PROJECT #106)

Location: Cottonwood Creek natural channel upstream of Austin Bluffs

Description: This is the first of a three-phased project to stabilize the reach of creek between Austin Bluffs and Powers Boulevard. The project will include several drop structures and reconnect the adjacent floodplain to the creek creating more riparian areas and environmental restoration of the area.

Engineer/Contractor: Matrix Design Group/Siete
Status: Engineering 100% Complete
Construction 30% Complete

EMERGENCY STORMWATER PROJECTS (IGA PROJECT #1)

Projects arising from 2020 prioritized needs

Elkhorn Creek at USAFA

Location: Elkhorn Creek from I-25 west to the USAFA Airport.

Description: Stabilization of the creek through this reach. This is a joint USAFA and Colorado Springs Stormwater Enterprise (SWENT) project to restore the creek from damage due to increased upstream flows. SWENT is funding the design portion of the project.

Consultant:	Matrix Design Group
Status:	Design 100% Complete Construction Complete

2021 Capital Projects Carried Over Into the 2022 Reporting Period

STORAGE SAND CREEK DETENTION POND 2 (IGA PROJECT #34)

Location: Southwest of Tutt and Barnes on Sand Creek

Description: The scope of this project is to retrofit the existing regional pond to a larger detention facility that will collect control high flows in Sand Creek.

Engineer/Contractor:	Merrick/TBD
Status:	Engineering 60% Complete Construction planned Fall of 2023

CHANNEL/GRADE CONTROL- COTTONWOOD CREEK - MONUMENT CREEK TO ACADEMY (IGA PROJECT #59)

Location: Cottonwood Creek just downstream of Academy

Description: The scope of this project is to stabilize the remaining bank on the north side of the creek next to the Cottonwood Creek Apartments.

Engineer/Contractor:	HDR/TBD
Status:	Engineering 90% Complete Construction planned Winter/Spring of 2023

COTTONWOOD CREEK - BUS BARN TO PINKERTON (IGA PROJECT #108)

Location: Cottonwood Creek from the existing drops structures downstream to the previous project limits

Description: This is the second of a three-phased project to stabilize the reach of creek between Austin Bluffs and Powers Boulevard. The project will include several drop structures and reconnect the adjacent floodplain to the creek creating more riparian areas and environmental restoration of the area.

Engineer/Contractor:	Matrix Design Group/Siete
Status:	Engineering Complete Construction 30% Complete

Capital Projects Undertaken During the 2022 Reporting Period

EMERGENCY STORMWATER PROJECTS (IGA PROJECT #1)

Projects arising from 2022 prioritized needs

15 Upland Road

Location: Intersection of Upland and Thayer Roads

Description: Installed berm and completed drainage improvements to prevent flooding of residence at intersection.

Contractor: Lucky Dog

Status: Complete

Spring Creek at Valley High Golf Course

Location: Southeast side of Golf Course on Spring Creek

Description: Repaired creek bank erosion that threatened golf course pathway.

Contractor: HPD

Status: Complete

Concrete Channel Repair

Location: 2080 Heatherdale Drive

Description: Repaired failed concrete sections of trapezoidal concrete channel.

Contractor: RJ Gleeson

Status: Complete

Academy and Hartsock

Location: Drainage inlet at northwest corner of intersection

Description: Repaired failed storm line coming from inlet and improved drainage in front of inlet to better capture storm flows from area parking lots.

Contractor: HPD

Status: Complete

Cragin Road Drainage Improvements

Location: 1222 Cragin Road

Description: Improved stormflow around intersection of Cragin Road and bike path and alley in area.

Contractor: HPD

Status: Complete

Adaman Alley

Location: Alley between Tejon/Nevada/Colorado

Description: Contributed to the reconstruction of alley and all utility alignments to improve storm flows in alley and make safer for pedestrian access.

Contractor: Beers

Status: Complete

EMERGENCY STORMWATER PROJECTS (IGA PROJECT #1) - Continued

Projects arising from 2022 prioritized needs

Heatherdale Drive Pipe Repair

Location: Rock Island Trail to the north of Heatherdale Drive

Description: Replaced 84-inch corrugated metal pipe (CMP) that was failing below and adjacent to trail.

Contractor: RJ Gleeson

Status: Complete

Miss-Locate Austin Bluffs at Academy

Location: East side of intersection in Austin Bluffs Drive

Description: Repaired storm pipe damaged by contractor.

Contractor: HPD

Status: Complete

Concrete Channel at Turman Elementary

Location: North side of Elementary School Property

Description: Repaired failed concrete trapezoidal channel.

Contractor: HPD

Status: Complete

217 North Prospect Street

Location: Curb and gutter in front of 217 N. Prospect Street

Description: Increased size of inlet to prevent flooding in area.

Contractor: Ability

Status: Complete

815 Grey Eagle Circle North

Location: Roadway in front of residence

Description: Improved drainage to prevent standing water and ice buildup in front of residence.

Contractor: Ability

Status: Complete

Valley Forge Road Drainage Improvements

Location: West side of Valley Forge Road just north of Constitution Avenue

Description: Improved drainage along road to prevent flows from entering residence yards.

Contractor: CMS

Status: Complete

EMERGENCY STORMWATER PROJECTS (IGA PROJECT #1) - Continued

Projects arising from 2022 prioritized needs

Shooks Run Drainage Channel

Location: Just downstream of Academy Boulevard

Description: Repaired failed grouted rip rap that was causing undermining and erosion of channel.

Contractor: Na Ali'
Status: Complete

Sand Creek Drop Repair

Location: Just upstream of Platte Avenue

Description: Repaired drop structure that was being undermined at toe of drop structure.

Contractor: Na Ali'
Status: Complete

5115 Neal Ranch Road

Location: Roadway in front of residence

Description: Improved drainage to prevent standing water and ice buildup in front of residence.

Contractor: Lucky Dog
Status: Complete

Hancock and Cache La Poudre

Location: Storm line under intersection.

Description: Repaired failing storm line that was causing sinkholes in street and adjacent landscaping.

Contractor: HPD
Status: Complete

Water Quality Gage Station Removal

Location: Various location throughout City

Description: Removed historic gauge stations that were restricting flow in large storm pipes.

Contractor: HPD
Status: Complete

GRANT APPLICATIONS

2022 OLDCC DCIP Grant Application

Location: Pine Creek

Description: Defense Community Infrastructure Program (DCIP) Application submitted to the Office of Local Defense Community Cooperation (OLDCC) in an effort to secure funding for the construction of Pine Creek Phase II (IGA Project #104).

Status: Grant Not Awarded

2022 USACE Section 7001 Program Grant Application

Location: Fountain Creek/Monument Creek

Description: Application submitted to USACE in an effort to secure funding for construction of channel improvement segments within Fountain Creek and Monument Creek

Status: Application Submitted

2022 FEMA Grant Applications

Location: Three Locations

Description: Applications submitted to FEMA in an effort to secure funding for the design and construction of three project areas along Monument Creek, Sand Creek, and Cottonwood Creek.

Status: Grants Not Awarded in 2022

ENGINEERING STUDIES

The Stormwater Enterprise continued to work on several significant and important engineering studies during the course of 2022, including completion of the City's Green Infrastructure Manual. These studies will be used to further develop capital lists, plan future maintenance and capital projects, and manage stormwater related infrastructure.

SOUTH DOUGLAS STABILIZATION AT SINTON TRAIL (IGA PROJECT #111)

Location: South Douglas Creek just downstream of Sinton Road

Description: The scope of this project is to stabilize a reach of the creek where two drop structures have failed, and another has become undermined.

Engineer/Contractor: In-House/TBD
Status: Engineering 60% Complete
Construction planned Fall of 2023

SAND CREEK WEST FORK - PLATTE TO GALLEY (IGA PROJECTS #74 AND #75)

Location: West Fork Sand Creek downstream of Galley Road

Description: The scope of this project is to stabilize this reach of West Fork Sand Creek including the side tributary running to the east up to Galley Road.

Engineer/Contractor: BHI/TBD
Status: Engineering 10% Complete
Construction planned Fall of 2023

PIKES PEAK AND ACADEMY DETENTION FACILITY (IGA PROJECT #113)

Location: Southwest corner of Pikes Peak and Academy Boulevard on Spring Creek

Description: The scope of this project is to restore the wetlands on this parcel of City property by constructing a stormwater detention facility.

Engineer/Contractor: USACE/TBD
Status: Engineering 10% Complete
Construction planned Fall of 2024

MIDDLE TRIBUTARY - UPSTREAM OF I-25 (IGA PROJECT #112)

Location: Middle Tributary (Creek) Upstream of Interstate- 25

Description: The scope of this project is to stabilize this reach of Middle Tributary creek that has become incised due to failing embankments upstream. The project will add onto the rebuilt embankment being constructed by the local developer.

Engineer/Contractor: Watervation/TBD
Status: Engineering 90% Complete
Construction planned Fall of 2023

PARK VISTA DRAINAGE IMPROVEMENTS (IGA PROJECT #114)

Location: Intersection of Siferd and Date Streets upstream to Hopeful Drive

Description: The scope of this project is to eliminate the low water crossing at the intersection of Siferd and Date Streets and stabilize the reach of channel upstream to hopeful drive.

Engineer/Contractor: Matrix/TBD
Status: Engineering 10% Complete
Construction planned Fall of 2024

O&M TRAINING FACILITY (IGA PROJECT #116)

Location: Hancock Expressway south of HWY 24

Description: The scope of this project is to create a training facility on this City Parcel that will demonstrate how to maintain various permanent control measures (PCMs) and how to properly install temporary PCMs for construction projects.

Engineer/Contractor: In-House/TBD
Status: Engineering 60% Complete
Construction planned Spring of 2023

Utilities Sanitary Sewer Creek Crossing (SSCC) Program Activities

In 2022, Utilities SSCC Program included participation in the design, repair, rehabilitation, or closeout of 19 creek crossing projects, at a cost of \$3,048,284.

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

Sand Creek Downstream of the East Fork Confluence Stream Stabilization - Construction

Channel degradation on Sand Creek resulted in two existing vertical sheet pile cutoff walls beginning to become compromised. This project converted the concrete cutoff walls to grouted sloping boulder drop structures and provided a long-term channel stabilization solution. Downstream of the project a sheet pile cutoff wall was installed to protect against potential future channel degradation. Bank protection and vegetative establishment were included as part of the project. This project protects wastewater pipelines running parallel to Sand Creek as well as the grouted boulder drop structures. Construction was completed in 2021 but staging area revegetation related to the City stormwater permit remains ongoing.

Engineer:	Internal Design (Utilities)/Tezak Heavy Equipment
Notice to Proceed:	February 2021
Completion Date:	August 2021
Status:	Construction complete, Revegetation Ongoing

Dry Creek Downstream of Dawson Drive Stream Stabilization – Vegetative Monitoring and Establishment

This project had construction completed in 2021. This project was 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 were exposed due to ongoing channel degradation. The project design consisted of several small sculpted concrete drop structures that reconnect Dry Creek to its floodplain and prevent future channel degradation. A monitoring report for the USACE 404 permit was created to document the status of the revegetation. Habitat Management was contracted to perform additional vegetative establishment activities per the recommendations of the monitoring report.

Consultant/Contractor:	ERO Resources/Habitat Management
Notice to Proceed:	June 2021
Completion Date:	Ongoing
Status:	Ongoing

Cottonwood Creek Upstream of Academy Blvd. Stream Stabilization - Construction

Three vertical concrete walls were constructed in series on Cottonwood Creek upstream of Academy Boulevard. In 2015, the lowermost drop failed and was replaced with a grouted boulder drop structure. The Cottonwood Creek Interceptor, a 24-inch to 30-inch sanitary sewer, runs parallel to Cottonwood Creek on the left (south) bank through this reach. This sewer was at risk from drop structure failure and the expected stream degradation that would follow. This project converted the remaining two vertical concrete walls to more robust grouted boulder drop structures and reduced the risk to Utilities' infrastructure.

Contractor:	Tezak Heavy Equipment
Notice to Proceed:	August 2021
Completion Date:	February 2022
Status:	Complete

Utilities SSCC Program Activities (Continued)

Templeton Gap at Siferd Blvd Stream Stabilization – Design and Construction

Channel degradation in the Templeton Gap drainageway threatened a sewer that parallels and crosses the drainage upstream of Siferd Boulevard. The project was designed internally by Utilities engineers and utilized stacked boulder bank walls and a boulder riffle to stabilize the reach. The extent of the improvements were approximately 200 feet long. Construction was completed in the Spring of 2022.

Contractor:	Tezak Heavy Equipment
Notice to Proceed:	March 2022
Completion Date:	April 2022
Status:	Complete

Fountain Creek SDS Realignment Storm Improvements – Design and Construction

This project modified an existing wetland area to prevent the potential incidental storage of stormwater out of priority in order to protect water rights of downstream users. Construction included the installation of a stormwater overflow pipe with a Tideflex valve and riprap.

Contractor:	Tezak Heavy Equipment
Notice to Proceed:	March 2022
Completion Date:	June 2022
Status:	Complete

Cottonwood Creek Austin Bluffs Pkwy to Powers Blvd Stream Stabilization Phase 1 and 1B – Design and Construction – City Stormwater

Project consists of stream stabilization on Cottonwood Creek from Austin Bluffs Parkway upstream to the base of an existing drop structure near the Public School District 20 Bus Barn. This project is being funded jointly by Utilities and the City Stormwater Enterprise. Phase 1B is fully funded by Utilities and protects a series of sculpted concrete drop structures that were previously installed to protect an existing sanitary sewer crossing in this area. Improvements include multiple grade control structures and bank protection elements in order meet design goals.

Engineer/Contractor:	Matrix Design Group/Siete
Notice to Proceed:	September 2022
Completion Date:	Projected Fall 2023
Status:	Under Construction

North Douglas Creek Stabilization and Flow-Fill – Design and Construction – City Stormwater (IGA Project #16)

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. This project is mutually beneficial to Utilities as it protects an active waterline, an active gas main, and prevents exposure of abandoned wastewater infrastructure.

Engineer/Contractor:	Merrick/Tezak Heavy Equipment
Status:	Under Construction (50% Complete)

Utilities SSCC Program Activities (Continued)

Pine Creek Stream Stabilization Phase II - Design and Construction - City Stormwater (IGA Project #104)

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 drainageway. This project is mutually beneficial to Utilities as it protects an active wastewater main and an existing underground electric crossing in the project area.

Engineer/Contractor:	HDR/TBD
Status:	Design 100% Complete Construction planned Fall of 2023

Monument Creek at Monument Street Stream Stabilization - Design and Construction

This project is being designed to reduce risk to Utilities infrastructure in the vicinity of Monument Creek at Monument Street. Channel degradation has exposed the toe of an existing drop structure and resulted in bank erosion. The design of the project extends over 3,000 feet and will consist of drop structures, rock riffles, bendway weirs, and bank armoring. Project design is complete and permitting with USACE and the State Historical Preservation Office (SHPO) is ongoing. Construction is anticipated to commence in 2023. The engineer has completed the design and will be supporting Utilities with engineering services during construction and additional permitting tasks.

Engineer/Contractor:	Dewberry
Notice to Proceed:	January 2020
Completion Date:	Ongoing
Status:	Design complete, undergoing permitting

Sand Creek Stabilization Karr to West Fork Confluence - Design and Construction

Channel degradation in Sand Creek from Karr Road to the confluence with the West Fork of Sand Creek threatens a wastewater pipeline running parallel to Sand Creek. The erosion also places a drop structure and creek crossing at risk. This project is under internal design and will result in the installation of drop structures and bank protection. Construction is anticipated to begin in 2023 depending on the timing for receiving permits from USACE and other permitting agencies. This project will be constructed in conjunction with the West Fork of Sand Creek Stream Stabilization project, with exact timing depending on project costs.

Engineer:	Internal Design (Utilities)
Design Started:	2019
Completion Date:	Projected 2026
Status:	Design and Permitting In-Progress

West Fork of Sand Creek Stream Stabilization (Upstream of Sand Creek Confluence)- Design and Construction

Channel degradation in West Fork of Sand Creek from downstream of Wooten Road to the confluence of Sand Creek threatens a wastewater pipeline running parallel to the West Fork of Sand Creek. This project is under internal design and will result in the installation of drop structures and bank protection. Construction is anticipated to begin in 2025 and will be coordinated in conjunction with the Sand Creek Stabilization Karr to West Fork Confluence stabilization project.

Engineer:	Internal Design (Utilities)
Notice to Proceed:	2019
Completion Date:	Projected 2026
Status:	Design and Permitting In-Progress

Utilities SSCC Program Activities (Continued)

Sand Creek Upstream of Constitution Pond Stream Stabilization Phase II – Design

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

Engineer:	Internal Design (Utilities)
Design Started:	2021
Completion Date:	TBD
Status:	Permitting

Stratton Creek at Quail Lake Park Stream Stabilization – Design

Channel degradation in Stratton Creek within Quail Lake Park is threatening a sanitary sewer crossing and sewer main running along the bank of the creek. The project will include re-alignment of a portion of at-risk sewer main to prevent catastrophic failure and may include bank protection, drop structures, and vegetation establishment.

Engineer:	Internal Design (Utilities)
Design Started:	2022
Completion Date:	TBD
Status:	Design

Broadmoor Valley Park – Design

Channel degradation through a drainage inside Broadmoor Valley Park threatens a sewer that crosses the drainage near Hidden Creek Drive. The project is being designed internally by Utilities engineers and will utilize sculpted concrete drops and riprap bank protection to stabilize the reach. Design is currently at 60% status and a permitting approach is being developed with ERO Resources.

Engineer:	Internal Design (Utilities)
Notice to Proceed:	TBD
Completion Date:	TBD
Status:	60% Design Completed

Sand Creek Stabilization Upstream of Barnes Road – Design

Channel degradation Sand Creek upstream of Barnes Road is threatening sanitary sewer mains. City Stormwater is working on a design downstream of Barnes Road in 2023. Utilities will partner for data collection and permitting including 404 and CLOMR and design improvements for the section upstream of Barnes Road. Anticipated improvements include drop structures, bank stabilization, and vegetation establishment.

Engineer:	Internal Design (Utilities)
Design Started:	2022
Completion Date:	Projected 2027
Status:	Design

Utilities SSCC Program Activities (Continued)

Middle Tributary Upstream of I-25 Channel Stabilization – Design

Channel degradation on Middle Tributary threatens a force main that crosses the drainage upstream of I-25. Significant sediment aggradation due to upstream sediment moving downstream has resulted in a destabilized condition due to impacts to vegetation. This project will be designed and constructed in partnership with the City of Colorado Springs Stormwater Enterprise in order to achieve efficiency in the expenditure of funds by partnering together on a reach of stream stabilization in which both parties have interest in restoring.

Engineer:	Watervation
Notice to Proceed:	January 2022
Completion Date:	TBD
Status:	Design

Sand Creek Stream Stabilization Downstream of Academy Blvd to Upstream of Chelton Rd – Design

This project will stabilize a portion of Sand Creek downstream and upstream of Academy Blvd. Existing drop structures in the project reach are showing signs of degradation and channel downcutting is evident. Utilities maintains a 30" wastewater interceptor along the southern bank and the planned improvements will stabilize Sand Creek to protect this critical infrastructure. Additionally, there are several active stormwater outfalls and improvements will be considered. Design elements will likely include grouted boulder drop structures, riprap, and additional stream restoration materials. Design started in Fall of 2022 and is anticipated to be completed by the end of 2023.

Contractor/Designer:	Jacobs
Notice to Proceed:	September 2022
Completion Date:	Projected end of 2023
Status:	Design

Cheyenne Creek Stream Stabilization at WW.149350 and WW.161468 – Design

This Project will protect two sanitary sewer crossings along Cheyenne Creek by improving stream stability. At location WW.149350, Utilities operates and maintains an 8" sewer main that crosses Cheyenne Creek near 1623 W Cheyenne Road. At location WW.161468, Utilities operates and maintains a 6" sewer main that crosses Cheyenne Creek near the intersection of W Cheyenne Road and Cresta Road adjacent to the Heather Drive cul-de-sac. Design elements will likely include sculpted concrete drop structures at each location, riprap, and additional stream restoration materials. Design started in Fall of 2022 and is anticipated to be completed by the end of 2023.

Contractor/Designer:	Matrix Design Group
Notice to Proceed:	October 2022
Completion Date:	Projected end of 2023
Status:	Design

Utilities SSCC Program Activities (Continued)

Upper Dry Creek Near Oak Hills Drive – Design

This reach of Upper Dry Creek has been identified as an opportunity to protect the sanitary sewer infrastructure, enhance the stream, and improve bank stability. Utilities operates and maintains an 8" sewer main within an existing 50' Utility and Drainage Easement located in the Hunters Point Homeowners Association open space. The sewer line crosses the Upper Dry Creek drainage in several locations throughout the project reach. Several active stormwater outfalls and a detention pond also exist within the reach. Utilities also operates and maintains an 8" water main in this reach of Upper Dry Creek. Design elements will likely include grouted boulder drop structures or sculpted concrete drop structures, riprap, and additional stream restoration materials. Design started in Fall of 2022 and is anticipated to be completed by the end of 2023.

Contractor/Designer:	Matrix Design Group
Notice to Proceed:	October 2022
Completion Date:	Projected end of 2023
Status:	Design

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 PCM Inspections
- Permanent Public PCM 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 2022 calendar year, the Drainage O&M Program completed the following activities:

- Completed inspections of all 153 publicly maintained regional and sub-regional detention ponds/facilities
- Completed identified maintenance activities within 60 publicly maintained regional and sub-regional detention facilities (including debris removal, sediment removal, mowing, tree trimming, and minor structure maintenance), resulting in removal of 6,496 cubic yards of sediment and debris
- Completed inspections of 35.87 miles of concrete-lined and natural channels
- Performed maintenance activities through 40.87 miles of concrete-lined and natural channels, including removal of 23,593 cubic yards of sediment, vegetation, and debris
- Completed 6,645 separate storm sewer maintenance/vacuum-truck operations (including cleaning of storm sewer inlets and storm sewer pipe cleaning), resulting in removal of 988 cubic yards of debris
- Repaired, replaced, or installed 341 linear feet of stormwater conveyance pipe
- Performed street sweeping operations on 18,969 lane miles of city streets, removing 25,882 cubic yards of debris

2022 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 new field employees, firefighters and first responders, and annual refresher training to existing field employees.
 - Social media metrics for public outreach on spill reporting:
 - Pet Waste Impressions: 9,719
 - Storm Drain Art Impressions: 8,618
 - Leaves Impressions: 5,067
 - Herbicides and Pesticides Impressions: 5,508
 - Deicer Impressions: 4,300

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): 76
 - Number of students and citizens reached (i.e., schools, community events): 1,773
 - 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): 10,810,885
 - Storm Drain Art Project: Completed 10 murals
 - Adopt-A-Waterway Program: 690 volunteers
- Educational materials distributed:
 - School Items: 12,850
(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.

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

- The City conducted three outdoor Stormwater Temporary Control Measure (TCM) Field Academy training for members of the construction community to provide hands-on training on proper installation and maintenance of construction control measures.
- The City hosted five Grading and Erosion Control (GEC) and Stormwater Management Plan trainings virtually to the construction and engineering community.
- The City hosted two Permanent Control Measure (PCM) training courses for members of the construction community
- The City hosted one Stormwater Management Plan (SWMP) course for members of the construction community.
- The City provided a Stormwater University presentation to the public which focused on the new Green Infrastructure Manual guidelines and requirements.
- The City hosted a Regional MS4 Meeting that focused on the City's Inter-Governmental Agreement (IGA) developed for Non-Standards to be covered under the City's renewed MS4 permit.
- The City participated in four "Wet Wednesdays" stakeholder meetings held virtually and at the area Home Builder's Association (HBA) offices. Topics included:
 - Temporary Control Measures: Annual review of the City's SCM and stormwater inspection process – 22 HBA members and 5 City staff attended.
 - Pond/Permanent Control Measures: Presentation on SWENT's design review, installation, and acceptance process – 6 HBA members and 6 City staff attended.
 - Developers and Accela, Guidance for Navigating Accela for Stormwater Compliance – 28 HBA members and 6 City staff attended.
 - Permit Changes to SWENT's MS4 Permit Impacting The Construction Industry – 20 HBA members and 6 City staff attended.

Private Permanent Control Measure (PCM) 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 PCMs in accordance with issued PCM maintenance agreements. The constructed PCMs (i.e., extended detention basins, porous landscape detention basins) are tracked in a database maintained by the City to ensure they are inspected and maintained as required. Approximately 2,636 inspections of private PCMs were conducted by the City in 2022, either during construction, during final acceptance phases, or as associated with annual or other compliance requirements, which resulted in 100 enforcement actions.

- PCM Operation and Maintenance (O&M) Program Sites: 505
 - Structures Within Private Structures O&M Program: 678
- Total Private PCM Inspections: 2,636
 - Construction Inspections: 1,586
 - Compliance Inspections: 353
 - Final Acceptance Inspections: 85
 - Annual Self Inspections: 272
- Total PCM Enforcement Actions: 100

Construction Site Inspections

In 2022, seven full-time MS4 inspectors were dedicated to the MS4 Program, with six inspectors dedicated through the first three quarters of the year and a seventh added in October 2021. During the 2022 reporting year, the City MS4 Program construction inspection team completed the following:

- Total inspections: 6,161
- Active construction sites through the year: 329
- Initial Inspections: 144
- Final Inspections: 128
- Routine Inspections: 4,013
- Complaint Inspections: 0
- Follow-up Inspections and storm event inspections: 1,713

Construction Site Enforcement:

- Notice and Order: 0
- Letter of Non-compliance: 120
- Stop Work Orders: 32

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 (1 inspector)
- Hazwoper 8-hour refresher training (2 inspectors)

Illicit Discharge Detection and Elimination (IDDE) Program

In 2022 the IDDE Program received 112 reports of illicit discharges. Of those reported, only 23 incidents were classified as an illicit discharge that reached the MS4 or Waters of the State.

IDDE Enforcement:

- Verbal Warnings Issued: 16
- Educational Brochures Distributed: 18
- Letter of Non-Compliance Issued: 3
- Notice of Violation Issued: 3

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.
 - 96 new field staff received the training during the City's onboarding process.
 - 713 field staff received annual refresher training.
 - 439 Colorado Springs Fire Department staff received pre-recorded illicit discharge training via CCTV.
 - 263 Utilities staff received annual illicit discharge training

Stormwater Development Review

At the end of 2020, the Stormwater Enterprise Development Review team implemented a new Electronic Review System. This system is used for all drainage report, grading erosion control, drainage related design plans, and construction drawing reviews. In 2022, the Stormwater Enterprise Development Review team completed various stage reviews of over 980 separate

drainage related development submittals in this system. Please note that planning reviews (plats, development plans, etc.) are handled separately by the City Planning Department and therefore are not included in this number.

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 2021 annual report was submitted to the Colorado Department of Health and Environment (CDPHE) on March 28, 2022.

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 2021 annual monitoring report was submitted to the CDPHE on June 1, 2022.

Municipal Facilities Runoff Control Program (MFRCP)

The MFRCP program is administered by the City's Stormwater Water Quality Program Manager along with various representatives from the City vehicle maintenance group, City Public Works Operations and Maintenance Division, City Parks and Recreation Department, City Fire Department and the City Police Department. There are currently 41 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.

MS4 Permit Renewal

The City completed the City's Municipal Separate Storm Sewer System (MS4) permit renewal process with the Colorado Department of Public Health and Environment (CDPHE) for Colorado Discharge Permit System (CDPS) Permit COS000004. The renewal permit was issued on July 29, 2022, with an effective date of September 1, 2022 and an expiration date of August 31, 2027.

E. Coli TMDL

In 2022, the City and Utilities continued to implement activities and program elements identified in the 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 City's CDPS MS4 Permit COS000004 did not include a TMDL within the renewed permit for *E. coli*, although a TMDL is still expected to be implemented in the future.

5.0 Planned 2023 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 2023 calendar year, the City and Utilities are required to invest a minimum of \$16.5 million dollars on the City's Stormwater Control Program, with a goal of \$22 million dollars.

IGA Requirement	Minimum Total Expenditures	Average Annual Expenditures	Minimum Annual Expenditures
Second Five Years (2021-2025)	\$110 Million	\$22 Million	\$16.5 M/yr.

- The approved 2022 City of Colorado Springs budget titled *Annual Budget, 2023*, describes the 2023 Stormwater Enterprise budget. The document can be downloaded at: <https://coloradosprings.gov/budget/page/city-budget>
- The 2023 Utilities budget allocates \$3,300,000 as part of Utilities' SSCC Program.
- Planned IGA related activities in 2023 include, but are not limited to:
 - Coordination and delivery of ongoing IGA capital projects;
 - Commencement of additional IGA capital design and construction projects

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 2023 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, 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.

- Utilities plans to meet the obligation accordingly.

Attachment A

City of Colorado Springs Stormwater Program Project List

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	Complete	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 and 3 complete. Phase 2 scheduled to begin construction 2022.	2016-2023
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 2022	2016-2023
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

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 (2 of 5)--Sierra Madre Water Quality Pond ²⁾	\$500,000			X		X		X	X	3	Yes	9	4	Complete	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. Complete YellowWood pond and PR-2 Complete ; PR-7 and PR-14 removed from list due to lack of benefit.	2017-2021
31. Rangewood Tributary Detention Pond (WWE CS-333)	\$750,000			X	X	X	X	X	X	4		3	11	Complete	2017-2019
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	Complete	2018=2020
9. South Pine Creek Detention Pond (WWE CS-335) Replace with:	\$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. Complete	2018-2019
15. Citadel Mall Neighborhood Improvements (CS-374)	\$1,270,000	X	X	X						0	Yes		14	Complete	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
23. North Chelton Road (CS-057)	\$1,370,000		X	X	X					0	Yes		15	Complete	2018-2020
11. Camp Creek Phase 1 (WWE CS-002 and CS-003)	\$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.	2018-2019
11. Camp Creek--Phase I (Redefined) ⁴⁾ (Rockledge Ranch channel)	\$1,000,000	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. Complete.	2018-2019
41. Storage Wagner Park Detention downstream of Bijou Detention Storage Required (CS-360) Replace with:	\$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 Propose Replace with:	\$704,000			X	X	X		X	X	3		8	17	Install a new drop structure and stabilization to protect 8th Street upstream. Complete	2018-2020
109. Bear Creek Channel Stabilization															
35. Side Channel Sand Creek segment 107, reach SC-5-1700lf channel stabilization (CS-261) Replace with:	\$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		X		X			X	X		2		20	26	Moving project up from 2021 to begin in 2018 due to degredation of Pine Creek Channel. Complete	2018-2020
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	Complete	2019-2020

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
38. Storage Austin Bluffs Parkway upstream of Research (CS-331) Replace with:	\$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	Complete	2019-2020
51. Storage Cottonwood Park (west side) (CS-334) Switch project priority with:	\$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.	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	Complete	2020-2021
24. Park Vista (Siferd Low Water Crossing) (CS-232) Replace with:	\$3,750,000	X		X						0	Yes		21	Localized flooding. Evaluate property acquisition 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.	2020-2023
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.	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
16. North Douglas Natural Channel <i>Switch project priority with:</i>	\$3,500,000	✖	✖				✖	✖		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 PR-15 (west side) (CS-334) <i>Switch project priority with:</i>	3768000			X	X	X		X	X	3		11	19	Cottonwood Creek drainage (Moved From 2019) (Moved down to 2026)	
59. Channel/Grade Control Cottonwood Creek - Monument Creek to Academy Construct flood control and stream restoration projects. (CS-005)	\$13,232,000													(Moved up from 2026)	2020-2022
19. Galley Road Channel (WWE CS-258) Sand Creek between Galley and Platte Avenue Moved to 2023	\$2,000,000	✖		✖			✖			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	Complete	2020-2021
35. Side Channel Sand Creek – segment 107, reach SC 5 1700lf channel stabilization (CS-261) Moved to 2018	\$1,242,000	✖		✖			✖			1		20	26	Project #35 replaced with Pine Creek Channel Improvements Phase 1 and moved up to 2018.	2021-2025
39. Grade Control Palmer Park Channel – Galley Rd. to Palmer Park, 300+00 to (CS-259) Moved to 2026-2035	\$6,594,000	✖		✖			✖			1		21	27	-On Sand Creek drainage-	2021-2024
106. Cottonwood Creek - Austin Bluffs to Bus Barn	\$3,000,000	X		X			X			1		21	27	Project #106 Cottonwood Creek - AB to BB Replaced Former Project #12 - Shooks Run Improvements (2026-2035)	2021-2025
28. Shooks Run Channel – Cache La Poudre St. to Patty Jewett Golf Course (CS-326) <i>Replaced with:</i>	\$3,500,000	✖	✖	✖				✖		1		23	28	Bundled and phased with other Shooks Run. Replaced with Project #107 Cottonwood Creek - P to P	2021-2023
107. Cottonwood Creek - Pinkerton to Powers Blvd	\$3,500,000	X		X			X			1		23	28		2021-2025

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
77. CS-265 Grade Control Sand Creek Upper West Fork — Maizeland to South Carefree 3 drop structures <i>Replaced with:</i> 110. USAFA Supplemental Project	\$420,000						X			1		24	29	Complete	2022-2024
76. CS-254 Channel/Grade Control Sand Creek Upper West Fork — Galley to Murray 1730lf channel stabilization, 2 drop structures <i>Replace with:</i> 111. South Douglas Stabilization at Sinton Trail Sinton Road to railroad crossing.	\$2,006,000 \$2,000,000						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 <i>Replace with:</i> 113. Pikes Peak and Academy Detention Facility Wetland Restoration Project with USACE	\$2,000,000 \$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 Completion Planned spend is City's portion of project cost.	2023-2025
71. CS-246 Channel/Grade Control Sand Creek Lower Center Tributary - No Name to East Fork	\$458,000						X			1		31	36	Complete	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) Moved to 2026-2035	\$7,464,000	X		X			X			1		32	37	Shifted up from original 2024 project schedule to 2023 project schedule. Moved to 2026-2035 Project Grouping	2023-2025
108. Cottonwood Creek - Bus Barn to Pinkerton	\$3,000,000	X		X			X			1		32	37	Cottonwood Creek - BB to P Replaced Former Project #27 and #29 - Shooks Run Channel and Shooks Run Improvements Phase 3 (2026-2035)	2023-2025
61. Channel/Grade Control Sand Creek (CS-040) Karr to West Fork	\$3,507,000	X		X			X			1		29	34	Shifted down from original 2023 project schedule to 2024 project schedule.	2024-2026
60. Channel/Grade Control Sand Creek (CS-039) Fountain to Airport <i>Replace with:</i>	\$3,908,000	X		X			X			1		30	35	Shifted down from original 2023 project schedule to 2024 project schedule.	2024-2026
112. Middle Creek Upstream of I-25 I-25 to Old Beaver Pond	\$1,200,000														
55. Grade Control Fountain Blvd. Channel - Chelton Rd. to Fountain Blvd., (CS-243) <i>Replace with:</i>	\$2,553,000	X		X			X			1		33	38	Combined IGA Project #55 with IGA Project #54 Close Siferd and Date Street intersection and stabilize creek upstream. Construction planned for 2024.	2024-2026
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	Complete	2026-2035
67. CS-238 Channel/Grade Control Lower Hancock Channel - Downstream 1500' If channel stabilization, 2 drop structures <i>Replace with:</i>	\$1,247,000						X			1		36	41	Sand Creek at Coleman Park Construction Planned for 2025	2026-2035
115. Sand Creek at Coleman Park															

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
66. CS-268 Channel/Grade Control Las Vegas St.-Channel – ATSF RR to Peterson Fld Trib. 700lf channel stabilization, 2 drop structures Replace with: 116. O&M Training Facility Improvements	\$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	Complete	2026-2035
68. CS-130 Channel Hancock Expressway Channel East of Astrozon Undermining of infrastructure.	\$72,000					X				1		39	44	Complete	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) Switch project priority with: 51. Storage Cottonwood Park PR-15 (west side) (CS-334)	\$13,232,000 3,768,000	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
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

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
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	Complete	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	2026-2035
12. Shooks Run Improvements (CS-319 through CS-329 minus CS-326) Replaced with: 106. Cottonwood Creek -Austin Bluffs to Bus Barn. Moved to 2021	\$3,000,000	X	X	X				X		1		59	64	Bundled and phased with other Shooks Run	2026-2035
62. Channel/Grade Control East Fork of Sand Creek (CS-041)	\$7,464,000	X		X			X			1		60	65	Project #62 moved from 2023. Complete	2026-2035
27. Shooks Run Channel - Bijou Street Culvert & Channel Stabilization (CS-054a) 29. Shooks Run Improvements Phase 3 (CS-054b) Replaced with: 108. Cottonwood Creek -Bus Barn to Pinkerton Moved to 2023	\$1,500,000 \$1,500,000	X	X	X				X		1		60	65	Bundled and phased with other Shooks Run	2026-2035
		X	X	X				X		1		61	66		2026-2035
4. Old Annexation Drainage Improvements	\$2,800,000	X	X	X	X					0			67	Five neighborhoods experiencing significant flooding. Complete	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

Prioritization Criteria (see notes below)											Priority Ranking				Projected Project Dates
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		
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.	
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 (see notes below)											Priority Ranking			Comments	Projected Project Dates
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		

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)

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 initiated 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
 - 8) Includes costs documented through September 20, 2018.