

January 29, 2019

Michael S. Black
Regional Director
Great Plains Regional Office
Bureau of Reclamation
P.O. Box 36900
Billings, MT 59107-6900

Subject: Southern Delivery System Permit Compliance Annual Report (Calendar Year 2018)

Mr. Ryan:

Colorado Springs Utilities, the Southern Delivery System (SDS) Project Manager, hereby submits the attached Permit Compliance Annual Report (PCAR) for Calendar Year 2018. This report demonstrates the SDS Project's progress in successfully implementing the commitments prescribed in the SDS Record of Decision (ROD), Reference No.: GP-2009-01, as well as meeting the annual reporting requirements for other programmatic permits and approvals.

Due to SDS becoming operational in April 2016, this report addresses compliance for both construction and operational activities associated with the project. Applicable compliance activities associated with Phase II planning and design will be incorporated into future PCARs; however, until Phase II enters the construction phase, all future reports will focus on operational compliance.

I certify that, to the best of my knowledge, the content of this report is true and accurate. As noted herein, SDS has complied with all applicable permit requirements.

Please contact me at 719-668-8679, with any questions regarding the attached report.

Sincerely,

A handwritten signature in blue ink, appearing to read "David Padgett".

David Padgett
Chief Environmental Officer

Enclosure

cc: City of Fountain, Curtis Mitchell, Director of Utilities
Colorado Department of Public Health and Environment, Pat Pfaltzgraff, Director,

Water Quality Control Division

Colorado Parks and Wildlife, Dan Prenzlów, Regional Manager, Southeast Region

Fountain Creek Watershed Flood Control and Greenway District, Larry Small, Executive Director

Pueblo County Planning & Development, Joan Armstrong, Director

Pueblo West Metropolitan District, Kim Swearingen, Director of Utilities

Security Water and Sanitation District, Roy Heald, District Manager

U.S. Army Corps of Engineers, Larry (Dale) Caswell, Lieutenant Colonel, U.S. Army, District Commander

Bureau of Reclamation, Terry Stroh, Environmental Specialist

Southern Delivery System Permit Compliance Annual Report Calendar Year 2018

Prepared for:

Bureau of Reclamation

**Colorado Department of Public Health and
Environment**

Colorado Parks and Wildlife

El Paso County

Pueblo County

**Fountain Creek Watershed, Flood Control, and
Greenway District**

Submitted by:

**Colorado Springs Utilities, SDS Project Manager
on behalf of the SDS Participants**

January 2019

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Acronyms and Abbreviations

1041 Permit	Pueblo County 1041 Permit No. 2008-002
BMPs	Best Management Practices
CPW	Colorado Parks and Wildlife
CDPHE	Colorado Department of Public Health and Environment
CWC	Colorado Wildlife Commission
CWCB	Colorado Water Conservation Board
EMS	Environmental Management System
FEIS	Final Environmental Impact Statement
FWMP	Fish and Wildlife Mitigation Plan
mgd	million gallons per day
NEPA	National Environmental Policy Act
PCAR	Permit Compliance Annual Report
PDC	Pueblo Dam Connection
Reclamation	Bureau of Reclamation
ROD	Record of Decision
SDS	Southern Delivery System Project
SDS Participants	City of Colorado Springs, City of Fountain, Security Water District, and Pueblo West Metropolitan District
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
WTP	water treatment plant

Executive Summary

The Southern Delivery System Project (SDS) is a regional water delivery system that serves the City of Colorado Springs (via Colorado Springs Utilities), City of Fountain, Security Water District, and Pueblo West Metropolitan District (collectively, the SDS Participants).

Purpose

The purpose of the SDS Permit Compliance Annual Report (PCAR), submitted by Colorado Springs Utilities, the SDS Project Manager, is to demonstrate progress in successfully implementing the commitments as prescribed in the Record of Decision (ROD) to the Bureau of Reclamation (Reclamation). Colorado Springs Utilities also reviewed the other seven programmatic permits/approvals that are in place to identify the annual reporting requirements of each. The following five permits/approvals have annual reporting requirements addressed in this report:

- El Paso County Location Approvals
 - Planning Commission Resolution U-09-002, March 2, 2010, Southern Delivery System Raw Water Pipelines, Amended by Resolution U-12-001, October 18, 2012
 - Planning Commission Resolution U-09-003, March 2, 2010, Southern Delivery System Finished Water Pipelines, Amended by Resolution U-12-003, October 18, 2012
 - Planning Commission Resolution U-09-004, March 16, 2010, Southern Delivery System Bradley Pump Station
 - Planning Commission Resolution U-09-005, March 16, 2010, Southern Delivery System Upper Williams Creek Reservoir, Amended by Resolution U-12-002, October 18, 2012
 - Planning Commission Resolution U-09-007, March 16, 2010, Southern Delivery System Exchange Flow System, Amended by Resolution U-12-004, October 18, 2012
- El Paso County 1041 Permits
 - Development Services Department, File No. AASI-13-002, Southern Delivery System Finished Water Section 1C, Administratively Approved January 2, 2014
 - Development Services Department, File No. AASI-13-005, Southern Delivery System Finished Water Section 3, Administratively Approved January 29, 2014
 - Development Services Department, File No. AASI-14-001, Southern Delivery System Raw Water Pipeline Section S4AC, Administratively Approved February 18, 2014
- Pueblo County Board of County Commissioners Resolution No. P&D 09-22 approving 1041 Permit No. 2008-02, April 21, 2009

- Fountain Creek Watershed, Flood Control, and Greenway District (District) Resolution 2010-01, February 26, 2010
- Colorado Department of Public Health and Environment (CDPHE) 401 Certification No. 4224, April 23, 2010, which includes the requirement to provide copies of all other annual reports

The following two programmatic permits/approvals do not specifically include annual reporting requirements:

- Memorandum of Agreement with the State of Colorado, Department of Natural Resources on behalf of the Colorado Division of Wildlife regarding the Fish and Wildlife Mitigation Plan, May 18, 2010
- United States Army Corps of Engineers (USACE) Clean Water Act Section 404 Individual Permit No. SPA-2005-00131-SCO, May 20, 2010

Reporting Requirements

The ROD requires annual reporting to summarize the SDS's progress made in implementing the ROD commitments. Colorado Springs Utilities has elected to develop a single SDS PCAR that addresses the ROD commitments and the other annual or periodic reporting requirements included in the programmatic permits/approvals that are listed above. This 2018 report focuses on commitments associated with project operations and mitigation project progress.

Summary of SDS Activities During this Reporting Period

Vegetation restoration efforts continued on the pipeline work packages.

Compliance with programmatic permit/approval commitments and construction permit requirements continued to be tracked in 2018 through an Environmental Management System (EMS).

Future SDS Activities

Compliance monitoring will continue for ongoing operational activities. Phase II activities include a minor modification of the NEPA and cultural resource boundaries related to utility relocates associated with reservoir construction. There have been no material changes to the project as described in the 2009 EIS.

1.0 Introduction

1.1 Purpose

The purpose of the SDS Permit Compliance Annual Report (PCAR), submitted by Colorado Springs Utilities as SDS Project Manager, is to demonstrate the progress in successfully implementing the commitments identified in the ROD (Reclamation 2009). This PCAR has been prepared to be consistent with the ROD and other permits issued by agencies having jurisdiction over SDS, specifically the following programmatic permits/approvals:

- Bureau of Reclamation Record of Decision for the Southern Delivery System Final Environmental Impact Statement, Record of Decision Reference No. GP-2009-01, March 20, 2009
- El Paso County Location Approvals
 - Planning Commission Resolution U-09-002, March 2, 2010, Southern Delivery System Raw Water Pipelines, Amended by Resolution U-12-001, October 18, 2012
 - Planning Commission Resolution U-09-003, March 2, 2010, Southern Delivery System Finished Water Pipelines, Amended by Resolution U-12-003, October 18, 2012
 - Planning Commission Resolution U-09-004, March 16, 2010, Southern Delivery System Bradley Pump Station
 - Planning Commission Resolution U-09-005, March 16, 2010, Southern Delivery System Upper Williams Creek Reservoir, Amended by Resolution U-12-002, October 18, 2012
 - Planning Commission Resolution U-09-007, March 16, 2010, Southern Delivery System Exchange Flow System, Amended by Resolution U-12-004, October 18, 2012
- El Paso County 1041 Permits
 - Development Services Department, File No. AASI-13-002, Southern Delivery System Finished Water Section 1C, Administratively Approved January 2, 2014
 - Development Services Department, File No. AASI-13-005, Southern Delivery System Finished Water Section 3, Administratively Approved January 29, 2014
 - Development Services Department, File No. AASI-14-001, Southern Delivery System Raw Water Pipeline Section S4AC, Administratively Approved February 18, 2014
- Pueblo County Board of County Commissioners Resolution No. P&D 09-22 approving 1041 Permit No. 2008-02, April 21, 2009
- Fountain Creek Watershed, Flood Control, and Greenway District (District) Resolution 2010-01, February 26, 2010

- Colorado Department of Public Health and Environment (CDPHE) 401 Certification No. 4224, April 23, 2010, which includes the requirement to provide copies of all other annual reports

Colorado Springs Utilities reviewed all eight of the programmatic permits/approvals that are in place to identify annual reporting requirements of each. The following two programmatic permits/approvals do not specifically include annual reporting requirements:

- Memorandum of Agreement with the State of Colorado, Department of Natural Resources on behalf of the Colorado Division of Wildlife regarding the Fish and Wildlife Mitigation Plan, May 18, 2010
- United States Army Corps of Engineers Clean Water Act Section 404 Individual Permit No. SPA-2005-00131-SCO, April 26, 2010

Colorado Springs Utilities prepared an Environmental Commitment Plan and developed a Phase I Environmental Management System (EMS) to track compliance with the commitments associated with all of the programmatic permits/approvals.

1.2 Southern Delivery System Project Overview

SDS is a regional water delivery project that serves the City of Colorado Springs (via Colorado Springs Utilities), City of Fountain, Security Water District, and Pueblo West Metropolitan District (collectively, the SDS Participants).

The first phase of SDS includes construction of the following facilities:

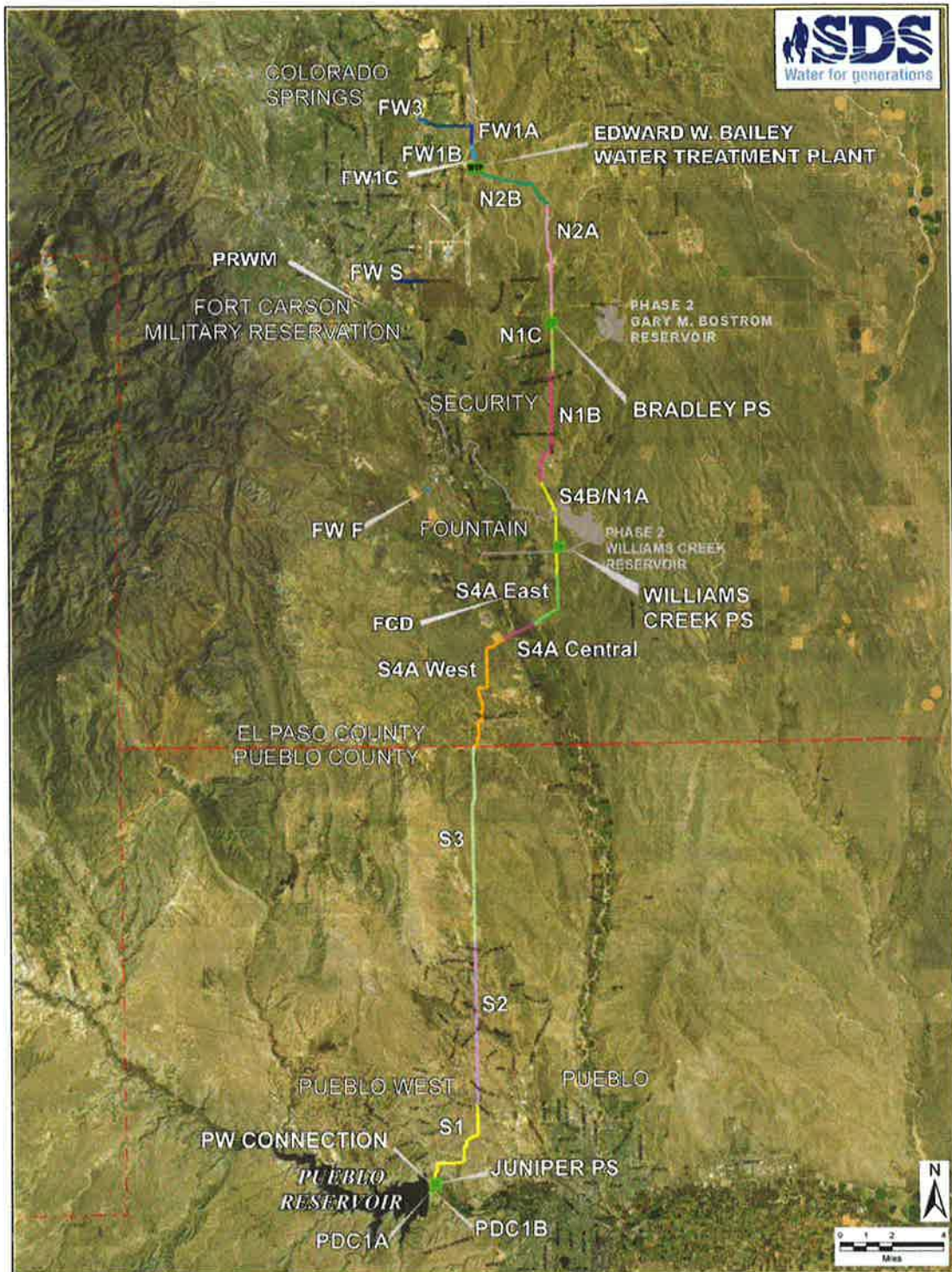
- 45 miles of raw water pipeline (66- and 72-inch diameter)
- Two 78-million-gallon-per-day (mgd) raw water pump stations and one 50-mgd raw water pump station (expandable in Phase 2)
- A water treatment plant, the Edward W. Bailey Water Treatment Plant (Bailey WTP) with a capacity of 50 mgd (expandable in Phase 2)
- Approximately seven miles of finished water pipelines up to 54 inches in diameter

Phase 2 of SDS includes the following:

- A 30,500 acre-feet terminal storage reservoir on upper Williams Creek, Gary M. Bostrom Reservoir
- Expansion of the 50-mgd raw water pump stations and Bailey WTP to 100-mgd capacity
- Expansion of the treated water delivery system
- A 28,000 acre-feet exchange storage reservoir on Williams Creek, Williams Creek Reservoir, and conveyance facilities to transfer water to and from Fountain Creek for exchange operations

SDS has been broken down into various work packages. The work packages and the facilities identified above are shown on Figure 1.

FIGURE 1. SOUTHERN DELIVERY SYSTEM WORK PACKAGES AND FACILITIES



1.3 SDS Participant Information

Contact details for the SDS Participants and their authorized agent are as follows.

1.3.1 SDS Participants

Colorado Springs Utilities

(Authorized agent acting on behalf of Participants)

Contact: Joseph Rasmussen, Senior Project Manager
Leon Young Service Center
1521 South Hancock Expressway
P.O. Box 1103, MC 1821
Colorado Springs, CO 80947-1821
Phone: (719) 668-4173; Fax: (719) 668-5651
E-mail: jrasmussen@csu.org

Security Water District (Participant)

Contact: Roy Heald, District Manager
231 Security Blvd.
Security, CO 80911
Phone: (719) 392-3475; Fax: (719) 390-7252
E-mail: r.heald@securitywsd.com

City of Fountain (Participant)

Contact: Curtis Mitchell, Director of Utilities
116 S. Main St.
Fountain, CO 80817
Phone: (719) 322-2040; Fax: (719) 322-2011
E-mail: cmitchell@fountaincolorado.org

Pueblo West Metropolitan District (Participant)

Contact: Kim Swearingen, Utilities Director
20 West Palmer Lake Drive
Pueblo West, CO 80007
Phone: (719) 547-5047; Fax: (719) 547-0719
E-mail: kswearingen@pwmnd-co.us

1.4 Southern Delivery System Project Regulatory Review Process

SDS has undergone, and continues to undergo, significant regulatory oversight at the federal, state, and local levels. At the federal level, Reclamation has performed extensive and detailed environmental studies as a part of the National Environmental Policy Act (NEPA) process, the culmination of which was a Final Environmental Impact Statement (FEIS) and issuance of a ROD.

The ROD for SDS was issued on March 20, 2009. It identified SDS, as shown on Figure 1, as the Preferred Alternative. SDS has been determined to cause “the least damage to the biological and physical environment” (Reclamation 2009). The ROD included extensive commitments by the SDS Participants to significant, long-term mitigation measures.

Because SDS crosses wetlands and other waters of the United States, it required a permit from the USACE under the dredge and fill material permit program established under Section 404 of the federal Clean Water Act. A Section 404 Permit was received for SDS on April 26, 2010. Colorado Springs Utilities has developed new wetlands as compensatory mitigation under the Section 404 Permit, and provided copies of the mitigation plans to the Fountain Creek Watershed, Flood Control, and Greenway District for review. The jurisdictional wetlands mitigation project was reviewed and approved by the USACE and Fountain Creek Watershed, Flood Control, and Greenway District prior to its construction in September 2011. On January 22, 2015, the USACE determined that the wetland mitigation project was established and complete.

At the state level, the SDS Section 404 Permit received a Certification under Section 401 of the Clean Water Act from the Colorado Department of Public Health and Environment (CDPHE) on April 23, 2010. In February 2011, the State Water Quality Control Commission denied a challenge to the CDPHE (Water Quality Control Division) certification and upheld the certification. In April 2012, the Pueblo County District Court determined that the Commission action was not supported by the administrative record and remanded the certification. In July 2013, the Colorado Court of Appeals ruled that the state Water Quality Control Commission’s approval of the SDS certification was consistent with applicable laws and regulations and was supported by substantial evidence.

Colorado Parks and Wildlife (CPW) also reviewed SDS, and the SDS Fish and Wildlife Mitigation Plan (FWMP) was prepared collaboratively with CPW staff and approved by both the Colorado Wildlife Commission (CWC) and the Colorado Water Conservation Board (CWCB) (Colorado Springs Utilities, City of Fountain, Security Water District, Pueblo West Metropolitan District, and Colorado Division of Wildlife 2010). A Memorandum of Agreement implementing the FWMP was executed with the CPW on May 18, 2010.

At the county, regional, and city levels, SDS is subject to a variety of regulatory reviews and associated mitigation requirements, including the following:

- Pueblo County 1041 Permit (No. 2008-002),
- El Paso County Approval of Location, Site Development Plan, and 1041 Permit processes, and
- Land use approval by the Fountain Creek Watershed, Flood Control, and Greenway District (District).

Collectively, these permit conditions include comprehensive and extensive mitigation requirements, which are detailed in the respective resolutions of approval.

2.0 Listing of Permit Compliance Reporting Requirements for SDS

A detailed and specific listing of the permit compliance reporting requirements for SDS for the six programmatic permits and approvals received for SDS that have annual reporting requirements is provided in Attachment 1 – Annual Implementation Progress Matrix.

The Annual Implementation Progress Matrix contains:

- A listing of the environmental commitments for SDS with annual reporting requirements (columns 1 and 2).
- A description of SDS implementation progress towards compliance with each of the commitments (column 3).
- A field to show if additional documentation is included in an attachment to this report (column 4).
- Items that are specific to either construction or operations have been color coded.

Supporting documentation listed in column 4 is provided in the following attachments:

- Attachment 2 - Monthly Average Flow Data from United States Geological Survey (USGS) Gauge Station
- Attachment 3 - Water Quality Monitoring Data
- Attachment 4 - Complaint Log
- Attachment 5 - Emergency Response Log
- Attachment 6 - Log of Work Occurring During Non-Typical Work Hours
- Attachment 7 - Expenditures for Wastewater System Improvements
- Attachment 8 - Summary of Storage, Diversion, Delivery of Water in Pueblo County
- Attachment 9 - Summary of Participants' Return Flows to Fountain Creek Including Storage and Releases of Such Return Flows
- Attachment 10 - Summaries of Exchanges by Participants between Pueblo Reservoir and the Fountain Creek Confluence
- Attachment 11 - Pueblo Flow Management Program
- Attachment 12 - Geomorphology Monitoring

3.0 Summary of SDS Activities Undertaken During the Reporting Period

SDS Phase I Construction Activities

A number of actions have been taken during this reporting period related to the construction of SDS. Some of the key activities during this reporting period include the following:

S4A Central Pipeline

Construction activities on the S4A Central Pipeline were completed in 2015, while vegetation restoration and maintenance activities were completed in 2018. Activities in 2018 included maintenance of BMPs, vegetation maintenance, and noxious weed mitigation. This is the last report that information will be included for this work package. The location of the S4A Central Pipeline is shown on Figure 1.

N2B Pipeline

Construction activities on the N2B Pipeline were completed in 2015, while vegetation restoration and maintenance activities were completed in 2018. Activities in 2018 included maintenance of BMPs, vegetation maintenance, temporary fence removal, and noxious weed mitigation. This is the last report that information will be included for this work package. The location of the N2B Pipeline is shown on Figure 1.

FW1C Pipeline

Construction activities on the FW1C Pipeline were completed in 2015, while vegetation restoration and maintenance activities continued in 2018. Activities in 2018 included maintenance of BMPs, vegetation maintenance, and noxious weed mitigation. The location of the FW1C Pipeline is shown on Figure 1.

Edward W. Bailey Water Treatment Plant (Bailey WTP)

Construction of the Bailey WTP was completed in 2016. Activities in 2018 included vegetation maintenance, maintenance of BMPs, warranty work, and noxious weed mitigation. The location of the Bailey WTP is shown on Figure 1.

Raw Water Pump Stations (RWPSs)

Construction of the three RWPSs, Bradley Pump Station (BPS), Williams Creek Pump Station (WCPS) and Juniper Pump Station (JPS), was completed in 2016. Activities in 2018 included maintenance of BMPs, vegetation maintenance, warranty work, and noxious weed mitigation. The locations of the three RWPS are shown on Figure 1.

Gary M. Bostrom Reservoir

30% design for the Gary M. Bostrom Reservoir was completed in 2016. Activities in 2018 included property acquisition, asbestos abatement, hazardous waste management, demolition and removal of existing structures, removal of septic systems, and well abandonment. The location of the Gary M. Bostrom Reservoir is shown on Figure 1.

Pinello Ranch Wetland Mitigation (PRWM) Project

Construction of the PRWM project commenced in November 2016, while construction and planting activities were completed in 2017. Activities in 2018 at the PRWM site included vegetation maintenance, irrigation, and noxious weed mitigation. The PRWM project will be used to mitigate a portion of the 12.0 acres of non-jurisdictional wetlands that will be permanently impacted as a result of SDS current and future activities. The location of PRWM is shown on Figure 1.

Fountain Creek Diversion (FCD) Project

Construction of the FCD was completed in 2017. Activities in 2018 included vegetation maintenance and noxious weed mitigation. The location of FCD is shown on Figure 1.

Additional SDS Activities

In addition to the milestones listed above, Colorado Springs Utilities engaged in the following initiatives of note during the reporting period:

- Pueblo County SDS 1041 Permit Condition 6 (Monetary Mitigation for Fountain Creek Impacts) - In accordance with Condition 6 of the SDS 1041 Permit and 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), a check dated January 11, 2018 in the amount of \$10,382,296.00 payable to the Fountain Creek Watershed Water Activity Enterprise was delivered by Colorado Springs Utilities to the Fountain Creek Watershed Flood Control and Greenway District Executive Director on January 12, 2018. Additional details are included in Attachment 1.
- Sediment Control - As a condition of the IGA, Colorado Springs Utilities agreed to contribute, subject to the conditions outlined in the IGA, \$1 million per year for three years to the City of Pueblo or its Stormwater Enterprise for the purpose of funding repairs or improvements, including sediment and debris removal, to the levee system on Fountain Creek within the City of Pueblo. The third and final of the three payments was made on January 3, 2018.
- SDS entities complied with the terms of the Pueblo Flow Management Program. Colorado Springs Utilities exchanges were curtailed to meet the recreational flow targets during the months of January, February, August and September 2018. Pueblo West Metropolitan District exchanges were curtailed to meet the recreational flow targets during the months of August and September 2018. No other SDS entities were exchanging during this period.

Other Activities

- Stormwater - the City of Colorado Springs, Colorado Springs Utilities, and the County of Pueblo entered into an Intergovernmental Agreement (IGA) on April 27, 2016 related

to stormwater management activities. The IGA annual report of final expenditures for the 2017 calendar year was submitted on June 29, 2018. This report is submitted to Pueblo County separately, and is not be submitted as part of this annual report.

In November 2017, Colorado Springs voters approved ballot initiative 2A which authorized the collection of stormwater service fees beginning July 1, 2018 and ending July 1, 2038, for the sole purpose of funding through a City enterprise, the construction, improvement, and operation and maintenance of public stormwater facilities and infrastructure.

4.0 Future SDS Activities

Anticipated activities for 2019 include:

- Continued land acquisition for SDS Phase II
- Cultural resource mitigation for SDS Phase II
- Permitting activities related to SDS Phase II
- Compliance monitoring for operational activities
- Warranty work on the raw water pump stations work package
- Maintenance/repair of the North Outlet Works mussel lining
- Installation and testing of SDS fiber optic line between Juniper Pump Station and Black Hills Energy Substation located at Lake Pueblo State Park

5.0 References

- Bureau of Reclamation. 2008. Southern Delivery System Final Environmental Impact Statement. December.
- Bureau of Reclamation. 2009. Record of Decision for the Southern Delivery System Project Final Environmental Impact Statement. Record of Decision Reference No. GP-2009-01. Colorado Department of Public Health and Environment. 2010. Section 401 Water Quality Certification; Colorado 401 Certification No.: 4224; U.S. COE 404 Permit No.: SPA-1995-00131-SCO; Description: Southern Delivery System; Location: El Paso and Pueblo Counties; Watercourse: Arkansas River, Fountain Creek and tributaries; Designation: Reviewable (MA01, MA02, MA03, FO02a, FO02b); Use Protected: (FO04, LA01a, LA01b). April 23.
- Colorado Springs Utilities, City of Fountain, Security Water District, Pueblo West Metropolitan District, and Colorado Division of Wildlife. 2010. Southern Delivery System Fish and Wildlife Mitigation Plan. March 11.
- El Paso County. 2010a. Planning Commission Resolution U-09-002. For the Approval of Location of the Southern Delivery System Raw Water Pipeline within the A-5 (Agricultural), PUD (Planned Unit Development), RR - 2.5 (Rural Residential) and RR-5 (Residential Rural) Zone District. March 2. Amended by Resolution U-12-001, October 18, 2012.
- El Paso County. 2010b. Planning Commission Resolution U-09-003. For the Approval of Location of the Southern Delivery System Finished Water Pipeline within the PUD (Planned Unit Development) Zone District. March 2. Amended by Resolution U-12-003, October 18, 2012.
- El Paso County. 2010c. Planning Commission Resolution U-09-004. For the Approval of Location of the Southern Delivery System Bradley Pump Station within the RR-5 (Residential Rural) Zone District. March 16.
- El Paso County. 2010d. Planning Commission Resolution U-09-005. For the Approval of Location of the Upper Williams Creek Reservoir within the RR-5 (Residential Rural) Zone District. March 16. Amended by Resolution U-12-002, October 18, 2012.
- El Paso County. 2010e. Planning Commission Resolution U-09-007. For the Approval of Location of the Exchange Flow System within the RR-5 (Residential Rural) Zone District. March 16. Amended by Resolution U-12-004, October 18, 2012.
- El Paso County. 2014a. Development Services Department, File No. AASI-13-002, Southern Delivery System Finished Water Section 1C. Administratively Approved Permit Issued to Conduct a Designated Activity of State Interest or to Engage in Development in a Designed Area of State Interest in El Paso County, Colorado. January 2.

- El Paso County. 2014b. Development Services Department, File No. AASI-13-005, Southern Delivery System Finished Water Section 3. Administratively Approved Permit Issued to Conduct a Designated Activity of State Interest or to Engage in Development in a Designated Area of State Interest in El Paso County, Colorado. January 29.
- El Paso County. 2014c. Development Services Department, File No. AASI-14-001, Southern Delivery System Raw Water Pipeline Section S4AC. Administratively Approved Permit Issued to Conduct a Designated Activity of State Interest or to Engage in Development in a Designated Area of State Interest in El Paso County, Colorado. February 18.
- Fountain Creek Watershed, Flood Control, and Greenway District. 2010. Board of Directors Resolution 2010-01 – Land Use. A Resolution recommending that the El Paso County Planning Commission approve applications by Colorado Springs Utilities and on behalf of the Project Participants for location approvals for the Southern Delivery System located within the Fountain Creek Watershed Management Area and approving those portions of the Southern Delivery System located within the Fountain Creek Corridor. February 26.
- Pueblo County. 2009. 1041 Permit No. 2008-002. The Board of County Commissioners of Pueblo County Colorado; A Resolution Approving 1041 Permit No.2008-002 With Terms and Conditions for Construction and Use of a Municipal Water Project Known as the Southern Delivery System within Pueblo County, Colorado. April 21.
- State of Colorado. 2010. Memorandum of Agreement by and between the State of Colorado, acting by and through the Department of Natural Resources, for the use and benefit of the Division of Wildlife and Colorado Springs Utilities, acting as the Project Manager for the Southern Delivery System. May 18.
- U.S. Army Corps of Engineers. 2010. Department of the Army Permit; Permittee: Colorado Springs Utilities; Permit No. SPA-2005-00131-SCO; Issuing Office: Albuquerque District, U.S. Army Corps of Engineers. April 26.

Implementation Progress Matrix

ATTACHMENT 1

Annual Implementation Progress Matrix

Reporting Requirements		CY2018 Annual Report Information	
Reference	Permit or Approval Document Requirement	Implementation Progress	Attachment Provided
Bureau of Reclamation - Record of Decision			
Environmental Commitments			
p. 11, ¶1	Such contracts will, at a minimum, include a requirement for the SDS Participants to submit to Reclamation an annual compliance report that certifies progress in successfully implementing these commitments in a timely manner as prescribed in this ROD and any contracts.	This Permit Compliance Annual Report is being prepared to demonstrate the progress in successfully implementing the commitments as prescribed in the ROD and the annual reporting requirements found in the other programmatic permits and approvals including: the Pueblo County 1041 Permit, the El Paso County Location Approvals, El Paso County 1041 Permits, the CDPHE 401 Water Quality Certification and the Fountain Creek Watershed, Flood Control and Greenway District approval.	No
Participants' Commitments: General Commitments			
p. 12, Bullet 1	Comply with all applicable permits, regulations, and laws including but not limited to CDPHE, USCOE 404, and local land use permits obtained for the SDS Project.	Compliance with permit and regulatory requirements is being tracked through the implementation of an Environmental Management System (EMS). In addition, the construction contract documents for each of the work packages include permit and regulatory compliance requirements. The EMS ensures that all applicable actions necessary for compliance are taken in a timely manner.	No
p. 12, Bullet 2	Construct and operate the SDS Project in a manner that does not differ substantially from that evaluated in this FEIS, except under emergency conditions, and unless additional and appropriate environmental investigations are completed by Reclamation and approval is then given to Participants to alter construction or operation of the SDS Project.	The SDS Participants constructed and will operate the preferred alternative that was identified in the FEIS in a manner that does not differ substantially from that evaluated in the FEIS.	No
Participants' Commitments: Surface Water			
p. 12, Bullet 1	Comply with the Upper Arkansas Voluntary Flow Management Program except during emergency conditions as defined in Section 2.b. of the Memorandum Of Understanding for Settlement of Case No. 04CW129, Water Division 2 (Chaffee County Recreation In-Channel Diversion).	The SDS Participants complied with the Upper Arkansas Voluntary Flow Management Program.	No
p. 13, Bullet 2	Comply with the Pueblo Flow Management Program pursuant to existing intergovernmental agreements. If Reclamation and the Participants receive credible information that project operations are impairing physical diversion of a senior water right, contrary to Colorado water law, the Participants will immediately initiate discussions among the parties, including the party alleging the impairment of Reclamation, to develop a solution and remedy the impairment in compliance with Colorado water law.	SDS Participants complied with the Pueblo Flow Management Program and details are shown in Attachments 8-11.	Attachments 8 through 11.
p. 13, Bullet 3	Participants will consult with Reclamation each year on the average annual flow in Fountain Creek. If the average annual stream flow of Fountain Creek as measured at Pueblo (USGS gauge station number 07106500) exceeds the scope and range of the flow estimated and analyzed in the Final Environmental Impact Statement (see Table 33 of the FEIS), then Participants will coordinate with Reclamation, within their adaptive management plan, to evaluate the cause(s) for the change in flows and determine whether appropriate response actions, such as monitoring and/or mitigation measures, are warranted. Each year, Participants will report to Reclamation the average annual flow in Fountain Creek at Pueblo together with other relevant data.	The average annual flow during this reporting period in Fountain Creek as measured at USGS gauge station number 07106500 was approximately 157.0 cubic feet per second (cfs). Table 33 of the FEIS reported the average annual simulated streamflow at this location under existing conditions as 188 cfs and under the preferred alternative (Alt 2) as 253 cfs. Flows did not exceed the scope and range identified in the FEIS. See Attachment 2 for the monthly average flow data from USGS Gauge Station Number 07106500.	Attachment 2 - Monthly Average Flow Data from USGS Gauge Station Number 07106500

ATTACHMENT 1

Annual Implementation Progress Matrix

Reporting Requirements		CY2018 Annual Report Information	
Reference	Permit or Approval Document Requirement	Implementation Progress	Attachment Provided
p. 13, ¶1	Surface water mitigation measures will resolve adverse effects to physical diversions of senior water rights.	The SDS Participants are implementing the surface water mitigation measures per the Upper Arkansas Voluntary Flow Management Program and the Pueblo Flow Management Program.	No
Participants' Commitments: Water Quality			
p. 13, Bullet 1	Include water quality monitoring and adaptive management within the integrated adaptive management program (see Participants' General Commitments).	The Monitoring Plan has been completed and was submitted to the Bureau of Reclamation on March 18, 2011.	No
p. 13, Bullet 2	Begin implementing water quality monitoring when construction of the project begins. This will allow about three years of baseline data to be collected before project operations begin.	A Joint Funding Agreement was executed with the U.S. Geological Survey (USGS) on the water quality monitoring program. Water quality monitoring began in January, 2011.	Attachment 3 - Water Quality Monitoring Data
p. 13, Bullet 3	Submit water quality monitoring data, including trend analyses, for the preceding calendar year to Reclamation by January 31st of the subsequent year.	A Joint Funding Agreement was executed with the U.S. Geological Survey (USGS) on the water quality monitoring program. Water quality monitoring began in January, 2011. See Attachment 3 for the water quality monitoring data. USGS reports data on a water year basis (October-September). The annual report will present data based on that reporting period. Trend analysis is not included in this report because Section 14.0 of the IAMP submitted to Reclamation indicates periodic reviews are to begin a minimum of 10 years following the initiation of the SDS Project operations. SDS began operation in April 2016, so trend analysis will not begin until the 2026 reporting year.	Attachment 3 - Water Quality Monitoring Data
p. 13, Bullet 4	If the Colorado Department of Public Health and Environment (CDPHE) determines that operation of the SDS Project is causing significant adverse water quality effects, the Participants will coordinate with Reclamation, CDPHE, and other interested parties to evaluate and select measures to mitigate adverse effects.	CDPHE has not indicated that any adverse water quality effects have occurred due to the operation of SDS.	No
p. 13, Bullet 5	In the event that operation of the SDS Project causes, or threatens to cause, stream flows in the Arkansas River or other waterways to diminish to low levels that will contribute significantly to elevated concentrations/densities of dissolved selenium, <i>E. coli</i> , or sulfate, the Participants will coordinate with Reclamation, CDPHE, CDOW, and other interested parties to evaluate and select measures to mitigate adverse effects.	The SDS Project has not caused or threatened to cause stream flows to diminish to such low levels.	No
p. 13, ¶1	Development and implementation of a water quality monitoring and adaptive management plan will provide a means of detecting changes in water quality, judging whether they are likely caused by operation of the SDS Project, and addressing actual effects in a systematic manner. Additionally, implementation of the geomorphology mitigation measures (below) will reduce suspended sediment and total recoverable iron concentrations in Fountain Creek and the lower Arkansas River.	The Monitoring Plan, Geomorphic Mitigation Plan and IAMP have been completed. These plans were submitted to the Bureau of Reclamation in March 2011. The plans will be implemented during the operation of the SDS project in accordance with this commitment.	No
Participants' Commitments: Geomorphology			
p. 14, Bullet 3	Design and construct an energy dissipation structure that will protect against erosion at the outlet of the pipeline from Williams Creek Reservoir to Fountain Creek.	The final design of the Williams Creek Reservoir is anticipated to begin during the period from 2020 to 2025. An energy dissipation structure at the pipe outlet will be incorporated into the design.	No

ATTACHMENT 1

Annual Implementation Progress Matrix

Reporting Requirements		CY2018 Annual Report Information	
Reference	Permit or Approval Document Requirement	Implementation Progress	Attachment Provided
p. 14, Bullet 4	Evaluate and implement appropriate future geomorphic stabilization projects, if such future projects are determined to be necessary after the project is operational.	The Geomorphic Mitigation Plan provides a means for evaluating geomorphic impacts and determining the need for stabilization projects. No need has been identified during the reporting period.	No
p. 14, ¶1	When implemented, these recommendations will mitigate potential adverse effects on geomorphology by avoiding or minimizing effects of return flow discharges through an energy dissipation structure, compensating for anticipated effects, and responding to effects identified after project operations begin.	This requirement is a summary statement of the specific water quality commitments described in the above listed bullets of this section. A Geomorphic Mitigation Plan has been completed and will be implemented during the construction and operation of SDS in accordance with this commitment.	No
Participants' Commitments: Aquatic Life			
p. 15, Bullet 2	In the event that the operation of the SDS Project causes, or threatens to cause, stream flows in Fountain Creek or the Arkansas River to diminish to low levels that could contribute significantly to impairment of aquatic life, coordinate with Reclamation, CDPHE, CDOW and other interested parties to evaluate and select measures to mitigate adverse effects.	The SDS Project has not caused or threatened to cause stream flows to diminish to low levels.	No
p. 15, Bullet 4	Monitor the effects of the operation of the SDS Project upon aquatic life in Fountain Creek and the Arkansas River between Pueblo Dam and the Las Animas Gage. Aquatic sampling will be conducted once per year at up to 10 locations. Monitoring methods and locations will be identified in the proposed wildlife mitigation plan that will be submitted to the Colorado Wildlife Commission pursuant to C.R.S. 37-60-122.2. Use the information from this monitoring in the adaptive management program for the SDS Project.	Aquatic sampling was performed per the Wildlife Mitigation Plan. There is no indication of adverse impacts to date as a consequence of the limited project operation.	No
p. 15, ¶1	When implemented, these recommendations will mitigate potential adverse effects on aquatic life by avoiding or minimizing effects, compensating for anticipated effects, and detecting and responding to effects identified after project operations begin.	The SDS Participants have implemented the Fish & Wildlife Mitigation Plan as well as the agreements from the MOA with the Colorado Department of Natural Resources during the construction phase and will continue to do so during the operation of SDS.	No
Participants' Commitments: Wetlands, Waters, and Riparian Vegetation			
p. 16, Bullet 5	Control Tamarisk that may establish around newly constructed reservoirs.	This requirement is not applicable yet as no SDS reservoir construction has commenced during this reporting period.	No
Participants' Commitments: Vegetation			
p. 17, Bullet 8	Monitor construction areas for 3 years after construction to assess if noxious weeds have invaded the site. If noxious weeds are present, weed control plans will be formulated and completed.	As part of the pre-construction vegetation surveys completed for each work package, a noxious weed survey was conducted. The noxious weed survey includes recommended weed control methods. This information was incorporated into the contract documents. Monitoring of construction areas will continue for three years after construction to ensure that any necessary weed control is performed. In 2018, applicable work packages were monitored for noxious weeds, control plans were followed and observed noxious weeds were treated consistent with these plans.	No
p. 17, Bullet 9	Because the project may indirectly increase the spread of tamarisk, the Participants will work with the Colorado Department of Agriculture's Colorado Noxious Weed Management Team on tamarisk issues in the Arkansas Valley including submitting a request for partnership evaluation.	The Fish and Wildlife Mitigation Plan has identified the inlet area at the Pueblo Reservoir as an area of specific interest and identified the Colorado Department of Agriculture's Colorado Noxious Weed Management group as a consulting agency. Appropriate coordination will continue to occur.	No

ATTACHMENT 1

Annual Implementation Progress Matrix

Reporting Requirements		CY2018 Annual Report Information	
Reference	Permit or Approval Document Requirement	Implementation Progress	Attachment Provided
p. 17, ¶1	Impacts to plant species and communities of concern and other sensitive vegetation areas can be avoided and minimized during final design and implementation. Because mitigation measures such as transplanting of individuals are often unsuccessful, avoidance and minimization will ensure survival, especially of plant species of concern. Seeding disturbed areas, replacing mature trees, and controlling noxious weeds will replace existing vegetation types and structural diversity and will ensure that high quality habitat remained.	As described in the previous responses of this section, numerous measures were implemented to minimize potential impacts to plant species and communities of concern and other sensitive vegetation areas. No concerns have been identified to date for this item or the previous items of this section.	No
Participants' Commitments: Visual Resources			
p. 20, Bullet 1	Vegetate earthen dam faces with native herbaceous plants to match the adjacent undisturbed prairie plant communities.	This requirement is not applicable yet as the final design of the Gary M. Bostrom Reservoir and Williams Creek Reservoir did not begin during this reporting period.	No
El Paso County - Location Approvals			
El Paso County - Location Approvals did not contain operational requirements.			
El Paso County - 1041 Permits			
El Paso County - 1041 Permits did not contain operational requirements.			
Pueblo County - 1041 permit			
7. Expenditures for Wastewater System Improvements, p. 12	In order to continue its efforts to protect against future spills to Fountain Creek, to increase its opportunities for reuse, and to mitigate possible water quality impacts by the SDS Project to Fountain Creek, Colorado Springs Utilities shall commit to invest an additional \$75,000,000 in its wastewater system. Expenditures will be made as part of the wastewater collection system rehabilitation programs or wastewater reuse systems between January 1, 2009 and December 31, 2024 as required. These expenditures shall be for projects not currently required by other regulatory permits, agency enforcement or court orders, consent agreements, or governmental regulations existing as of January 30, 2009. These expenditures will include the Local Collector Evaluation and Rehabilitation Program (LCERP) for the improvement and fortification of wastewater lines which could adversely affect Fountain Creek or its tributaries. These expenditures are subject to annual appropriation by the Colorado Springs City Council. Beginning in 2010, by January 31 of each year, Colorado Springs Utilities shall provide an annual report to Pueblo County describing such expenditures for the prior year.	Colorado Springs Utilities submitted a wastewater expenditures report documenting 2009 expenditures to Pueblo County on January 29, 2010. The report for 2010 was submitted to Pueblo County on January 31, 2011. The report for 2011 was submitted to Pueblo County on January 26, 2012. The report for 2012 was submitted to Pueblo County on January 31, 2013. The report for 2013 was submitted to Pueblo County on January 31, 2014. The report for 2014 was submitted to Pueblo County on January 28, 2015. The report for 2015 was submitted to Pueblo County on January 16, 2016. The report for 2016 was submitted to Pueblo County on January 31, 2017. The report for 2017 was submitted to Pueblo County on January 29, 2018. The report for 2018 is being prepared and will be submitted to Pueblo County with this Annual Report on or before January 31, 2019.	Attachment 7 - Expenditures for Wastewater System Improvements Annual Report
Mitigation Appendix ENF-1, Project Detail, Item 2, p. 23 of 28	2. Submit an annual report to Pueblo County that will provide a summary of activities related to the SDS Project and the Conditions of the Permit. These reports will be due annually on or before January 31, beginning the year following commencement of water deliveries through the SDS pipeline. The reports shall include a signed certification of compliance with the Permit. Contents of the report will include, but will not be necessarily limited to:	This report will satisfy the requirement for the annual report following delivery of water through the SDS pipeline.	

ATTACHMENT 1

Annual Implementation Progress Matrix

Reporting Requirements		CY2018 Annual Report Information	
Reference	Permit or Approval Document Requirement	Implementation Progress	Attachment Provided
	a. Summary of storage, diversion, delivery of water in Pueblo County.	Summary data from the project Participants related to the SDS Project is located in Attachment 8.	Attachment 8 - Summary of Storage, Diversion, Delivery of Water in Pueblo County related to the SDS Project
	b. Summary of Participants' return flows to Fountain Creek including storage and releases of such return flows (maximum daily flows, average annual and monthly flows and amounts).	Summary data from the project Participants in located in Attachment 9.	Attachment 9 - Summary of Participants' SDS Return Flows to Fountain Creek Including Storage and Releases of Such Return Flows
	c. Summaries of exchanges by Participants between Pueblo Reservoir and the Fountain Creek confluence (monthly and annual rates of flow and quantities).	Summary data from the project Participants in located in Attachment 10.	Attachment 10 - Summaries of Exchanges by Participants between Pueblo Reservoir and the Fountain Creek Confluence
	d. Use of any new water rights to be delivered or stored through SDS (amount, time, source).	There were no new water rights to be delivered or stored through SDS during the reporting period.	No
	e. Water quality monitoring.	A Joint Funding Agreement was executed with the U.S. Geological Survey (USGS) on the water quality monitoring program. Water quality monitoring began in January, 2011. See Attachment 3 for the water quality monitoring data. Colorado Springs Utilities continues to use effluent monitoring data from its Water Resource Recovery Facilities (WRRFs) to demonstrate the plants are operating in accordance with the specifications and standards associated with permits for its WRRFs. There were no violations of permit effluent limits during the reporting period.	Attachment 3 - Water Quality Monitoring Data
	f. Geomorphology monitoring.	Geomorphologic monitoring data has been collected under an existing program led by the USGS in partnership with Colorado Springs Utilities and the City of Colorado Springs Engineering Department. Ten cross sections established at designated points along Fountain Creek are monitored for degradation, aggradation, and other changes to the geomorphic surface. Each cross section is surveyed once per year during low stream flow; preferably in the winter when leaves and other organic material on the ground is at a minimum. Survey data from 2015 has been provided as pre-SDS operations baseline conditions along with survey data from the reporting period (2018) for comparative purposes.	Attachment 12 - Geomorphology Monitoring

ATTACHMENT 1

Annual Implementation Progress Matrix

Reporting Requirements		CY2018 Annual Report Information	
Reference	Permit or Approval Document Requirement	Implementation Progress	Attachment Provided
	g. Status of adaptive management plans on Fountain Creek.	<p>The Monitoring Plan and Integrated Adaptive Management Plan were submitted to the Bureau of Reclamation on March 18, 2011 and acknowledged by Reclamation on March 24, 2011. The Geomorphic Mitigation Plan was submitted to Reclamation on March 15, 2011 and approved on April 26, 2011.</p> <p>Colorado Springs Utilities participates in a Joint Funding Agreement with the USGS regarding implementation of the Monitoring Plan.</p>	No
	h. Status of payments into the Fountain Creek monetary mitigation fund.	<p>A check dated January 11, 2018 in the amount of \$10,382,296.00 payable to the Fountain Creek Watershed Water Activity Enterprise was delivered by Utilities to the Fountain Creek Watershed Flood Control and Greenway District (FWFCGD) Executive Director on January 12, 2018. The payment was made in accordance with Condition 6 of the Southern Delivery System (SDS) 1041 Permit and as outlined in Pueblo County Resolution No. P&D 14-15 (confirming the commencement date for the annual indexing and approving the annual indexing methodology for purposes of calculating monetary mitigation).</p> <p>As outlined in Resolution No. P&D 14-15 and the associated attachment, "On or before March 31 of each year, CSU staff shall meet with Pueblo County Staff for purposes of confirming the PPIs for each of the November to November twelve month periods used in the calculation and reaching agreement upon the index-based amount to be paid by CSU utilizing the calculation methodology (described)...." This meeting was postponed until April 2018 when the originally reported "Preliminary" November 2017 Producer Price Index (PPI) for Finished Goods (WPUFD49207) value of 200.6 was updated to a "Finalized" published value of 200.4 (0.2 points less than the original published "Preliminary" value).</p>	No
	i. Status of expenditures for wastewater system improvements for Participants (and third party users in the Fountain Creek basin) per Permit Conditions.	Summary data are in located in Attachment 7.	Attachment 7 - Expenditures for Wastewater System Improvements

ATTACHMENT 1

Annual Implementation Progress Matrix

Reporting Requirements		CY2018 Annual Report Information	
Reference	Permit or Approval Document Requirement	Implementation Progress	Attachment Provided
	j. Reports on the operation of the Pueblo Flow Management Program and the Low Flow Program (rates, and quantities, and times of foregone exchanges, releases, and reception documentation).	A Memorandum of Understanding (MOU) was executed between the Pueblo Board of Water Works and Colorado Springs Utilities on April 17, 2009 that provides the terms and conditions under which each of the entities will contribute to and assist in the maintenance of a storage pool in Pueblo Reservoir. SDS entities complied with the terms of the Pueblo Flow Management Program. Colorado Springs Utilities exchanges were curtailed to meet the recreational flow targets during the months of January, February, August and September 2018. Pueblo West Metropolitan District exchanges were curtailed to meet the recreational flow targets during the months of August and September 2018. No other SDS entities were exchanging during this period.	Attachment 11
	k. Status of lake level management cooperative efforts with other entities at Pueblo Reservoir.	Colorado Springs Utilities remains committed to participate in the development of a reservoir management plan for Pueblo Reservoir at such time as the Bureau of Reclamation and the Southeastern Colorado Water Conservancy District decide to proceed forward.	No
	l. Status of conservation and local reuse.	Colorado Springs Utilities, on behalf of the SDS Participants, remains committed to incorporating conservation and local reuse as important aspects of its water management plan. Colorado Springs Utilities prepared the 2015 Water Use Efficiency Plan which identifies and reports on conservation measures. Colorado Springs Utilities incorporated the 2015 Water Use Efficiency Plan into its updated Integrated Water Resources Plan, which was completed in 2017 and included additional efficiency measures. In 2018, both the City of Fountain and the Security Water District updated their respective water conservation/efficiency plans. Pueblo West Metropolitan District implemented its Water Conservation Plan in 2013, which was also incorporated into its 2017 Water Master Plan.	No
	m. Payments to Pueblo County in lieu of property taxes.	The payment in-lieu of property tax for 2016 for the properties acquired in Pueblo County was made on April 25, 2016. The payment in-lieu of property tax for 2017 for the properties acquired in Pueblo County was made on April 13, 2017. The payment in-lieu of property tax for 2018 for the properties acquired in Pueblo County was made on April 23, 2018.	No
	n. Copies of the annual reports on the SDS Project submitted to Reclamation.	This report will satisfy the requirement for the annual report following delivery of water through the SDS pipeline.	No
CDPHE - 401 Water Quality Certification			
Certification Statement, Bullet 4, p. 6	All collected raw data and annual reports developed as a requirement of other agency conditions will be submitted to the Division at the same time they are submitted to the requiring regulatory agency. Data and reports will be submitted directly to the Environmental Data Unit in an electronic data format agreed to by the Division.	The SDS Permit Compliance Annual Report addresses the annual reporting requirements for all of the major programmatic permits. Pertinent raw data and reports are being submitted as part of this annual report, of which CDPHE is a recipient.	No
Fountain Creek WFCGD - Resolution 2010-01			

ATTACHMENT 1

Annual Implementation Progress Matrix

Reporting Requirements		CY2018 Annual Report Information	
Reference	Permit or Approval Document Requirement	Implementation Progress	Attachment Provided
Technical Advisory Committee Condition 2, p. 3 (Also Citizen Advisory Committee Condition 2)	<p>The Integrated Adaptive Management Plan (IAMP) shall be submitted to the District for review, and periodic reports on water quality and quantity shall be provided to the District.</p> <p>The Integrated Adaptive Management Plan (IAMP) will include how mitigation will be performed in case there are problems that were not anticipated during the project. This will include means and methods to address impacts from the project and specific triggers to initiate the process. Once the IAMP is finalized there will be an opportunity for comment.</p>	The IAMP has been completed and was submitted to the Bureau of Reclamation on March 18, 2011. The IAMP has been provided to the District.	No

Monthly Average Flow Data from USGS Gauge Station No. 07106500 Fountain Creek at Pueblo

The USGS provides data based on a water year (October through September).

ATTACHMENT 2

Monthly Average Flow Data

USGS Gauge Station No: 07106500

FOUNTAIN CREEK AT PUEBLO, CO

Pueblo County, Colorado

Hydrologic Unit Code 11020003

Latitude 38°17'16", Longitude 104°36'02" NAD27

Drainage area 925 square miles

Gage datum 4,705 feet above sea level NGVD29

00060, Discharge, cubic feet per second														
YEAR	Monthly mean in cfs (Calculation Period: 2017-10-01 -> 2018-09-30) Period-of-record for statistical calculation restricted by user												Annual Average Flow	Long-Term Average Annual Simulated Streamflow
	2017			2018										
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep		
Mean of Monthly Discharge	158	169	177	186	166	145	114	102	57	206	285	114	157	253

Notes:

1. Data in the above table were queried from the USGS National Water Information System database (<https://waterdata.usgs.gov/nwis/monthly>) on November 28, 2018.
2. The annual average is computed from the monthly mean data published by the U.S. Geological Survey.
3. The long-term average annual simulated streamflow for the preferred alternative (Alt 2) was taken from Table 33 of the FEIS.
4. The months of January and February each contain one day of missing data.

Water Quality Monitoring Data

A Joint Funding Agreement was executed with the USGS to begin the water quality monitoring program in January 2011. Data are provisional until they go through the USGS quality assurance process. Cells shaded in blue represent data that exceed CDPHE Reg. 32 Water Quality standards for Middle Arkansas River Basin segment 3, Lower Arkansas River Basin segment 1a, and Fountain Creek Basin segments 1a, 2a, 2b, and 6. Note that the data have been reordered from previous reports. The data are now presented in order by sampling point number, as identified in the SDS Monitoring Plan, and are presented as one location per page.

Attachment 3

Water Quality Monitoring Data

Location	Date	Sample Note	Barometric pressure (mmHg)	Flow (cfs)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm at 25°C)	Temperature (°C)	Turbidity (FNU)	Total Ammonia (mg/L as N)	Escherichia coli (#/100 mL)	Total coliform (#/100 mL)	Selenium (µg/L)
SP #1 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO. USGS Site # 07103700	10-03-2017		613	25 S	9.6	8	229	7.6	5.6	< 0.02	120	> 2,400	0.12
	10-17-2017	B	--	26 S	--	--	253	5	--	--	610	1,400	--
	11-07-2017		610	21 S	10.5	8	239	4.1	26	< 0.02	180	2,400	0.1
	11-20-2017	B	--	18 S	--	--	262	3.7	--	--	43	2,000	--
	12-05-2017		608	11 S	11.4	8.2	345	1.5	97	< 0.02	88	> 2,400	0.16
	12-18-2017	B	--	20 S	--	--	265	1	--	--	340	1,000	--
	01-08-2018		606	18 S	11.5	8.2	272	2.3	85	< 0.02	200	70	0.2
	01-24-2018	B	--	21 S	--	--	283	0	--	--	110	410	--
	02-05-2018		602	14 S	10.2	8.3	266	5	5.8	< 0.02	440	1,700	0.2
	02-26-2018	B	--	15 S	--	--	297	0	--	--	E 20	E 180	--
	03-06-2018		610	24 S	10.6	8.2	234	3	16	< 0.02 @c	11	2,000	0.17
	03-23-2018	B	--	19 S	--	--	243	6.1	--	--	40	> 2,400	--
	04-09-2018		612	20 S	10.4	8.2	243	5.7	3.7	< 0.02	34	550	0.16
	04-23-2018	B	--	17 S	--	--	250	6.2	--	--	60	730	--
	05-08-2018		610	12 S	9	8.2	303	10	2.7	< 0.02	140	980	0.16
	05-21-2018	B	--	11 S	--	--	304	10.3	--	--	63	> 2,400	--
	06-04-2018		610	8 S	8.5	8.2	345	11.3	5.3	< 0.02	190	> 2,400	0.15
	06-21-2018	B	--	7 S	--	--	350	17	--	--	490	> 2,400	--
	07-02-2018		611	6 S	7.9	8.2	372	14.9	5.7	< 0.02	1,700	> 2,400	0.13
	07-18-2018	B	--	7 S	--	--	366	16.2	--	--	> 2,400	> 2,400	--
	07-23-2018	J	617	738 S	12.2	7.7	124	0.2	450	--	75,000	610,000	0.57
	07-25-2018	J	616	86 S	7.5	8.1	211	17.5	1080	--	11,000	> 240,000	0.4
	08-03-2018		610	16 S	8.1	8.1	301	14.3	41	< 0.02	930	8,700	0.14
	08-21-2018	B	--	15 S	--	--	342	12.2	--	--	> 2,400	> 2,400	--
	09-05-2018		615	13 S	8.1	8.3	331	14.3	7.7	< 0.02	470	> 24,000	0.12
	09-18-2018	B	--	12 S	--	--	332	13.6	--	--	550	8,200	--
Standards from WQCC Regulation No. 32, Appendix 32-1 (if applicable)		See note 2			6.0 (minimum)	6.5-9.0		Apr - Oct = 23.9 Nov - Mar = 13.0		See note 1	126		4.6 (chronic)

Notes: 1. Standards for ammonia include calculations to be performed monthly and are not included as the small amount of data would yield inaccurate standards.

2. Samples with a note of B are bi-weekly bacteria samples, and those with a note of J are storm event samples, and are provided as additional data for informational purposes.

3. Data in the above table were queried from the USGS National Water Information System database (<https://waterdata.usgs.gov/nwis>) on January 8, 2019.

Legend	
Description	Qualifier
no data for that parameter for that sample event	--
less than	<
greater than	>
estimated	E
holding time exceeded	@
see USGS result comment in NWIS	c
sample was diluted	d
below the reporting level but at or above the detection level	n
value verified by rerun, same method	r
value will likely be estimated when record is approved	#
data is preliminary and subject to change based on USGS QA/QC	S

Location	Date	Sample Note	Barometric pressure (mmHg)	Flow (cfs)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm at 25°C)	Temperature (°C)	Turbidity (FNU)	Total Ammonia (mg/L as N)	Escherichia coli (#/100 mL)	Total coliform (#/100 mL)	Selenium (µg/L)
SP #2 MONUMENT CREEK AT BIJOU ST. AT COLO. SPRINGS, CO USGS Site # 07104905	10-02-2017		606	62 S	7.7	8.2	656	16.7	56	0.23	550	> 2,400	2.8
	10-18-2017	B	--	50 S	--	--	668	14.1	--	--	140	> 2,400	--
	11-08-2017		611	63 S	9.5	8.2	731	8.8	28	0.02 n	580	> 2,400	2.9 d
	11-20-2017	B	--	56 S	--	--	628	8.7	--	--	370	> 2,400	--
	12-06-2017		615	43 S	9.8	8.4	652	6.7	32	0.03 n	100	2,000	2.7
	12-18-2017	B	--	27 S	--	--	627	4.9	--	--	220	> 2,400	--
	01-09-2018		605	51 S	9.3	8.2	620	8.9	27	0.28	15	610	2.9
	01-24-2018	B	--	49 S	--	--	746	4.6	--	--	150	> 2,400	--
	02-06-2018		610	37 S	10.1	8.3	705	4.1	25	0.64	140	1,700	3.7 d
	02-26-2018	B	--	27 S	--	--	851	3.5	--	--	36	310	--
	03-06-2018		614	36 S	9	8.3	660	10.8	28	0.15	21	980	2.8
	03-23-2018	B	--	29 S	--	--	841	11.6	--	--	27	2,000	--
	04-10-2018		615	45 S	8.3	8.7	613	16.9	17	< 0.02	26	610	2.7
	04-23-2018	B	--	50 S	--	--	729	13.6	--	--	76	1,700	--
	05-07-2018		614	40 S	7.7	8.5	661	19.6	18	< 0.02	54	> 2,400	2.7
	05-18-2018	J	607	1,200 S	9.4	8.3	206	8.6	730	--	3,900	160,000	1.3
	05-21-2018	B	--	57 S	--	--	595	17.7	--	--	120	7,700	--
	06-05-2018		611	33 S	6.8	8.5	645	25.6	9	< 0.02	150	6,100	3
	06-19-2018	B	--	37 S	--	--	575	25.3	--	--	360	> 24,000	--
	06-30-2018	J	613	416 S	7.8	8	158	16	230	--	8,200	> 240,000	0.73
	07-09-2018		621	26 S	6.6	8.4	629	29.5	9.2	< 0.02	160	17,000	2.4
	07-18-2018	B	--	27 S	--	--	659	26	--	--	1,700	24,000	--
	08-06-2018		616	38 S	7	8.3	581	23.4	26	< 0.02	12,000	> 24,000	2.5
	08-21-2018	B	--	38 S	--	--	712	16.6	--	--	300	> 24,000	--
	09-04-2018		614	43 S	6.8	8.3	627	23.3	21	3.14 d	720	20,000	2
	09-18-2018	B	--	18 S	--	--	721	20.8	--	--	420	12,000	--
Standards from WQCC Regulation No. 32, Appendix 32-1 (if applicable)			See note 2		5.0 (minimum)	6.5-9.0		Mar - Nov = 28.6 Dec - Feb = 14.3		See note 1	126		4.6 (chronic)

Notes: 1. Standards for ammonia include calculations to be performed monthly and are not included as the small amount of data would yield inaccurate standards.
2. Samples with a note of B are bi-weekly bacteria samples, and those with a note of J are storm event samples, and are provided as additional data for informational purposes.
3. Data in the above table were queried from the USGS National Water Information System database (<https://waterdata.usgs.gov/nwis>) on January 8, 2019.

Legend	
Description	Qualifier
no data for that parameter for that sample event	--
less than	<
greater than	>
estimated	E
holding time exceeded	@
see USGS result comment in NWIS	c
sample was diluted	d
below the reporting level but at or above the detection level	n
value verified by rerun, same method	r
value will likely be estimated when record is approved	#
data is preliminary and subject to change based on USGS QA/QC	S

Location	Date	Sample Note	Barometric pressure (mmHg)	Flow (cfs)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm at 25°C)	Temperature (°C)	Turbidity (FNU)	Total Ammonia (mg/L as N)	Escherichia coli (#/100 mL)	Total coliform (#/100 mL)	Selenium (µg/L)
SP #3 FOUNTAIN CREEK AT COLORADO SPRINGS, CO USGS Site # 07105500	10-03-2017		618	72 S	8.2	8.2	595	14.6	17	0.09	330	2,400	2.2
	10-18-2017	B	--	75 S	--	--	608	12.9	--	--	190	> 2,400	--
	11-07-2017		615	74 S	9.6	8	607	6.9	55	0.03 n	330	> 2,400	2.1 d
	11-20-2017	B	--	74 S	--	--	593	7.3	--	--	820	> 2,400	--
	12-06-2017		618	66 S	10.9	8.2	640	2.9	26	0.21	200	> 2,400	2.9
	12-18-2017	B	--	75 S	--	--	627	3.6	--	--	160	2,400	--
	01-09-2018		606	68 S	9.4	8.2	599	8.4	23	0.14	290	1,100	2.4
	01-24-2018	B	--	80 S	--	--	700	3	--	--	68	1,600	--
	02-06-2018		611	58 S	10.1	8.2	636	4.9	20	0.37	42	1,700	2.9
	02-26-2018	B	--	37 S	--	--	738	2.8	--	--	22	370	--
	03-05-2018		612	53 S	9.1	8.3	621	9.4	15	0.14	44	> 2,400	2.7
	03-23-2018	B	--	51 S	--	--	645	11.1	--	--	53	2,000	--
	04-10-2018		615	61 S	8.4	8.6	568	16.2	13	< 0.02	37	390	2.3
	04-23-2018	B	--	64 S	--	--	630	13.1	--	--	55	830	--
	05-07-2018		615	50 S	7.7	8.3	601	18.4	12	< 0.02	44	> 2,400	2.3 d
	05-18-2018	J	610	838 S	9.4	8.3	216	8.8	960	--	3,600	200,000	1.2
	05-21-2018	B	--	71 S	--	--	601	17.1	--	--	130	7,700	--
	06-05-2018		612	38 S	6.7	8.3	688	23.4	7.3	< 0.02	150	6,900	3 d
	06-19-2018	B	--	43 S	--	--	613	24.9	--	--	550	> 24,000	--
	07-10-2018		619	23 S	7.3	7.9	742	20.9	4.4	< 0.02	260	13,000	2.9 d
	07-18-2018	B	--	31 S	--	--	712	25.8	--	--	260	24,000	--
	07-23-2018	J	606	1,590 S	8.7	7.9	204	10.4	1020	--	73,000	980,000	0.79
	08-06-2018		617	44 S	7	8.2	584	21.3	19	< 0.02	3,700	> 24,000	2.2
	08-21-2018	B	--	36 S	--	--	673	15.8	--	--	410	14,000	--
	09-04-2018		615	52 S	6.8	8.3	622	23.2	16	1.59 d	910	24,000	2.1
	09-18-2018	B	--	32 S	--	--	691	19.8	--	--	340	9,200	--
Standards from WQCC Regulation No. 32, Appendix 32-1 (if applicable)		See note 2			5.0 (minimum)	6.5-9.0		Mar - Nov = 28.6 Dec - Feb = 14.3		See note 1	126		4.8 (chronic)

Notes: 1. Standards for ammonia include calculations to be performed monthly and are not included as the small amount of data would yield inaccurate standards.
2. Samples with a note of B are bi-weekly bacteria samples, and those with a note of J are storm event samples, and are provided as additional data for informational purposes.
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Legend	
Description	Qualifier
no data for that parameter for that sample event	--
less than	<
greater than	>
estimated	E
holding time exceeded	@
see USGS result comment in NWIS	c
sample was diluted	d
below the reporting level but at or above the detection level	n
value verified by rerun, same method	r
value will likely be estimated when record is approved	#
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Location	Date	Sample Note	Barometric pressure (mmHg)	Flow (cfs)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm at 25°C)	Temperature (°C)	Turbidity (FNU)	Total Ammonia (mg/L as N)	Escherichia coli (#/100 mL)	Total coliform (#/100 mL)	Selenium (µg/L)
SP #4 FOUNTAIN CR BLW JANITELL RD BLW COLO. SPRINGS, CO USGS Site # 07105530	10-03-2017		620	111 S	8	8.2	696	16.3	10	0.07	460	2,400	2.7
	10-17-2017	B	--	86 S	--	--	694	9	--	--	180	> 2,400	--
	11-07-2017		617	138 S	8.8	8	741	10.6	43	0.23	870	> 2,400	3.2
	11-20-2017	B	--	144 S	--	--	667	11.4	--	--	610	> 2,400	--
	12-06-2017		621	98 S	9.6	7.9	734	10.6	9.4	0.17	130	> 2,400	2.8
	12-18-2017	B	--	141 S	--	--	662	10	--	--	180	> 2,400	--
	01-09-2018		608	128 S	8.8	8	683	11.2	17	0.56	110	820	2.8
	01-24-2018	B	--	135 S	--	--	777	8.6	--	--	200	2,000	--
	02-06-2018		613	110 S	9.1	8.1	686	10.2	10	0.38	82	1,600	2.9
	02-26-2018	B	--	90 S	--	--	770	10.3	--	--	240	> 2,400	--
	03-06-2018		618	105 S	8.7	8.1	724	11.9	15	1.58 d	83	1,400	2.9
	03-23-2018	B	--	105 S	--	--	723	14.8	--	--	61	> 2,400	--
	04-10-2018		616	95 S	9	8.5	659	17	9.7	0.09	75	1,000	2.7
	04-23-2018	B	--	98 S	--	--	657	15.9	--	--	220	2,400	--
	05-07-2018		616	95 S	7.1	8	677	18.4	12	1.43	240	> 2,400	2.6
	05-21-2018	B	--	98 S	--	--	661	18.7	--	--	160	20,000	--
	06-05-2018		614	83 S	7.3	8.1	745	22.6	5.7	0.06	340	10,000	2.8
	06-20-2018	B	--	76 S	--	--	731	21	--	--	320	> 24,000	--
	06-30-2018	J	616	498 S	7.2	7.9	670	19.2	430	--	10,000	> 240,000	4.4 d
	07-10-2018		621	76 S	7.4	8	733	23.6	6.6	0.05	790	24,000	2.3 d
	07-18-2018	B	--	67 S	--	--	752	25.8	--	--	540	17,000	--
	07-23-2018	J	620	939 S	7.9	7.9	266	17.4	1070	--	65,000	820,000	1.1
	08-06-2018		620	88 S	7.3	7.8	670	21.9	16	0.02 n	1,100	24,000	2.6
	08-21-2018	B	--	89 S	--	--	777	19.9	--	--	390	> 24,000	--
	09-04-2018		616	92 S	7.1	8.2	678	23.4	9.7	0.52	880	24,000	2.5
Standards from WQCC Regulation No. 32, Appendix 32-1 (if applicable)		See note 2			5.0 (minimum)	6.5-9.0		Mar - Nov = 28.6 Dec - Feb = 14.3		See note 1	126		4.8 (chronic)

Notes: 1. Standards for ammonia include calculations to be performed monthly and are not included as the small amount of data would yield inaccurate standards.
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Description	Qualifier
no data for that parameter for that sample event	--
less than	<
greater than	>
estimated	E
holding time exceeded	@
see USGS result comment in NWIS	c
sample was diluted	d
below the reporting level but at or above the detection level	n
value verified by rerun, same method	r
value will likely be estimated when record is approved	#
data is preliminary and subject to change based on USGS QA/QC	S

Location	Date	Sample Note	Barometric pressure (mmHg)	Flow (cfs)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm at 25°C)	Temperature (°C)	Turbidity (FNU)	Total Ammonia (mg/L as N)	Escherichia coli (#/100 mL)	Total coliform (#/100 mL)	Selenium (µg/L)
SP #5 FOUNTAIN CREEK AT SECURITY, CO USGS Site # 07105800	10-04-2017		627	140 S	8.6	8.3	786	13.3	31	0.26	230	> 2,400	3.4
	10-17-2017	B	--	118 S	--	--	786	8.6	--	--	120	> 2,400	--
	11-08-2017		618	157 S	9.1	8.3	825	9.4	32	0.18	690	> 2,400	3.5
	11-20-2017	B	--	128 S	--	--	771	11.4	--	--	240	> 2,400	--
	12-05-2017		620	142 S	9.2	8.4	798	8.4	14	0.39	80	2,400	3.5
	12-18-2017	B	--	121 S	--	--	766	9	--	--	88	> 2,400	--
	01-08-2018		616	115 S	8.9	8.3	756	10.1	20	0.71	75	170	3.5
	01-24-2018	B	--	85 S	--	--	897	8.6	--	--	35	980	--
	02-06-2018		618	124 S	9.5	8.3	751	8	14	0.5	64	1,600	3.5 d
	02-20-2018	B	--	78 S	--	--	841	3.6	--	--	46	980	--
	03-07-2018		623	68 S	10.3	8.4	783	6.9	12	1.32	17	980	3.3 d
	03-20-2018	B	--	83 S	--	--	803	5.1	--	--	50	820	--
	04-09-2018		623	121 S	9.8	9.1	749	15.9	14	0.35	34	870	3.2 d
	04-23-2018	B	--	109 S	--	--	735	18.2	--	--	66	> 2,400	--
	05-08-2018		620	81 S	7.5	8.4	796	22.1	14	0.32	52	1,900	3.5
	05-21-2018	B	--	97 S	--	--	747	20.8	--	--	52	7,700	--
	06-04-2018		620	83 S	7.6	8.5	812	23.8	14	0.23	75	3,700	3.6
	06-20-2018	B	--	59 S	--	--	793	23.8	--	--	400	16,000	--
	07-02-2018		622	100 S	6.8	8.4	736	27.4	36	0.25	210	17,000	2.8
	07-18-2018	B	--	74 S	--	--	841	29.3	--	--	97	14,000	--
	08-03-2018		621	95 S	6.7	8.3	710	23.7	66	0.37	670	24,000	3 d
	08-21-2018	B	--	92 S	--	--	819	18.6	--	--	150	11,000	--
	09-05-2018		626	104 S	6.6	8.3	760	22.2	26	0.45	1,500	> 24,000	3.3
	09-18-2018	B	--	68 S	--	--	820	22.9	--	--	220	6,900	--
Standards from WQCC Regulation No. 32, Appendix 32-1 (if applicable)		See note 2			5.0 (minimum)	6.5-9.0		Mar - Nov = 28.6 Dec - Feb = 14.3		See note 1	126		4.8 (chronic)

Notes: 1. Standards for ammonia include calculations to be performed monthly and are not included as the small amount of data would yield inaccurate standards.
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less than	<
greater than	>
estimated	E
holding time exceeded	@
see USGS result comment in NWIS	c
sample was diluted	d
below the reporting level but at or above the detection level	n
value verified by rerun, same method	r
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Location	Date	Sample Note	Barometric pressure (mmHg)	Flow (cfs)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm at 25°C)	Temperature (°C)	Turbidity (FNU)	Total Ammonia (mg/L as N)	Escherichia coli (#/100 mL)	Total coliform (#/100 mL)	Selenium (µg/L)
SP #6 FOUNTAIN CR BELOW JIMMY CAMP CR NR FOUNTAIN, CO USGS Site # 383854104413601	10-05-2017		627	136 S	8.1	8.2	904	15.3	21	0.02 n	110	> 2,400	3.8
	10-18-2017	B	--	107 S	--	--	894	14.5	--	--	30	> 2,400	--
	11-01-2017		614	140 S	9.2	8.2	886	8.2	44	< 0.02	80	> 2,400	3.5 d
	11-15-2017	B	--	114 S	--	--	896	9.5	--	--	30	1,400	--
	12-01-2017		622	134 S	10	8.2	865	6	38	0.33	62	> 2,400	3.4 d
	12-18-2017	B	--	118 S	--	--	872	8.2	--	--	40	> 2,400	--
	01-10-2018		612	124 S	9.6	8.1	869	6.1	21	0.33	91	820	4
	01-26-2018	B	--	116 S	--	--	926	5.2	--	--	24	2,000	--
	02-07-2018		629	112 S	10.5	8.2	869	4	15	0.35	46	820	3.7 d
	02-26-2018	B	--	110 S	--	--	938	9.8	--	--	25	> 2,400	--
	03-07-2018		627	111 S	9.6	8.3	884	8.8	16	0.91	27	870	3.8
	03-23-2018	B	--	118 S	--	--	865	13.4	--	--	12	> 2,400	--
	04-11-2018		621	97 S	9.2	8.5	854	10.3	10	0.04 n	15	650	3.3 d
	04-25-2018	B	--	115 S	--	--	893	19	--	--	38	1,200	--
	05-09-2018		625	76 S	7.8	8.3	876	17.6	9.5	< 0.02	41	1,000	3.4
	05-22-2018	B	--	79 S	--	--	844	15.6	--	--	52	2,400	--
	06-07-2018		626	92 S	7.6	8.5	854	20.6	12	< 0.02	110	3,400	3.1 d
	06-20-2018	B	--	78 S	--	--	865	26.3	--	--	120	9,800	--
	07-03-2018		623	75 S	7.1	8.3	795	21.8	10	0.02 n	190	10,000	3
	07-18-2018	B	--	61 S	--	--	895	29.6	--	--	63	5,500	--
	07-24-2018	J	--	-- #	--	--	506	19.6	--	--	6,900	> 24,000	--
	08-06-2018	J	--	3,500 S	--	--	597	20.9	--	--	12,000	> 240,000	--
	08-10-2018		630	110 S	7.2	8.2	899	20.1	21	< 0.02	160	24,000	2.9 d
	08-23-2018	B	--	142 S	--	--	844	18.8	--	--	310	20,000	--
	09-11-2018		624	107 S	7.6	8.4	844	20.2	11	0.03 n	98	4,100	3.2
	09-20-2018	B	--	84 S	--	--	879	17.5	--	--	110	8,200	--
Standards from WQCC Regulation No. 32, Appendix 32-1 (if applicable)			See note 2		5.0 (minimum)	6.5-9.0		Mar - Nov = 28.6 Dec - Feb = 14.3		See note 1	126		4.8 (chronic)

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Location	Date	Sample Note	Barometric pressure (mmHg)	Flow (cfs)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm at 25°C)	Temperature (°C)	Turbidity (FNU)	Total Ammonia (mg/L as N)	Escherichia coli (#/100 mL)	Total coliform (#/100 mL)	Selenium (µg/L)
SP #7 FOUNTAIN CREEK NEAR FOUNTAIN, CO. USGS Site # 07106000	10-05-2017		627	146 S	7.5	8.2	987	18.8	19	< 0.02	36	2,400	4.3
	10-18-2017	B	--	155 S	--	--	965	15.3	--	--	28	2,400	--
	11-01-2017		616	152 S	9	8.2	954	10.1	42	< 0.02	59	2,000	3.9 d
	11-15-2017	B	--	169 S	--	--	949	11.3	--	--	20	920	--
	12-01-2017		624	177 S	9.7	8.3	923	8.2	24	0.22	53	2,000	3.7 d
	12-19-2017	B	--	125 S	--	--	920	7.3	--	--	20	730	--
	01-10-2018		612	137 S	9.6	8.2	910	6.8	22	0.18	84	1,000	4 d
	01-24-2018	B	--	135 S	--	--	1,000	8.4	--	--	10	370	--
	02-07-2018		630	127 S	10.2	8.3	903	6.1	14	0.2	9	580	4 d
	02-20-2018	B	--	131 S	--	--	972	3.3	--	--	23	1,400	--
	03-07-2018		628	118 S	8.7	8.3	918	12.1	17	0.4	5	310	4.3
	03-20-2018	B	--	127 S	--	--	924	5.7	--	--	91	820	--
	04-11-2018		623	58 S	8.3	8.5	922	14.6	11	< 0.02	13	490	3.8 d
	04-23-2018	B	--	119 S	--	--	939	19.4	--	--	20	980	--
	05-09-2018		626	63 S	7.3	8.2	957	19.2	9.3	< 0.02	41	930	4
	05-22-2018	B	--	87 S	--	--	876	17.6	--	--	41	4,900	--
	06-07-2018		627	82 S	7.4	8.3	944	23.3	32	< 0.02	260	10,000	3.6 d
	06-20-2018	B	--	66 S	--	--	961	25.9	--	--	86	8,200	--
	07-03-2018		625	68 S	6.6	8.3	909	25.1	9.7	< 0.02	85	11,000	3.8
	07-18-2018	B	--	46 S	--	--	1,000	29.8	--	--	63	4,600	--
	08-10-2018		632	160 S	7	8.2	950	21.7	25	< 0.02	230	20,000	3.1 d
	08-23-2018	B	--	155 S	--	--	891	19.9	--	--	280	20,000	--
	09-11-2018		625	109 S	7	8.3	929	23.9	17	< 0.02	41	4,800	3.5
	09-20-2018	B	--	93 S	--	--	963	17.6	--	--	86	5,800	--
Standards from WQCC Regulation No. 32, Appendix 32-1 (if applicable)		See note 2			5.0 (minimum)	6.5-9.0		Mar - Nov = 28.6 Dec - Feb = 14.3		See note 1	126		4.8 (chronic)

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Location	Date	Sample Note	Barometric pressure (mmHg)	Flow (cfs)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm at 25°C)	Temperature (°C)	Turbidity (FNU)	Total Ammonia (mg/L as N)	Escherichia coli (#/100 mL)	Total coliform (#/100 mL)	Selenium (µg/L)
SP #8 FOUNTAIN CREEK NEAR PINON, CO USGS Site # 07106300	10-05-2017		637	137 S	7.9	8.2	996	17.1	65	< 0.02	220	> 2,400	4.1
	10-18-2017	B	--	98 S	--	--	1,000	16.7	--	--	36	> 2,400	--
	11-01-2017		624	144 S	9	8.3	1,000	11.8	63	< 0.02	37	> 2,400	4 d
	11-16-2017	B	--	128 S	--	--	1,010	3.8	--	--	58	> 2,400	--
	12-01-2017		631	136 S	9.7	8.4	981	9.1	68	< 0.02	16	> 2,400	3.7 d
	12-18-2017	B	--	134 S	--	--	970	6.7	--	--	23	1,600	--
	01-10-2018		619	140 S	9.8	8.3	962	7.1	68	< 0.02	29	1,000	4.4 d
	02-07-2018		637	130 S	10.1	8.4	970	7.2	38	< 0.02	< 1	440	4.3 d
	02-26-2018	B	--	--	--	--	--	--	--	--	5	580	--
	03-07-2018		636	127 S	8.8	8.4	978	12.4	44	0.07	6	770	4.8
	03-23-2018	B	--	117 S	--	--	1,010	16.4	--	--	30	> 2,400	--
	04-11-2018		630	93 S	8.2	8.5	1,040	16.9	35	< 0.02	13	580	4.6 d
	04-25-2018	B	--	90 S	--	--	1,030	13.9	--	--	21	870	--
	05-09-2018		633	52 S	6.9	8.4	1,060	23.5	22	< 0.02	< 10	1,400	4.8 d
	05-16-2018	J	--	571 S	--	--	648	14.7	--	--	10,000	> 24,000	--
	05-22-2018	B	--	105 S	--	--	945	19.4	--	--	120	12,000	--
	06-07-2018		634	45 S	7	8.5	1,070	27.5	44	< 0.02	110	6,900	4.6 d
	06-20-2018	B	--	98 S	--	--	1,030	30.1	--	--	180	17,000	--
	07-03-2018		623	32 S	6.3	8.4	1,010	28.9	28	< 0.02	130	10,000	4.2 d
	07-19-2018	B	--	28 S	--	--	1,030	31	--	--	120	3,700	--
	07-24-2018	J	--	- #	--	--	469	15.3	--	--	28,000	> 240,000	--
	08-10-2018		640	146 S	6.8	8.3	976	24	75	< 0.02	220	24,000	3.2 d
	08-23-2018	B	--	172 S	--	--	939	21.8	--	--	290	> 24,000	--
	09-11-2018		632	86 S	6.9	8.4	1,030	25.4	40	< 0.02	97	8,200	3.6 d
	09-20-2018	B	--	67 S	--	--	1,060	18.4	--	--	170	8,700	--
Standards from WQCC Regulation No. 32, Appendix 32-1 (if applicable)		See note 2			5.0 (minimum)	6.5-9.0		Mar - Nov = 28.6 Dec - Feb = 14.3		See note 1	126		4.8 (chronic)

- Notes: 1. Standards for ammonia include calculations to be performed monthly and are not included as the small amount of data would yield inaccurate standards.
2. Samples with a note of B are bi-weekly bacteria samples, and those with a note of J are storm event samples, and are provided as additional data for informational purposes.
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Legend	
Description	Qualifier
no data for that parameter for that sample event	--
less than	<
greater than	>
estimated	E
holding time exceeded	@
see USGS result comment in NWIS	c
sample was diluted	d
below the reporting level but at or above the detection level	n
value verified by rerun, same method	r
value will likely be estimated when record is approved	#
data is preliminary and subject to change based on USGS QA/QC	S

Location	Date	Sample Note	Barometric pressure (mmHg)	Flow (cfs)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm at 25°C)	Temperature (°C)	Turbidity (FNU)	Total Ammonia (mg/L as N)	Escherichia coli (#/100 mL)	Total coliform (#/100 mL)	Selenium (µg/L)
SP #9 FOUNTAIN CR ABV 40TH ST AT PUEBLO, CO USGS Site # 381840104361001	10-04-2017		646	168 S	8.4	8.4	1,020	15	70	< 0.02	120	> 2,400	5.2
	10-18-2017	B	--	115 S	--	--	1,050	17	--	--	91	> 2,400	--
	11-01-2017		629	138 S	8.7	8.5	1,050	13.9	68	< 0.02	36	> 2,400	5.2 d
	11-16-2017	B	--	144 S	--	--	1,060	5.1	--	--	72	2,400	--
	12-01-2017		637	151 S	9.4	8.4	1,030	10.2	76	< 0.02	20	> 2,400	5.1 d
	12-19-2017	B	--	160 S	--	--	1,020	7	--	--	9	980	--
	01-05-2018		640	200 S	11.4	8.4	1,020	4	120	0.07	14	1,600	5.6 d
	01-26-2018	B	--	148 S	--	--	1,060	2.5	--	--	1,300	30	--
	02-01-2018		643	149 S	11.1	8.4	1,040	3.6	68	< 0.02	37	1,200	5.5 d
	02-26-2018	B	--	159 S	--	--	1,080	9.6	--	--	2	580	--
	03-05-2018		640	150 S	9.6	8.5	1,040	9.4	53	< 0.02	8	550	5.7 d
	03-23-2018	B	--	134 S	--	--	1,040	17.2	--	--	< 10	790	--
	04-06-2018		639	103 S	9.8	8.5	1,070	9.1	28	< 0.02	8	1,700	6.3 d
	04-25-2018	B	--	117 S	--	--	1,080	16.9	--	--	3	820	--
	05-09-2018		638	68 S	7.2	8.5	1,100	23.5	17	< 0.02	140	1,100	6.5 d
	05-22-2018	B	--	106 S	--	--	993	21.9	--	--	31	5,800	--
	06-07-2018		639	55 S	6.9	8.6	1,120	26.4	17	< 0.02	280	3,900	6.9 d
	06-21-2018	B	--	68 S	--	--	1,100	30	--	--	160	11,000	--
	07-03-2018		637	43 S	6.4	8.6	1,090	30	21	< 0.02	110	5,500	6.4 d
	07-19-2018	B	--	48 S	--	--	1,110	29.9	--	--	86	8,200	--
	08-06-2018		646	105 S	7	8.2	1,050	25.2	77	0.32	170	13,000	4.3 d
	08-23-2018	B	--	145 S	--	--	973	24.9	--	--	270	> 24,000	--
	09-11-2018		637	108 S	7.1	8.5	1,080	25.5	43	0.02 n	86	7,700	4.7 d
	09-20-2018	B	--	73 S	--	--	1,110	17.4	--	--	120	12,000	--
Standards from WQCC Regulation No. 32, Appendix 32-1 (if applicable)		See note 2			5.0 (minimum)	6.5-9.0		Mar - Nov = 28.6 Dec - Feb = 14.3		See note 1	126		4.8 (chronic)

Notes: 1. Standards for ammonia include calculations to be performed monthly and are not included as the small amount of data would yield inaccurate standards.

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Legend	
Description	Qualifier
no data for that parameter for that sample event	--
less than	<
greater than	>
estimated	E
holding time exceeded	@
see USGS result comment in NWIS	c
sample was diluted	d
below the reporting level but at or above the detection level	n
value verified by rerun, same method	r
value will likely be estimated when record is approved	#
data is preliminary and subject to change based on USGS QA/QC	S

Location	Date	Sample Note	Barometric pressure (mmHg)	Flow (cfs)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm at 25°C)	Temperature (°C)	Turbidity (FNU)	Total Ammonia (mg/L as N)	Escherichia coli (#/100 mL)	Total coliform (#/100 mL)	Selenium (µg/L)
SP #10 FOUNTAIN CREEK AT PUEBLO, CO. USGS Site # 07106500	10-04-2017		646	199 S	8.2	8.4	1,080	16.5	62	< 0.02	110	> 2,400	8.2
	10-17-2017	B	--	162 S	--	--	1,080	14.3	--	--	74	> 2,400	--
	11-06-2017		639	162 S	9.8	8.4	1,070	10.1	98	< 0.02	99	> 2,400	7.3 d
	11-16-2017	B	--	175 S	--	--	1,070	10.8	--	--	12	> 2,400	--
	12-01-2017		638	195 S	9.4	8.4	1,040	9.8	79	< 0.02	16	2,400	7.1 d
	12-19-2017	B	--	168 S	--	--	1,040	4.9	--	--	13	1,200	--
	01-10-2018		625	174 S	9.9	8.3	1,070	7	88	< 0.02	54	820	8.9 d
	01-26-2018	B	--	189 S	--	--	1,100	3.7	--	--	15	580	--
	02-07-2018		645	163 S	10	8.4	1,040	8.1	44	< 0.02	3	330	8.2 d
	02-22-2018	B	--	164 S	--	--	1,210	0.5	--	--	12	340	--
	03-08-2018		640	158 S	9.9	8.4	1,050	9.5	48	< 0.02	5	440	8 d
	03-22-2018	B	--	146 S	--	--	1,110	6.7	--	--	25	1,100	--
	04-06-2018		642	99 S	9.2	8.6	1,130	11.5	28	< 0.02	3	580	10.7 d
	04-24-2018	B	--	136 S	--	--	1,090	8.3	--	--	44	> 2,400	--
	05-08-2018		640	99 S	7.2	8.5	1,160	25.4	25	< 0.02	31	690	11.3 d
	05-16-2018	J	--	371 S	--	--	1,090	18.7	--	--	6,500	> 24,000	--
	05-22-2018	B	--	110 S	--	--	1,090	23.6	--	--	110	7,700	--
	06-04-2018		640	56 S	6.9	8.5	1,220	28.1	30	< 0.02	86	6,100	14.1 d
	06-21-2018	B	--	46 S	--	--	1,170	30.5	--	--	290	6,100	--
	07-10-2018		646	42 S	6.7	8.3	1,180	30	22	< 0.02	41	3,400	12.1 d
	07-24-2018	J	--	3,880 S	--	--	521	14.5	--	--	29,000	> 240,000	--
	08-10-2018		646	139 S	6.7	8.4	996	26.2	92	< 0.02	240	24,000	5.6 d
	08-24-2018	B	--	212 S	--	--	1,070	24.1	--	--	200	> 24,000	--
	09-12-2018		640	139 S	7.9	8.5	1,100	20.2	36	< 0.02	97	9,800	7.6 d
	09-19-2018	B	--	94 S	--	--	1,160	27.7	--	--	63	7,300	--
Standards from WQCC Regulation No. 32, Appendix 32-1 (if applicable)					5.0 (minimum)	6.5-9.0		Mar - Nov = 28.6 Dec - Feb = 14.3		See note 1	126		28.1 (chronic)

Notes: 1. Standards for ammonia include calculations to be performed monthly and are not included as the small amount of data would yield inaccurate standards.
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Legend	
Description	Qualifier
no data for that parameter for that sample event	--
less than	<
greater than	>
estimated	E
holding time exceeded	@
see USGS result comment in NWIS	c
sample was diluted	d
below the reporting level but at or above the detection level	n
value verified by rerun, same method	r
value will likely be estimated when record is approved	#
data is preliminary and subject to change based on USGS QA/QC	S

Location	Date	Sample Note	Barometric pressure (mmHg)	Flow (cfs)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm at 25°C)	Temperature (°C)	Turbidity (FNU)	Total Ammonia (mg/L as N)	Escherichia coli (#/100 mL)	Total coliform (#/100 mL)	Selenium (µg/L)
SP #11 FOUNTAIN CR AT EAST RIVER ST AT PUEBLO, CO USGS Site # 381601104355801	10-10-2017		650 S	137 S	9 S	8.4 S	1,100 S	13.2 S	120 S	< 0.02 S	610 S	> 2,400 S	7.9 dS
	10-19-2017	B	--	106 S	--	--	1,110 S	8.7 S	--	--	100	2,400	--
	11-06-2017		638	171 S	8.8	8.4	1,090	13	84	< 0.02	40	> 2,400	7.3 d
	11-16-2017	B	--	161 S	--	--	1,100	3.9	--	--	57	2,400	--
	12-04-2017		639	158 S	9.9	8.5	1,090	7.4	83	0.17	11	1,600	7.8 d
	12-19-2017	B	--	163 S	--	--	1,060	6.3	--	--	16	1,200	--
	01-05-2018		644	151 S	11.7	8.3	1,090	1.2	90	0.07	17	1,300	8.6 d
	01-26-2018	B	--	161 S	--	--	1,120	6.3	--	--	8	> 2,400	--
	02-01-2018		646	140 S	11.3	8.4	1,100	2.7	66	< 0.02	21	870	8.6 d
	02-26-2018	B	--	168 S	--	--	1,120	10.1	--	--	21	1,400	--
	03-08-2018		642	143 S	10.5	8.4	1,090	6.6	43	< 0.02	5	490	8.6 d
	03-23-2018	B	--	135 S	--	--	1,080	18	--	--	< 10	720	--
	04-06-2018		642	131 S	9.3	8.5	1,160	11.3	30	< 0.02	10	690	11.2 d
	04-25-2018	B	--	130 S	--	--	1,160	19.3	--	--	17	770	--
	05-10-2018		641	69 S	8.3	8.3	1,320	15.6	18	< 0.02	47	1,300	16.3 d
	05-22-2018	B	--	112 S	--	--	1,130	24.9	--	--	10	7,700	--
	06-08-2018		643	70 S	7.6	8.4	1,220	21.7	51	< 0.02	280	6,900	11.9 d
	06-21-2018	B	--	64 S	--	--	1,210	29.2	--	--	240	6,900	--
	07-11-2018		643	32 S	6.9	8.3	1,320	23.1	7.7	0.06	63	4,900	14 d
	07-19-2018	B	--	81 S	--	--	1,300	27.5	--	--	160	14,000	--
	08-06-2018		648	92 S	7	8.2	1,120	22.2	84	< 0.02	140	14,000	8.1 d
	08-24-2018	B	--	154 S	--	--	1,090	26.6	--	--	110	> 24,000	--
	09-12-2018		641	99 S	8	8.4	1,130	18.3	38	< 0.02	120	10,000	8 d
	09-19-2018	B	--	77 S	--	--	1,170	27.4	--	--	74	6,100	--
Standards from WQCC Regulation No. 32, Appendix 32-1 (if applicable)		See note 2			5.0 (minimum)	6.5-9.0		Mar - Nov = 28.6 Dec - Feb = 14.3		See note 1	126		28.1 (chronic)

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Description	Qualifier
no data for that parameter for that sample event	--
less than	<
greater than	>
estimated	E
holding time exceeded	@
see USGS result comment in NWIS	c
sample was diluted	d
below the reporting level but at or above the detection level	n
value verified by rerun, same method	r
value will likely be estimated when record is approved	#
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Location	Date	Sample Note	Barometric pressure (mmHg)	Flow (cfs)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm at 25°C)	Temperature (°C)	Turbidity (FNU)	Total Ammonia (mg/L as N)	Escherichia coli (#/100 mL)	Total coliform (#/100 mL)	Selenium (µg/L)
SP #12 ARKANSAS RIVER AT MOFFAT STREET AT PUEBLO, CO USGS Site # 07099970	10-10-2017		648	390 S	9.3	8.7	472	16.8	6.3	< 0.02	14	2,000	9.2
	10-17-2017	B	--	262 S	--	--	530	13.2	--	--	26	> 2,400	--
	11-06-2017		639	379 S	10	8.6	494	12.8	9.9	< 0.02	41	770	10
	11-16-2017	B	--	94 S	--	--	743	10.4	--	--	28	1,700	--
	12-04-2017		640	75 S	10.5	8.5	811	8.1	86	0.03 @nr	30	2,400	28.9 d
	12-19-2017	B	--	80 S	--	--	782	6.2	--	--	5	520	--
	01-11-2018		643	79 S	11.8	8.5	765	5.4	25	0.03 n	1,300	> 2,400	30.8 d
	01-25-2018	B	--	78 S	--	--	795	3.2	--	--	960	> 2,400	--
	02-01-2018		645	73 S	12	8.5	848	5.3	7	< 0.02	44	870	38.2 d
	02-15-2018	B	--	42 S	--	--	826	6.3	--	--	67	980	--
	03-08-2018		639	361 S	11.2	8.7	508	7.2	3.9	< 0.02	10	200	11 d
	03-22-2018	B	--	582 S	--	--	508	5.9	--	--	6	200	--
	04-06-2018		643	807 S	10.7	8.8	483	8.5	3.1	< 0.02	1	170	8.6
	04-26-2018	B	--	197 S	--	--	625	8.6	--	--	390	> 2,400	--
	05-10-2018		641	407 S	10.4	8.4	540	10.8	3.2	< 0.02	20	550	11.5 d
	05-22-2018	B	--	696 S	--	--	501	13.9	--	--	11	610	--
	06-08-2018		642	932 S	9.6	8.6	504	14.3	5.1	0.02 n	30	820	8 d
	06-21-2018	B	--	598 S	--	--	515	14.1	--	--	130	> 2,400	--
	07-11-2018		643	562 S	9.3	8.6	487	16.7	5.2	< 0.02	74	2,400	7.8 d
	07-19-2018	B	--	621 S	--	--	510	15.3	--	--	230	5,800	--
	08-06-2018		646	161 S	10.4	8.7	578	20	14	< 0.02	63	3,700	14.7 d
	08-22-2018	B	--	52 S	--	--	756	22.3	--	--	41	13,000	--
	09-12-2018		639	377 S	9.5	8.9	486	19.3	2.8	< 0.02	120	3,400	9
	09-18-2018	B	--	112 S	--	--	580	18.1	--	--	270	12,000	--
Standards from WQCC Regulation No. 32, Appendix 32-1 (if applicable)		See note 2			5.0 (minimum)	6.5-9.0		Mar - Nov = 28.6 Dec - Feb = 14.3		See note 1	126		17.1 (chronic)

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less than	<
greater than	>
estimated	E
holding time exceeded	@
see USGS result comment in NWIS	c
sample was diluted	d
below the reporting level but at or above the detection level	n
value verified by rerun, same method	r
value will likely be estimated when record is approved	#
data is preliminary and subject to change based on USGS QA/QC	S

Location	Date	Sample Note	Barometric pressure (mmHg)	Flow (cfs)	Dissolved oxygen (mg/L)	pH	Specific conductance (µS/cm at 25°C)	Temperature (°C)	Turbidity (FNU)	Total Ammonia (mg/L as N)	Escherichia coli (#/100 mL)	Total coliform (#/100 mL)	Selenium (µg/L)
SP #13 ARKANSAS RIVER NEAR AVONDALE, CO. USGS Site # 7109500	10-10-2017		650	628 S	8.6	8.4	802	15.8	35	< 0.02	91	> 2,400	11.6 d
	10-17-2017	B	--	558 S	--	--	830	14.8	--	--	52	> 2,400	--
	11-06-2017		642	629 S	9.7	8.4	791	11.3	32	< 0.02	45	2,400	11.1 d
	11-16-2017	B	--	395 S	--	--	1,000	10.6	--	--	17	830	--
	12-04-2017		642	329 S	10.6	8.4	1,060	6.6	30	< 0.02	41	2,400	16 d
	12-19-2017	B	--	338 S	--	--	1,030	5.2	--	--	13	390	--
	01-11-2018		647	360 S	11	8.2	1,010	4.1	41	0.04 n	370	1,700	16.9 d
	01-25-2018	B	--	325 S	--	--	1,270	2.6	--	--	11	610	--
	02-01-2018		648	315 S	10.9	8.4	1,060	5.4	27	0.03 n	9	390	17.8 d
	02-15-2018	B	--	300 S	--	--	1,130	4.9	--	--	33	870	--
	03-08-2018		643	498 S	10.3	8.4	795	8.8	26	< 0.02	35	770	12.1 d
	03-22-2018	B	--	760 S	--	--	722	6.1	--	--	42	1,000	--
	04-06-2018		646	1,120 S	9	8.5	626	9.8	30	< 0.02	7	690	9.6 d
	04-24-2018	B	--	628 S	--	--	754	9.9	--	--	210	> 2,400	--
	05-10-2018		642	574 S	9.2	8.4	740	16.5	14	< 0.02	36	2,000	12 d
	05-22-2018	B	--	1,300 S	--	--	615	15	--	--	15	1,700	--
	06-08-2018		646	1,170 S	8.7	8.3	622	15.5	12	< 0.02	60	2,400	11.9 d
	06-21-2018	B	--	754 S	--	--	640	17.1	--	--	100	2,400	--
	07-11-2018		646	726 S	8.2	8.4	599	18.9	26	< 0.02	66	> 2,400	8.9 d
	07-19-2018	B	--	760 S	--	--	645	18.4	--	--	360	17,000	--
	08-06-2018		649	325 S	7.7	8.3	854	26.7	56	< 0.02	20	20,000	12.5 d
	08-22-2018	B	--	314 S	--	--	979	24.6	--	--	160	> 24,000	--
	09-12-2018		643	503 S	7.8	8.3	710	21.1	50	< 0.02	130	17,000	9.9
	09-17-2018	B	--	227 S	--	--	972	25.6	--	--	150	14,000	--
Standards from WQCC Regulation No. 32, Appendix 32-1 (if applicable)		See note 2			5.0 (minimum)	6.5-9.0		See note 4		See note 1	126		14.1 (chronic)

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4. Mar - Nov = 28.6, Dec = 21.5, Jan - Feb = 14.3

Legend	
Description	Qualifier
no data for that parameter for that sample event	--
less than	<
greater than	>
estimated	E
holding time exceeded	@
see USGS result comment in NWIS	c
sample was diluted	d
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data is preliminary and subject to change based on USGS QA/QC	S

Complaint Log

Complaint logs are only recorded during construction, so no attachment is included. This activity will resume during Phase II construction.

Emergency Response Log

Emergency response logs are only recorded during construction, so no attachment is included. This activity will resume during Phase II construction.

Log of Work Occurring During Non-Typical Work Hours

Non-typical work hours are only recorded during construction, so no attachment is included. This activity will resume during Phase II construction.

Expenditures for Wastewater System Improvements



Colorado Springs Utilities
It's how we're all connected

Pueblo County 1041 Permit

**Expenditures for Wastewater System
Improvements**

Annual Progress Report

January 11, 2019

Reporting for the period between January 1, 2018 and December 31, 2018

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APPENDIX A – LCERP COMPLETION TABLE

APPENDIX B – R&R COMPLETION TABLE

Introduction

On March 18, 2009 the Pueblo Board of County Commissioners passed Resolution No. P&D 09-22, approving 1041 Permit No. 2008-002 with terms and conditions for construction of the Southern Delivery System water project within Pueblo County, Colorado.

1041 Permit Condition No.7 requires that Springs Utilities provide an annual report to the Pueblo County Board of Commissioners on or before January 31 of each year reporting the Wastewater System Improvement expenditures from January 1 through December 31. Condition No.7 of the permit states:

Expenditures for Wastewater System Improvements

In order to continue its efforts to protect against future spills to Fountain Creek, to increase its opportunities for reuse, and to mitigate possible water quality impacts by the SDS Project to Fountain Creek, Colorado Springs Utilities shall commit to invest an additional seventy-five million dollars (\$75,000,000) in its wastewater system. Expenditures will be made as part of the wastewater collection system rehabilitation programs or wastewater reuse systems between January 1, 2010 and December 31, 2024 as required. These expenditures shall be for projects not currently required by other regulatory permits, agency enforcement or court orders, consent agreements, or governmental regulations existing as of January 30, 2010. These expenditures will include the Local Collector Evaluation and Rehabilitation Program (LCERP) for the improvement and fortification of wastewater lines which could adversely affect Fountain Creek or its tributaries. These expenditures are subject to annual appropriation by the Colorado Springs City Council. Beginning in 2010, by January 31 of each year, Colorado Springs Utilities shall provide an annual report to Pueblo County describing such expenditures for the prior year.

The Wastewater Collection System Rehabilitation Programs are comprehensive programs that systematically inspect, evaluate, prioritize, and rehabilitate the entire Springs Utilities collection system. In 2018 the projects that met the terms of Condition No. 7 are: 1) the Local Collectors Evaluation and Rehabilitation Project (LCERP); 2) the Collection System Rehabilitation and Replacement Project (R&R); and 3) the Manhole Evaluation and Rehabilitation Project (MHERP). These projects are independent of Springs Utilities' normal operation and maintenance programs.

Project Descriptions

Local Collectors Evaluation and Rehabilitation Project (LCERP)

LCERP consists of the systematic evaluation and rehabilitation of sewer collection pipes less than 10-inch in diameter.

LCERP:

- Determines the condition of all the sanitary sewer pipe segments less than 10-inches in diameter and places them by priority on a schedule to be re-inspected, rehabilitated, repaired and/or replaced.
- Reduces the risk of Sanitary Sewer Overflows (SSO's)
- Is part of the overall long-term investments to our wastewater system through the year 2025.

LCERP repaired or rehabilitated approximately 40,514 feet of less than 10-inch sewer pipe, representing approximately 143-line segments, at a cost of \$2,232,073 in 2018.

Collection System Rehabilitation and Replacement Project (R&R)

The Sanitary Sewer Evaluation and Rehabilitation Program (SSERP) was completed on December 31, 2012, meeting all the requirements of the CDPHE Compliance Order on Consent (COC). Closure of the COC was requested on January 29, 2013 and granted by CDPHE on March 8, 2013. The successor Collection System Replacement and Rehabilitation Program (R&R) contracts were also put into place in 2009 to continue the rehabilitation and replacement of the pipes identified and is described below. The total cost associated with SSERP since 2000 is approximately \$74.85million.

The R&R project rehabilitates or replaces large diameter (greater than 10-inch) sewer pipe that were installed after January 1, 1994.

R&R:

- Is designed to facilitate operations, increase capacity, and upgrade the system
- Focuses on the reduction of sanitary sewer overflows and stoppages
- Reduces the risk of spills and protecting the public health and environment.

R&R repaired or rehabilitated approximately 8,159 feet of pipe greater than 10-inch, representing 25-line segments, at a cost of \$3,664,480 in 2018.

Manhole Evaluation and Rehabilitation Project (MHERP)

MHERP has been developed as a comprehensive program to provide the rehabilitation of sanitary sewer manholes throughout the Springs Utilities wastewater collection system

MHERP:

- Is designed to reducing the risk of spills, stoppages and SSOs
- Reduces infiltration and inflow at manholes throughout collection system.

Only normal operation and maintenance of manholes was conducted in 2018.

Wastewater Reuse System

The Wastewater Reuse System consists of several pumping stations, storage reservoirs, holding ponds, transmission mains and a tertiary treatment facility.

Wastewater Reuse Systems:

- Deliver tertiary-treated wastewater to parks, cemeteries, golf courses and commercial properties for landscape irrigation
- Deliver tertiary-treated wastewater to Drake Power Plant for evaporative cooling
- Include supplies from raw surface water, groundwater, and reclaimed water.

Only normal operation and maintenance of the reuse system was conducted in 2018.

Summary

During the reporting period of January 1, 2018 through December 31, 2018 costs for LCERP, System R&R, and MHERP totaled \$5,896,553. The total Wastewater Expenditures reported since 2010 is \$62,458,304.

Appendix A

2018 Local Collectors Evaluation and Rehabilitation Program Completion Table

CSU Location ID	Work Order #	DIAMETER (inches)	LENGTH (feet)	Assesment Description	Collection Basin Name	Date Complete
WW.145844	3203839	8	175	CIPP	LOWER SAND CREEK	01/08/18
WW.135213	3203840	8	260	CIPP	LOWER SAND CREEK	01/08/18
WW.160071	3203845	8	295	CIPP	LOWER SAND CREEK	01/09/18
WW.158048	3203849	8	293	CIPP	LOWER SAND CREEK	01/09/18
WW.158049	3203846	8	271	CIPP	LOWER SAND CREEK	01/10/18
WW.143748	3203844	8	264	CIPP	LOWER SAND CREEK	01/10/18
WW.135210	3203841	8	159	CIPP	LOWER SAND CREEK	01/11/18
WW.143747	3203842	8	276	CIPP	LOWER SAND CREEK	01/11/18
WW.162051	3203794	8	229	CIPP	LOWER SAND CREEK	01/12/18
WW.141648	3203806	8	245	CIPP	LOWER SAND CREEK	01/12/18
WW.162093	3203864	8	211	CIPP	LOWER SAND CREEK	01/17/18
WW.139558	3203801	8	285	CIPP	LOWER SAND CREEK	01/17/18
WW.147873	3203808	8	280	CIPP	LOWER SAND CREEK	01/17/18
WW.155920	3203803	8	266	CIPP	LOWER SAND CREEK	01/17/18
WW.155919	3203825	8	233	CIPP	LOWER SAND CREEK	01/18/18
WW.143728	3203866	8	225	CIPP	LOWER SAND CREEK	01/18/18
WW.164160	3203833	8	146	CIPP	LOWER SAND CREEK	01/18/18
WW.139586	3203836	8	254	CIPP	LOWER SAND CREEK	01/18/18
WW.135080	3203811	8	230	CIPP	LOWER SAND CREEK	01/19/18
WW.141606	3203852	8	277	CIPP	LOWER SAND CREEK	01/19/18
WW.141604	3203817	8	239	CIPP	LOWER SAND CREEK	01/25/18
WW.155884	3203827	8	178	CIPP	LOWER SAND CREEK	01/25/18
WW.135450	3407002	8	399	CIPP	WEST SIDE	01/26/18
WW.147891	3203832	8	141	CIPP	LOWER SAND CREEK	01/26/18
WW.139587	3203835	8	282	CIPP	LOWER SAND CREEK	01/26/18
WW.147992	3174182	8	183	CIPP	WEST SIDE	01/29/18
WW.159862	3174269	8	345	CIPP	BEAR CREEK	01/30/18
WW.151909	3174052	8	326	CIPP	LOWER SAND CREEK	01/31/18
WW.158055	3174049	8	403	CIPP	LOWER SAND CREEK	01/31/18
WW.162116	3174045	8	252	CIPP	LOWER SAND CREEK	02/01/18
WW.158054	3174047	8	374	CIPP	LOWER SAND CREEK	02/05/18
WW.150190	3174109	8	315	CIPP	LOWER SAND CREEK	02/06/18
WW.147836	3174013	8	343	CIPP	LOWER SAND CREEK	02/08/18
WW.162058	3173998	8	399	CIPP	LOWER SAND CREEK	02/09/18
WW.145700	3174104	8	161	CIPP	LOWER SAND CREEK	02/12/18
WW.145697	3174105	8	198	CIPP	LOWER SAND CREEK	02/12/18
WW.156844	3174266	8	290	CIPP	TEMPLETON GAP	02/13/18
WW.136361	3174267	8	335	CIPP	TEMPLETON GAP	02/14/18
WW.207985	3287499	6	142	Replace	STRATTON MEADOWS	04/08/18
WW.207986	3279796	6	160	Replace	STRATTON MEADOWS	04/09/18
WW.137494	3174010	8	294	CIPP	LOWER SAND CREEK	06/12/18
WW.164247	2927157	8	314	CIPP	GARDEN OF THE GODS	07/23/18
WW.135384	2927128	8	411	CIPP	GARDEN OF THE GODS	07/24/18
WW.143828	2927148	8	322	CIPP	GARDEN OF THE GODS	07/24/18
WW.135397	2927097	8	80	CIPP	GARDEN OF THE GODS	07/25/18

2018 Local Collectors Evaluation and Rehabilitation Program Completion Table

CSU Location ID	Work Order #	DIAMETER (inches)	LENGTH (feet)	Assesment Description	Collection Basin Name	Date Complete
WW.141768	2927151	8	325	CIPP	GARDEN OF THE GODS	07/25/18
WW.164239	2927167	8	371	CIPP	GARDEN OF THE GODS	07/26/18
WW.135377	2927096	8	114	CIPP	GARDEN OF THE GODS	07/27/18
WW.146099	2927159	8	377	CIPP	GARDEN OF THE GODS	07/27/18
WW.137644	2927161	8	165	CIPP	GARDEN OF THE GODS	07/30/18
WW.160161	2927127	8	138	CIPP	GARDEN OF THE GODS	07/31/18
WW.162382	2927145	8	166	CIPP	GARDEN OF THE GODS	07/31/18
WW.162192	2927146	8	152	CIPP	GARDEN OF THE GODS	07/31/18
WW.145853	3174014	8	327	CIPP	LOWER SAND CREEK	07/31/18
WW.158146	2927143	8	275	CIPP	GARDEN OF THE GODS	08/01/18
WW.145917	2927147	8	99	CIPP	GARDEN OF THE GODS	08/01/18
WW.135066	3174005	8	346	CIPP	LOWER SAND CREEK	08/01/18
WW.137648	2927126	8	460	CIPP	GARDEN OF THE GODS	08/02/18
WW.135064	3174006	8	359	CIPP	LOWER SAND CREEK	08/02/18
WW.135400	2927160	8	16	CIPP	GARDEN OF THE GODS	08/03/18
WW.141778	2927156	8	525	CIPP	GARDEN OF THE GODS	08/03/18
WW.143707	3174108	8	326	CIPP	LOWER SAND CREEK	08/03/18
WW.136300	3174184	8	289	CIPP	TEMPLETON GAP	08/06/18
WW.141765	3253377	8	261	CIPP	GARDEN OF THE GODS	08/07/18
WW.139569	3174111	8	418	CIPP	LOWER SAND CREEK	08/07/18
WW.137677	3294557	8	500	CIPP	WEST SIDE	08/07/18
WW.139534	3174009	8	209	CIPP	LOWER SAND CREEK	08/08/18
WW.151915	3174015	8	152	CIPP	LOWER SAND CREEK	08/08/18
WW.164283	3296465	8	216	CIPP	WEST SIDE	08/08/18
WW.160678	3294526	8	401	CIPP	CRAGMOOR	08/08/18
WW.162115	3174048	8	378	CIPP	LOWER SAND CREEK	08/09/18
WW.140206	3294587	8	279	CIPP	CRAGMOOR	08/09/18
WW.164338	3294537	8	393	CIPP	CRAGMOOR	08/09/18
WW.149898	3174051	8	181	CIPP	LOWER SAND CREEK	08/10/18
WW.159322	3174185	8	402	CIPP	TEMPLETON GAP	08/13/18
WW.135418	3294552	8	563	CIPP	WEST SIDE	08/13/18
WW.135741	3174007	8	413	CIPP	LOWER SAND CREEK	08/14/18
WW.135436	3294542	8	321	CIPP	WEST SIDE	08/14/18
WW.154481	3296463	8	380	CIPP	CRAGMOOR	08/15/18
WW.137702	3294547	8	258	CIPP	WEST SIDE	08/15/18
WW.149895	3174044	8	333	CIPP	LOWER SAND CREEK	08/16/18
WW.148049	3294524	8	313	CIPP	CRAGMOOR	08/16/18
WW.136111	3294504	8	246	CIPP	CRAGMOOR	08/16/18
WW.135423	3294545	8	379	CIPP	WEST SIDE	08/16/18
WW.159690	3296550	8	255	CIPP	CRAGMOOR	08/17/18
WW.155947	3174021	8	198	CIPP	LOWER SAND CREEK	08/21/18
WW.160077	3174032	8	159	CIPP	LOWER SAND CREEK	08/21/18
WW.159688	3294563	8	400	CIPP	CRAGMOOR	08/21/18
WW.134391	3294538	8	175	CIPP	CRAGMOOR	08/21/18
WW.149896	3174043	8	360	CIPP	LOWER SAND CREEK	08/22/18

2018 Local Collectors Evaluation and Rehabilitation Program Completion Table

CSU Location ID	Work Order #	DIAMETER (inches)	LENGTH (feet)	Assesment Description	Collection Basin Name	Date Complete
WW.154118	3296495	8	450	CIPP	CRAGMOOR	08/22/18
WW.139173	3296544	8	363	CIPP	CRAGMOOR	08/22/18
WW.137564	3174028	8	263	CIPP	LOWER SAND CREEK	08/23/18
WW.149899	3174042	8	312	CIPP	LOWER SAND CREEK	08/24/18
WW.135171	3174110	8	385	CIPP	LOWER SAND CREEK	08/27/18
WW.134337	3294570	8	401	CIPP	CRAGMOOR	08/27/18
WW.134355	3294821	8	325	CIPP	CRAGMOOR	08/27/18
WW.164165	3174030	8	324	CIPP	LOWER SAND CREEK	08/28/18
WW.155499	3296506	8	409	CIPP	CRAGMOOR	08/28/18
WW.134349	3296469	8	330	CIPP	CRAGMOOR	08/28/18
WW.171131	3296519	8	331	CIPP	CRAGMOOR	08/28/18
WW.143753	3174023	8	320	CIPP	LOWER SAND CREEK	08/29/18
WW.137129	3294556	8	183	CIPP	CRAGMOOR	08/29/18
WW.145414	3296513	8	403	CIPP	CRAGMOOR	08/29/18
WW.163743	3296520	8	400	CIPP	CRAGMOOR	08/29/18
WW.134351	3296535	8	297	CIPP	CRAGMOOR	08/30/18
WW.158059	3174039	8	200	CIPP	LOWER SAND CREEK	08/31/18
WW.137569	3174026	8	239	CIPP	LOWER SAND CREEK	08/31/18
WW.163739	3296496	8	275	CIPP	CRAGMOOR	08/31/18
WW.142975	3178101	8	267	CIPP	TEMPLETON GAP	09/05/18
WW.145962	3294533	8	404	CIPP	WEST SIDE	09/05/18
WW.139349	3294558	8	202	CIPP	WEST SIDE	09/05/18
WW.153162	3178100	8	260	CIPP	LOWER COTTONWOOD CREEK	09/06/18
WW.144350	3294543	8	420	CIPP	CRAGMOOR	09/06/18
WW.162118	3174036	8	246	CIPP	LOWER SAND CREEK	09/07/18
WW.147897	3174041	8	206	CIPP	LOWER SAND CREEK	09/10/18
WW.153168	3178099	8	400	CIPP	TEMPLETON GAP	09/11/18
WW.152013	3294551	8	106	CIPP	WEST SIDE	09/11/18
WW.134330	3294583	8	138	CIPP	CRAGMOOR	09/12/18
WW.151484	3294564	8	157	CIPP	CRAGMOOR	09/12/18
WW.149517	3294568	8	296	CIPP	CRAGMOOR	09/12/18
WW.139190	3294539	8	413	CIPP	CRAGMOOR	09/12/18
WW.137128	3296547	8	256	CIPP	CRAGMOOR	09/13/18
WW.164409	3296551	8	234	CIPP	CRAGMOOR	09/13/18
WW.141241	3296479	8	124	CIPP	CRAGMOOR	09/13/18
WW.149525	3296504	8	140	CIPP	CRAGMOOR	09/13/18
WW.134350	3296502	8	259	CIPP	CRAGMOOR	09/13/18
WW.164169	3174017	8	219	CIPP	LOWER SAND CREEK	09/14/18
WW.163742	3296517	8	183	CIPP	CRAGMOOR	09/14/18
WW.155501	3296518	8	201	CIPP	CRAGMOOR	09/14/18
WW.135704	3296516	8	180	CIPP	CRAGMOOR	09/14/18
WW.151839	3174011	8	407	CIPP	LOWER SAND CREEK	09/17/18
WW.141240	3296510	8	398	CIPP	CRAGMOOR	09/17/18
WW.147488	3296508	8	230	CIPP	CRAGMOOR	09/17/18
WW.159327	3178096	8	450	CIPP	TEMPLETON GAP	09/18/18

2018 Local Collectors Evaluation and Rehabilitation Program Completion Table

CSU Location ID	Work Order #	DIAMETER (inches)	LENGTH (feet)	Assesment Description	Collection Basin Name	Date Complete
WW.134347	3407094	8	134	CIPP	CRAGMOOR	09/18/18
WW.159689	3296521	8	345	CIPP	CRAGMOOR	09/18/18
WW.137565	3174027	8	365	CIPP	LOWER SAND CREEK	09/19/18
WW.149519	3296514	8	290	CIPP	CRAGMOOR	09/19/18
WW.134333	3296507	8	449	CIPP	CRAGMOOR	09/19/18
WW.157889	3174107	8	234	CIPP	LOWER SAND CREEK	09/20/18
WW.160320	3296543	8	280	CIPP	CRAGMOOR	09/20/18
WW.155502	3296530	8	278	CIPP	CRAGMOOR	09/20/18
Totals	143		40,514			

Appendix B

2018 - Collection System Rehabilitation and Replacement Project

PIPE LID	Task Order #	Work Order #	Existing Size	PIPE COND.	LENGTH	NEW PIPE SIZE	Completion Date
WW.153260	86	3406714	42	Corroded Pipe	505	NA	01/04/18
WW.148101	86	3406717	42	Corroded Pipe	530	NA	01/05/18
WW.163472	86	3406723	42	Corroded Pipe	390	NA	01/06/18
WW.145166	86	3406720	48	Corroded Pipe	462	NA	01/07/18
WW.163473	86	3406713	48	Corroded Pipe	337	NA	01/20/18
WW.138921	86	3406721	54	Corroded Pipe	532	NA	01/21/18
WW.163474	86	3406715	54	Corroded Pipe	371	NA	01/22/18
WW.155231	86	3406722	60	Corroded Pipe	309	NA	02/08/18
WW.140964	86	3406719	60	Corroded Pipe	419	NA	02/09/18
WW.151224	86	3406712	60	Corroded Pipe	205	NA	02/10/18
WW.151522	86	3406710	12	Corroded Pipe	390	NA	04/09/18
WW.155883	86	3368732	10	Corroded Pipe	275	NA	04/10/18
WW.167741	88	3233670	12	Corroded Pipe	467	NA	04/11/18
WW.151688	88	3233669	12	Corroded Pipe	64	NA	04/12/18
WW.137723	88	3233667	18	Corroded Pipe	486	NA	04/14/18
WW.190987	88	3233662	30	Corroded Pipe	267	NA	04/14/18
WW.190989	88	3233663	30	Corroded Pipe	266	NA	04/15/18
WW.139351	88	3233664	30	Corroded Pipe	284	NA	04/16/18
WW.145984	88	3233665	30	Corroded Pipe	488	NA	04/17/18
WW.164303	88	3233671	30	Corroded Pipe	49	NA	05/06/18
WW.160211	88	3233674	12	Corroded Pipe	273	NA	05/07/18
WW.160210	88	3233673	12	Corroded Pipe	60	NA	05/08/18
WW.150045	88	3233672	12	Corroded Pipe	27	NA	05/09/18
WW.143516	88	3233666	18	Corroded Pipe	525	NA	05/10/18
WW.147694	88	3233668	15	Corroded Pipe	178	NA	05/11/18
Subtotal	25				8,159		

Summary of Storage, Diversion, Delivery of Water in Pueblo County related to the SDS Project

Data will be reported in 12-month increments, from November of the previous year to October of the current year.

Summary of Storage, Diversion, Delivery of Water in Pueblo County

Storage & Diversion

Colorado Springs Utilities

	Pueblo Reservoir EOM Storage (acre-feet)		Total Diversion	Total Delivery
	<i>Long Term Excess Capacity Acct</i>	<i>Fry-Ark Carry Over Account</i>	acre-feet	acre-feet
Oct 2017	14,556.99	48,360.39	0.00	397.68
Nov	15,823.92	48,219.97	0.00	404.68
Dec	16,149.30	48,137.12	0.00	408.33
Jan 2018	16,655.10	48,064.12	0.00	415.37
Feb	16,201.08	47,966.13	0.00	351.84
Mar	16,004.74	47,773.60	0.00	394.73
Apr	17,542.28	47,429.15	0.00	314.10
May	17,218.01	51,971.09	0.00	271.77
Jun	16,231.51	51,276.43	0.00	181.42
Jul	17,705.75	50,524.71	0.00	258.83
Aug	19,151.32	50,044.80	0.00	330.37
Sep	14,826.37	49,597.73	0.00	311.28

Annual Total: 4040.40

City of Fountain

	Pueblo EOM Storage (acre-feet)		Total Diversion	Total Delivery
	<i>Fry-Ark Carryover Account</i>	<i>SDS Long-Term Excess Capacity Account</i>	acre-feet	acre-feet
Oct 2017	6719.94	1268.08	0.00	86.53
Nov	6700.46	1263.43	0.00	61.01
Dec	6689.34	1283.35	0.00	67.99
Jan 2018	6679.19	1210.56	0.00	70.91
Feb	6665.57	1292.72	0.00	5.35
Mar	6639.02	1275.34	0.00	12.13
Apr	6591.15	1212.54	0.00	53.76
May	7135.11	1131.25	0.00	178.92
Jun	7039.74	1113.53	0.00	231.84
Jul	6965.71	1201.02	0.00	128.88
Aug	6900.82	1244.49	0.00	43.73
Sep	6839.19	1217.53	0.00	75.77

Annual Total: 1016.82

Pueblo West Metropolitan District

	Pueblo Reservoir EOM Storage (acre-feet)	Total Diversion	Total Delivery
	<i>Pueblo West</i>	acre-feet	acre-feet
Oct 2017	5025.34	0.00	0.00
Nov	7121.03	0.00	0.00
Dec	8114.58	0.00	0.00
Jan 2018	8014.29	0.00	0.00
Feb	7814.98	0.00	0.00
Mar	7486.00	0.00	0.00
Apr	6732.26	0.00	0.00
May	6572.90	0.00	0.00
Jun	6090.63	0.00	0.00
Jul	8112.22	221.00	221.00
Aug	7422.80	106.00	106.00
Sep	7843.63	0.00	0.00

Annual Total: 327.00 327.00

Notes: Only used North Outlet Works Jul - Aug; remainder of deliveries out of South Outlet Works

Security Water District

	Pueblo EOM Storage (acre-feet)		Total Diversion	Total Delivery
	<i>Fry-Ark Carryover Account</i>	<i>SDS Long- Term Excess Capacity Account</i>	acre-feet	acre-feet
Oct 2017	4305.00	989.34	0.00	48.85
Nov	4242.71	971.99	0.00	42.35
Dec	4235.59	987.30	0.00	52.16
Jan 2018	4229.16	938.13	0.00	50.25
Feb	4220.54	891.49	0.00	57.39
Mar	4203.68	821.24	0.00	67.47
Apr	4062.72	900.28	0.00	85.59
May	4858.54	714.58	0.00	232.09
Jun	4680.75	573.09	0.00	267.61
Jul	4631.53	479.23	0.00	197.03
Aug	4588.38	439.05	0.00	144.26
Sep	4408.11	375.25	0.00	176.10

Annual Total: 1421.15

Summary of Participants' SDS Return Flows to Fountain Creek Including Storage and Releases of Such Return Flows

Data will be reported in 12-month increments, from November of the previous year to October of the current year.

Summary of Participants' Return Flows to Fountain Creek
Including Storage and Releases of Such Return Flows
Return Flow Summary

Colorado Springs Utilities

SDS Return Flow Summary

	Total SDS RFs to Fountain Creek	Avg Flow	Max Daily Flow	RFs to Fountain Creek Storage	RFs released from Ftn Ck Storage
	acre-feet	cfs	cfs	acre-feet	acre-feet
Oct 2017	264.12	4.30	7.77	0.00	0.00
Nov	303.22	5.10	9.57	0.00	0.00
Dec	325.42	5.29	7.96	0.00	0.00
Jan 2018	369.71	6.01	13.64	0.00	0.00
Feb	310.34	5.59	10.98	0.00	0.00
Mar	282.26	4.59	10.57	0.00	0.00
Apr	179.43	3.02	6.54	0.00	0.00
May	87.16	1.42	3.70	0.00	0.00
Jun	49.10	0.83	1.64	0.00	0.00
Jul	78.14	1.27	3.01	0.00	0.00
Aug	132.02	2.15	3.29	0.00	0.00
Sep	103.18	1.73	3.30	0.00	0.00

2484.11

0.00

0.00

City of Fountain

	Total SDS RFs to Fountain Creek	Avg Flow	Max Daily Flow	RFs to Ftn Ck Storage	RFs released from Ftn Ck Storage
	acre-feet	cfs	cfs	acre-feet	acre-feet
Oct 2017	49.41	0.80	1.22	0.00	0.00
Nov	36.00	0.60	0.85	0.00	0.00
Dec	53.03	0.86	1.29	0.00	0.00
Jan 2018	58.86	0.96	1.18	0.00	0.00
Feb	4.33	0.08	0.36	0.00	0.00
Mar	10.46	0.17	0.71	0.00	0.00
Apr	43.12	0.72	1.90	0.00	0.00
May	134.73	2.19	3.54	0.00	0.00
Jun	166.58	2.80	3.44	0.00	0.00
Jul	73.85	1.20	2.61	0.00	0.00
Aug	24.86	0.40	0.89	0.00	0.00
Sep	37.01	0.62	1.01	0.00	0.00

692.24

0.00

0.00

Pueblo West Metropolitan District

Return Flow Summary

Pueblo West does not exchange flows from Fountain Creek.

	Total SDS RFs to Fountain Creek	Avg Flow	Max Daily Flow	RFs to Ftn Ck Storage	RFs released from Ftn Ck Storage
	acre-feet	cfs	cfs	acre-feet	acre-feet
Oct 2017	acre-feet	cfs	cfs	acre-feet	acre-feet
Nov	n/a	0.00	0.00	0.00	0.00
Dec		0.00	0.00	0.00	0.00
Jan 2018		0.00	0.00	0.00	0.00
Feb		0.00	0.00	0.00	0.00
Mar		0.00	0.00	0.00	0.00
Apr		0.00	0.00	0.00	0.00
May		0.00	0.00	0.00	0.00
Jun		0.00	0.00	0.00	0.00
Jul		0.00	0.00	0.00	0.00
Aug		0.00	0.00	0.00	0.00
Sep		0.00	0.00	0.00	0.00
	0.00			0.00	0.00

Security Water District

	Total SDS RFs to Fountain Creek	Avg Flow	Max Daily Flow	RFs to Ftn Ck Storage	RFs released from Ftn Ck Storage
	acre-feet	cfs	cfs	acre-feet	acre-feet
Oct 2017	39.32	0.64	0.65	0.00	0.00
Nov	43.40	0.73	0.91	0.00	0.00
Dec	53.98	0.88	0.88	0.00	0.00
Jan 2018	53.56	0.87	0.87	0.00	0.00
Feb	61.61	1.11	1.11	0.00	0.00
Mar	57.00	0.93	0.97	0.00	0.00
Apr	49.85	0.84	0.84	0.00	0.00
May	77.84	1.27	1.27	0.00	0.00
Jun	79.82	1.34	1.35	0.00	0.00
Jul	74.31	1.21	1.22	0.00	0.00
Aug	65.87	1.07	1.08	0.00	0.00
Sep	67.67	1.14	1.14	0.00	0.00
	724.23			0.00	0.00

Summaries of SDS Exchanges by Participants between Pueblo Reservoir and the Fountain Creek Confluence

Data will be reported in 12-month increments, from November of the previous year to October of the current year.

Summaries of Exchanges by Participants between Pueblo Reservoir and the Fountain Creek Confluence

Colorado Springs Utilities

SDS Exchange Summary

	Total Exchange	Avg Flow
	acre-feet	cfs
Oct 2017	187.45	3.15
Nov	296.03	4.97
Dec	283.17	4.76
Jan 2018	200.93	3.38
Feb	0.00	0.00
Mar	128.16	2.15
Apr	153.66	2.50
May	72.05	1.21
Jun	43.29	0.70
Jul	58.41	0.95
Aug	46.93	0.79
Sep	70.71	1.15

1540.80

City of Fountain

SDS Exchange Summary

	Total Exchange	Avg Flow
	acre-feet	cfs
Oct 2017	0.00	0.00
Nov	0.00	0.00
Dec	0.00	0.00
Jan 2018	0.00	0.00
Feb	0.00	0.00
Mar	0.00	0.00
Apr	0.00	0.00
May	0.00	0.00
Jun	0.00	0.00
Jul	0.00	0.00
Aug	0.00	0.00
Sep	0.00	0.00

0.00

Pueblo West Metropolitan District

SDS Exchange Summary

	Total Exchange	Avg Flow
	acre-feet	cfs
Oct 2017	0.00	0.00
Nov	0.00	0.00
Dec	0.00	0.00
Jan 2018	0.00	0.00
Feb	0.00	0.00
Mar	0.00	0.00
Apr	0.00	0.00
May	0.00	0.00
Jun	0.00	0.00
Jul	0.00	0.00
Aug	0.00	0.00
Sep	0.00	0.00

0.00

Security Water District

SDS Exchange Summary

	Total Exchange	Avg Flow
	acre-feet	cfs
Oct 2017	0.00	0.00
Nov	0.00	0.00
Dec	0.00	0.00
Jan 2018	0.00	0.00
Feb	0.00	0.00
Mar	0.00	0.00
Apr	0.00	0.00
May	0.00	0.00
Jun	0.00	0.00
Jul	0.00	0.00
Aug	0.00	0.00
Sep	0.00	0.00

0.00

Pueblo Flow Management Program

Data will be reported in 12-month increments, from November of the previous year to October of the current year.

Pueblo Flow Management Program

Southern Delivery System

1041 Permit Reporting

Water Year 2018

Entity: Colorado Springs Utilities

Pueblo Flow Management Program Summary

			Amount	Rate	Run to Colo Canal	Colo Canal aug	Leased
Date Curtailed	Start Time	End Time	acre-feet	cfs	acre-feet	acre-feet	acre-feet
January 24, 2018	12:00	24:00	22.40	22.59	0.00	0.00	22.40
January 25, 2018	0:00	24:00	45.83	23.11	0.00	0.00	45.83
January 26, 2018	0:00	24:00	47.07	23.73	0.00	0.00	47.07
January 27, 2018	0:00	24:00	40.28	20.31	0.00	0.00	40.28
January 28, 2018	0:00	24:00	35.63	17.96	0.00	0.00	35.63
January 29, 2018	0:00	24:00	32.75	16.51	0.00	0.00	32.75
January 30, 2018	0:00	24:00	32.98	16.63	0.00	0.00	32.98
January 31, 2018	0:00	24:00	35.53	17.91	0.00	0.00	35.53
February 1, 2018	0:00	24:00	38.78	19.55	0.00	0.00	38.78
February 2, 2018	0:00	24:00	42.10	21.22	0.00	0.00	42.10
February 3, 2018	0:00	24:00	42.07	21.21	0.00	0.00	42.07
February 4, 2018	0:00	24:00	42.02	21.18	0.00	0.00	42.02
February 5, 2018	0:00	24:00	41.87	21.11	0.00	0.00	41.87
February 6, 2018	0:00	24:00	40.88	20.61	0.00	0.00	40.88
February 7, 2018	0:00	24:00	38.98	19.65	0.00	0.00	38.98
February 8, 2018	0:00	24:00	40.70	20.52	0.00	0.00	40.70
February 9, 2018	0:00	24:00	40.90	20.62	0.00	0.00	40.90
February 10, 2018	0:00	24:00	44.04	22.20	0.00	0.00	44.04
February 11, 2018	0:00	24:00	45.74	23.06	0.00	0.00	45.74
February 12, 2018	0:00	24:00	46.67	23.53	0.00	0.00	46.67
February 13, 2018	0:00	24:00	29.79	15.02	0.00	0.00	29.79
February 14, 2018	0:00	24:00	38.76	19.54	0.00	0.00	38.76
February 15, 2018	0:00	24:00	39.18	19.75	0.00	0.00	39.18
February 16, 2018	0:00	24:00	39.85	20.09	0.00	0.00	39.85
February 17, 2018	0:00	24:00	43.89	22.13	0.00	0.00	43.89
February 18, 2018	0:00	24:00	45.79	23.09	0.00	0.00	45.79
February 19, 2018	0:00	24:00	46.87	23.63	0.00	0.00	46.87
February 20, 2018	0:00	24:00	36.25	18.28	0.00	0.00	36.25
February 21, 2018	0:00	24:00	39.98	20.16	0.00	0.00	39.98
February 22, 2018	0:00	24:00	38.64	19.48	0.00	0.00	38.64
February 23, 2018	0:00	24:00	41.62	20.98	0.00	0.00	41.62

Entity: Colorado Springs Utilities

Pueblo Flow Management Program Summary con't

			Amount	Rate	Run to Colo Canal	Colo Canal aug	Leased
Date Curtailed	Start Time	End Time	acre-feet	cfs	acre-feet	acre-feet	acre-feet
February 24, 2018	0:00	24:00	48.00	24.20	0.00	0.00	48.00
February 25, 2018	0:00	24:00	45.72	23.05	0.00	0.00	45.72
February 26, 2018	0:00	24:00	47.76	24.08	23.88	0.00	23.88
February 27, 2018	0:00	16:00	42.54	21.45	42.54	0.00	0.00
August 9, 2018	9:00	24:00	60.54	38.45	0.00	12.87	42.41
August 10, 2018	0:00	24:00	67.99	24.09	0.00	12.87	49.86
August 11, 2018	0:00	24:00	58.88	23.20	0.00	12.87	40.75
August 12, 2018	0:00	24:00	43.58	21.97	0.00	12.87	25.45
August 13, 2018	0:00	24:00	43.35	21.86	0.00	12.87	25.22
August 14, 2018	0:00	24:00	66.83	33.69	0.00	12.87	48.70
August 15, 2018	0:00	24:00	82.70	41.69	0.00	12.87	64.57
August 16, 2018	0:00	24:00	87.04	43.88	0.00	12.87	68.91
August 17, 2018	0:00	24:00	49.60	14.59	0.00	12.87	31.47
August 18, 2018	0:00	24:00	30.32	15.28	0.00	12.87	12.19
August 19, 2018	0:00	24:00	23.12	11.65	0.00	12.87	4.99
August 20, 2018	0:00	24:00	16.54	8.34	0.00	12.87	0.00
August 21, 2018	0:00	24:00	21.21	10.69	0.00	12.87	3.08
August 22, 2018	0:00	24:00	24.64	12.42	0.00	12.87	6.51
August 23, 2018	0:00	24:00	28.53	14.38	0.00	12.87	10.40
August 24, 2018	0:00	24:00	81.54	41.11	0.00	12.87	61.82
August 25, 2018	0:00	24:00	80.15	40.41	0.00	12.87	62.02
August 26, 2018	0:00	24:00	77.96	39.30	0.00	12.87	59.83
August 27, 2018	0:00	24:00	76.76	38.70	0.00	12.87	58.63
August 28, 2018	0:00	24:00	76.22	38.43	0.00	12.87	58.10
August 29, 2018	0:00	24:00	77.32	38.98	0.00	12.87	59.19
August 30, 2018	0:00	24:00	77.82	39.24	0.00	12.87	59.69
August 31, 2018	0:00	24:00	77.89	39.27	0.00	12.87	59.76
September 1, 2018	0:00	24:00	71.70	36.15	0.00	12.67	57.56
September 2, 2018	0:00	24:00	76.11	38.37	0.00	12.67	61.97
September 3, 2018	0:00	24:00	80.17	40.42	0.00	12.67	66.03
September 4, 2018	0:00	9:00	29.72	39.96	0.00	12.67	15.58
September 15, 2018	12:00	24:00	36.16	36.46	34.71	0.00	0.00
September 16, 2018	0:00	24:00	72.46	36.53	69.42	0.00	1.55
September 17, 2018	0:00	10:00	30.78	37.26	28.92	0.00	0.40

Low Flow Program Summary (Colorado Springs and BWWP only)

			Amount	Rate	Use 1	Use 2	Use 3
Date	Start Time	End Time	acre-feet	cfs	acre-feet	acre-feet	acre-feet
no releases in 2018							

Entity: City of Fountain

Pueblo Flow Management Program Summary

			Amount	Rate	Use 1	Use 2	Use 3
Date Curtailed	Start Time	End Time	acre-feet	cfs	acre-feet	acre-feet	acre-feet
n/a							

Entity: Pueblo West Metropolitan District

Pueblo Flow Management Program Summary

			Amount	Rate	Spill	Use 2	Use 3
Date Curtailed	Start Time	End Time	acre-feet	cfs	acre-feet	acre-feet	acre-feet
8/9/2018	9:00	24:00	1.59	0.80	1.59		
8/10/2018	0:00	24:00	1.62	0.82	1.62		
8/11/2018	0:00	24:00	1.57	0.79	1.57		
8/12/2018	0:00	24:00	1.60	0.81	1.60		
8/13/2018	0:00	24:00	1.62	0.81	1.62		
8/14/2018	0:00	24:00	2.53	1.28	2.53		
8/15/2018	0:00	24:00	3.14	1.59	3.14		
8/16/2018	0:00	24:00	2.80	1.41	2.80		
8/17/2018	0:00	24:00	3.44	1.74	3.44		
8/18/2018	0:00	24:00	2.30	1.16	2.30		
8/19/2018	0:00	24:00	2.72	1.37	2.72		
8/20/2018	0:00	24:00	2.90	1.46	2.90		
8/21/2018	0:00	24:00	2.73	1.38	2.73		
8/22/2018	0:00	24:00	2.91	1.47	2.91		
8/23/2018	0:00	24:00	3.08	1.55	3.08		
8/24/2018	0:00	24:00	2.89	1.46	2.89		
8/25/2018	0:00	24:00	2.80	1.41	2.80		
8/26/2018	0:00	24:00	2.59	1.30	2.59		
8/27/2018	0:00	24:00	2.88	1.45	2.88		
8/28/2018	0:00	24:00	2.75	1.39	2.75		
8/29/2018	0:00	24:00	2.76	1.39	2.76		
8/30/2018	0:00	24:00	2.97	1.50	2.97		
8/31/2018	0:00	24:00	2.98	1.50	2.98		
9/1/2018	0:00	24:00	3.03	1.53	3.03		
9/2/2018	0:00	24:00	2.97	1.50	2.97		

Entity: Pueblo West Metropolitan District

Pueblo Flow Management Program Summary con't

			Amount	Rate	Spill	Use 2	Use 3
Date Curtailed	Start Time	End Time	acre-feet	cfs	acre-feet	acre-feet	acre-feet
9/3/2018	0:00	24:00	3.05	1.54	3.05		
9/4/2018	0:00	24:00	2.82	1.42	2.82		
9/15/2018	0:00	24:00	2.83	1.42	2.83		
9/16/2018	0:00	24:00	2.93	1.48	2.93		

Entity: Security Water District

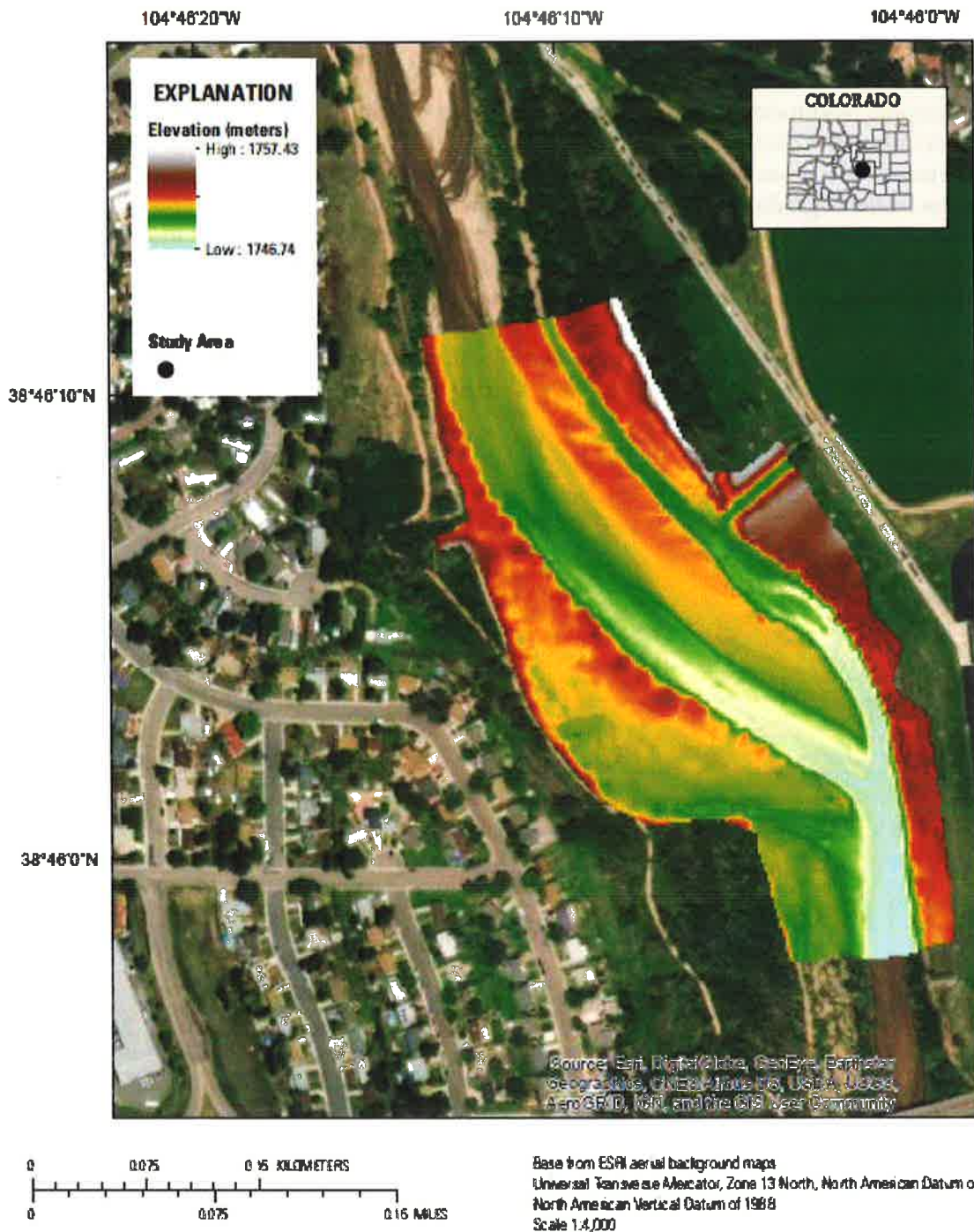
Pueblo Flow Management Program Summary

			Amount	Rate	Use 1	Use 2	Use 3
Date Curtailed	Start Time	End Time	acre-feet	cfs	acre-feet	acre-feet	acre-feet
n/a							

Geomorphology Monitoring

Geomorphic monitoring data are collected under an existing program led by the USGS in partnership with Colorado Springs Utilities and the City of Colorado Springs Engineering Department. Ten cross sections established at designated points along Fountain Creek are monitored for degradation, aggradation, and other changes to the geomorphic surface. Each cross section is surveyed once per year during low stream flow; preferably in the winter when leaves and other organic material on the ground is at a minimum. Survey data from 2015 are provided as pre-SDS operations baseline conditions along with survey data from the reporting period (2018) for comparative purposes. Note that the data are overlaid on an aerial photo that provides context of the surrounding landscape. Also, the color scheme for the geomorphic data has changed, due to a change in methodology by the USGS.

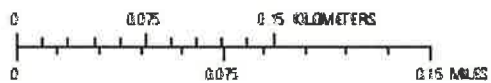
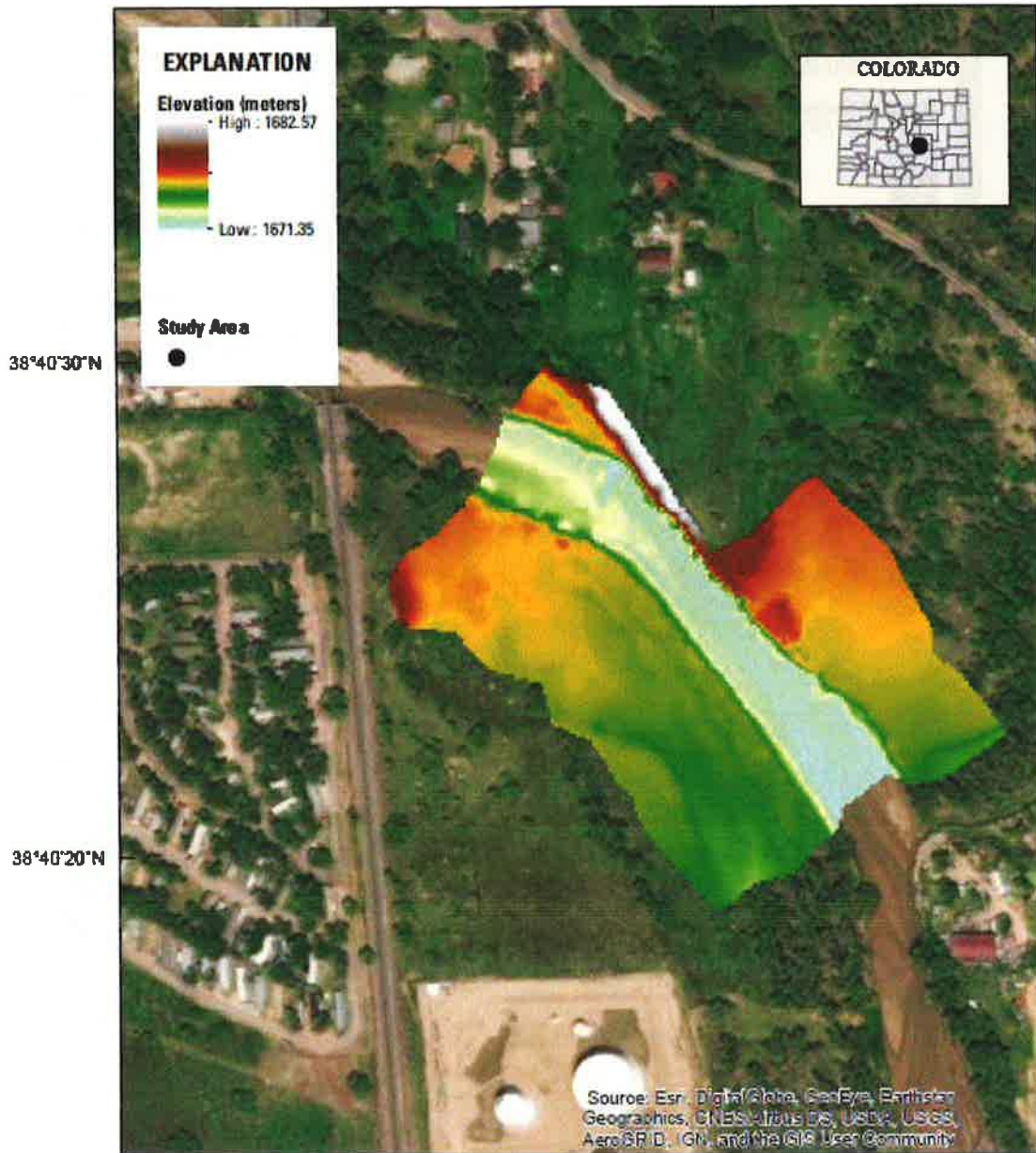
Elevation Map 2015- Site 01



Elevation Map 2015- Site 02

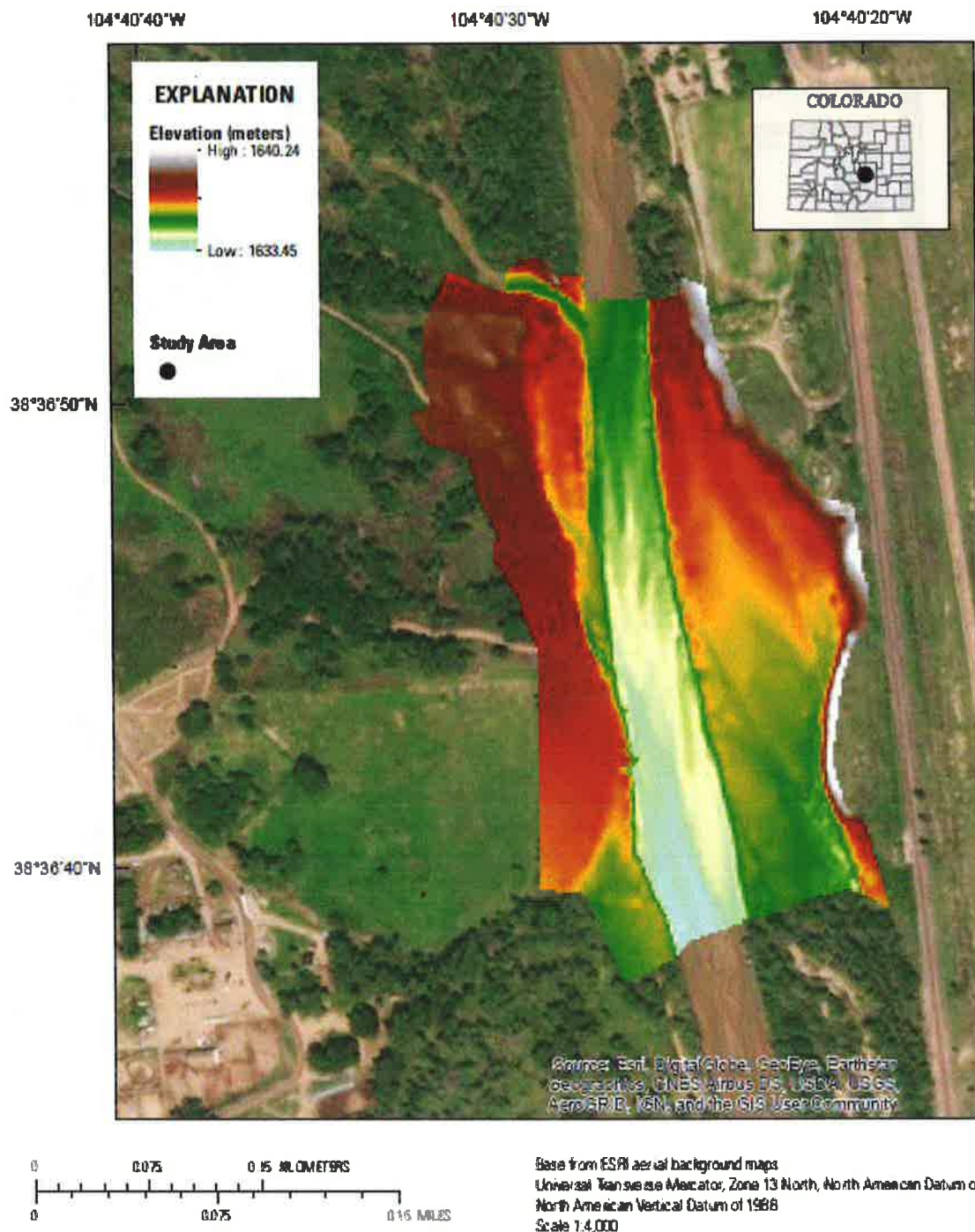
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104°42'0"W

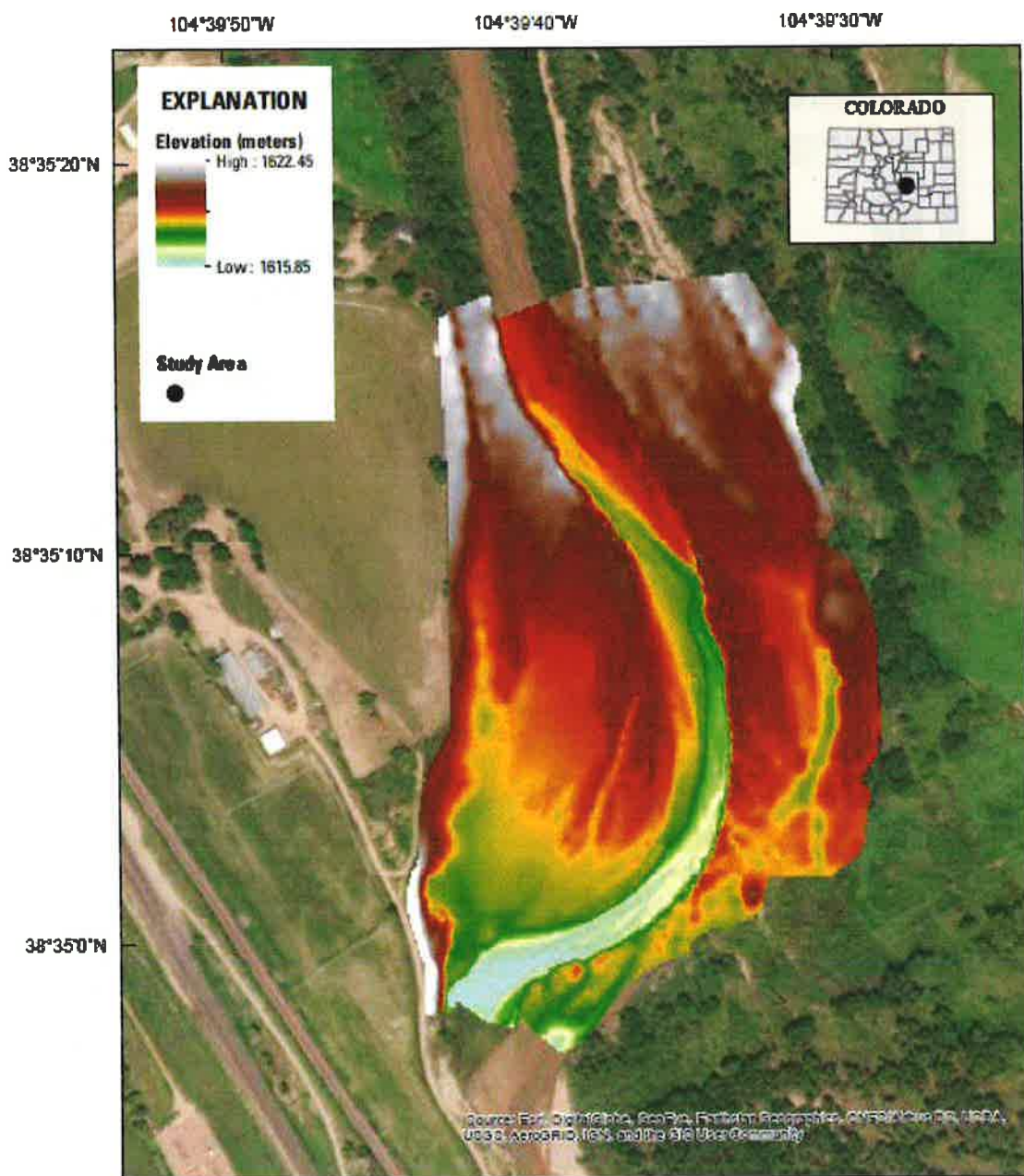


Base from ESRI aerial background maps
Universal Transverse Mercator, Zone 13 North, North American Datum of 1983
North American Vertical Datum of 1988
Scale 1:4,000

Elevation Map 2015- Site 03



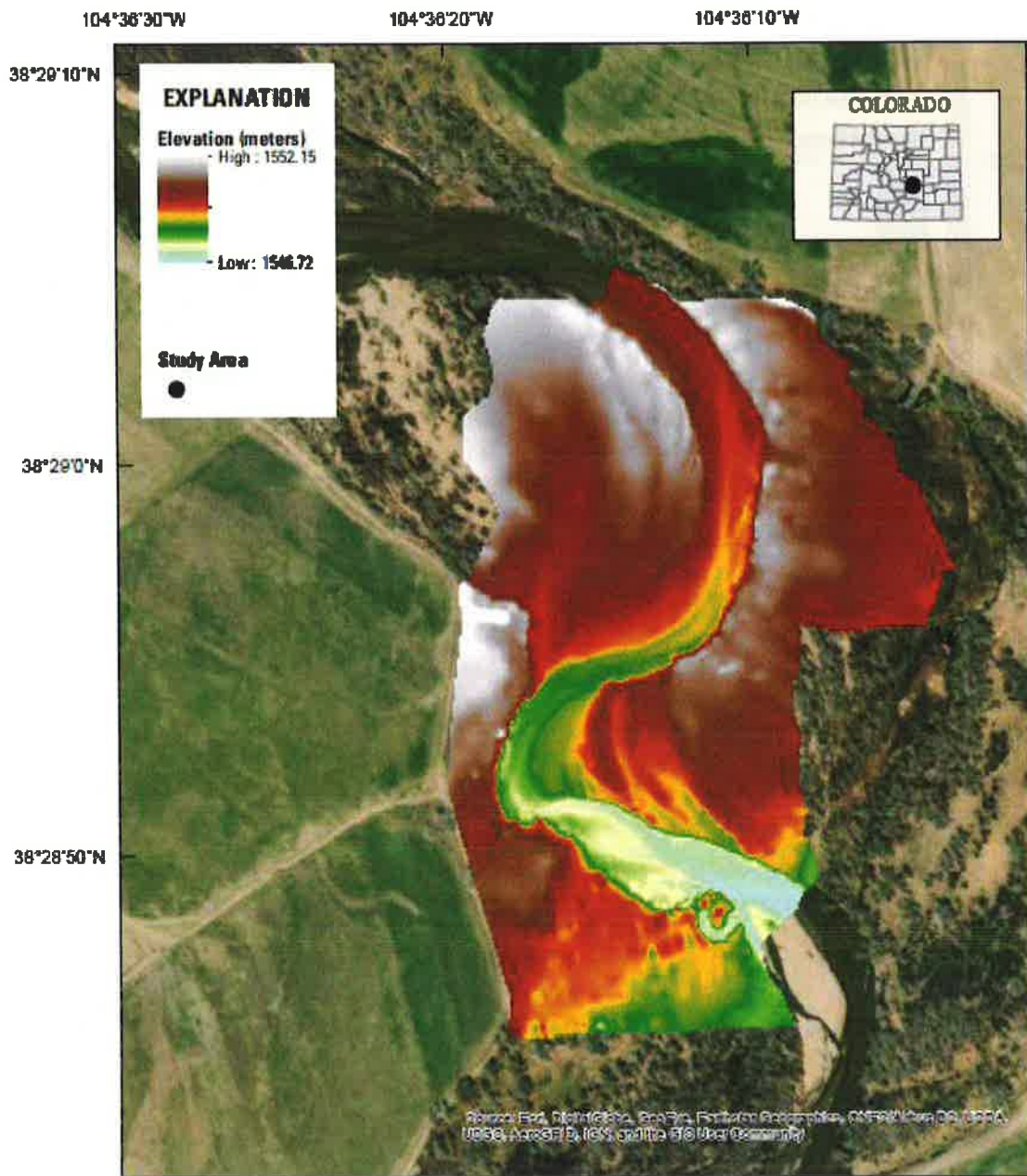
Elevation Map 2015- Site 04



0 0.095 0.19 KILOMETERS
0 0.095 0.19 MILES

Base from ESRI aerial background maps
Universal Transverse Mercator, Zone 13 North, North American Datum of 1983
North American Vertical Datum of 1988
Scale 1:5,000

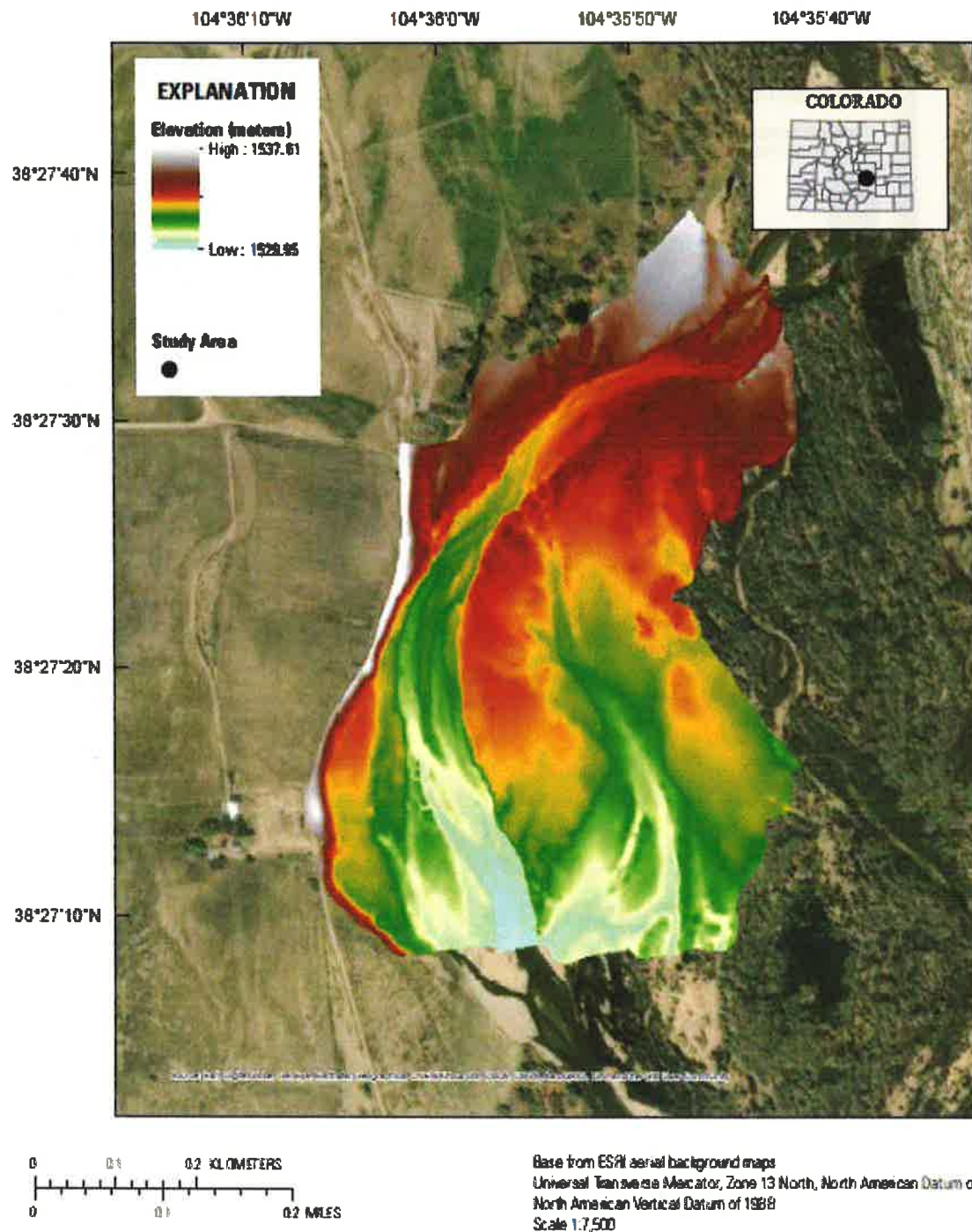
Elevation Map 2015- Site 05



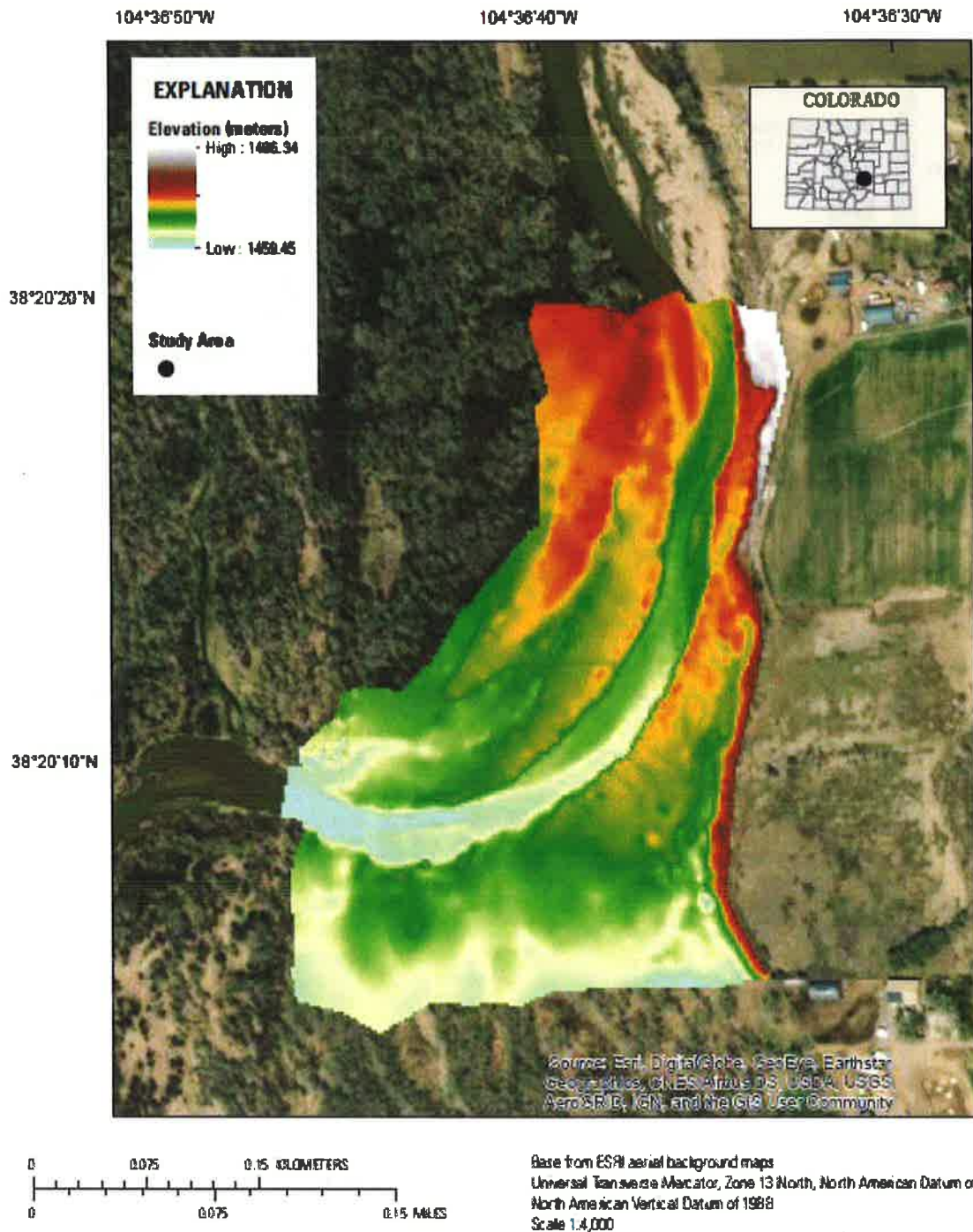
0 0.095 0.19 KILOMETERS
0 0.095 0.19 MILES

Base from ESRI aerial background maps
Universal Transverse Mercator, Zone 13 North, North American Datum of 1983
North American Vertical Datum of 1988
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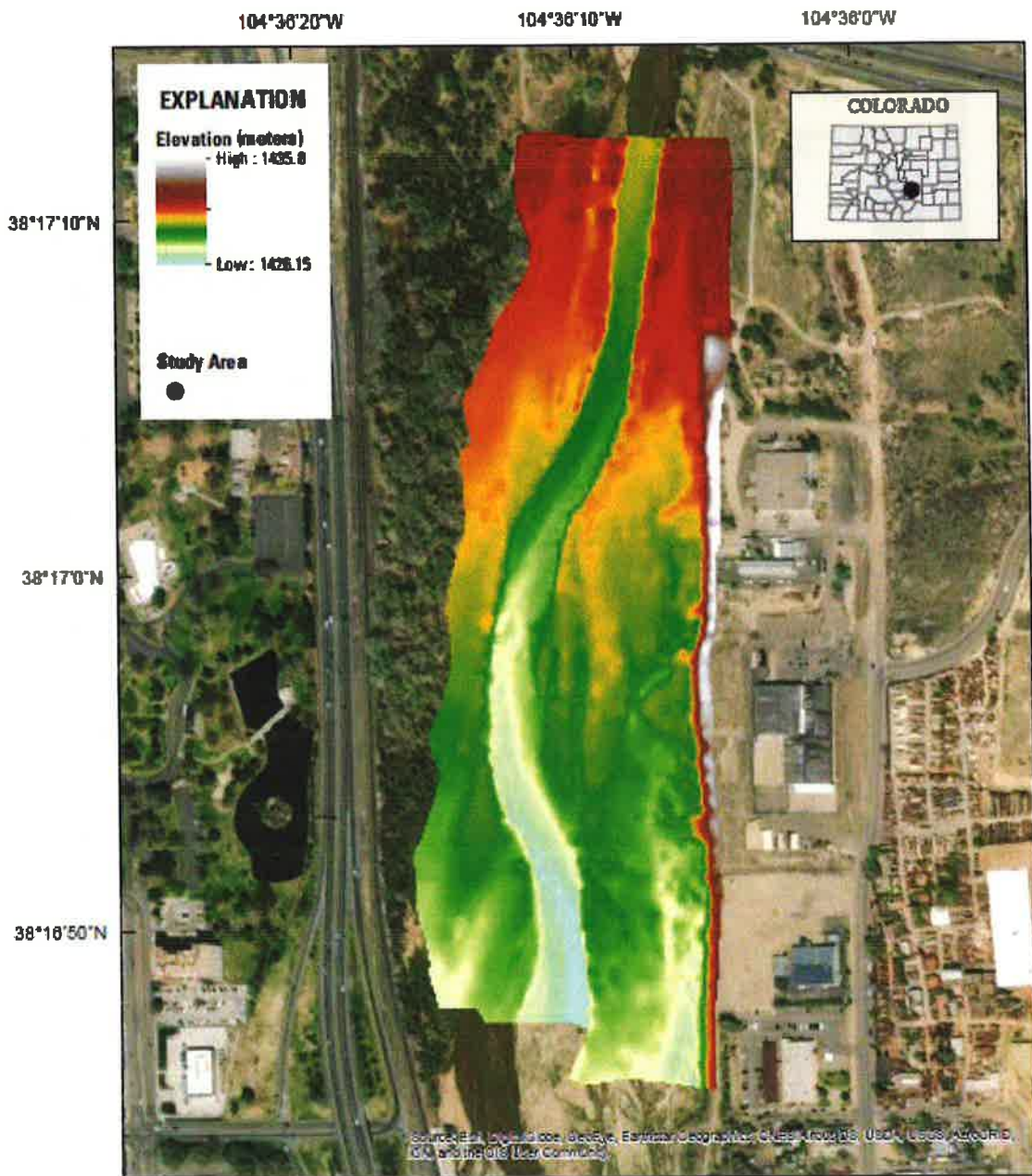
Elevation Map 2015- Site 06



Elevation Map 2015- Site 07

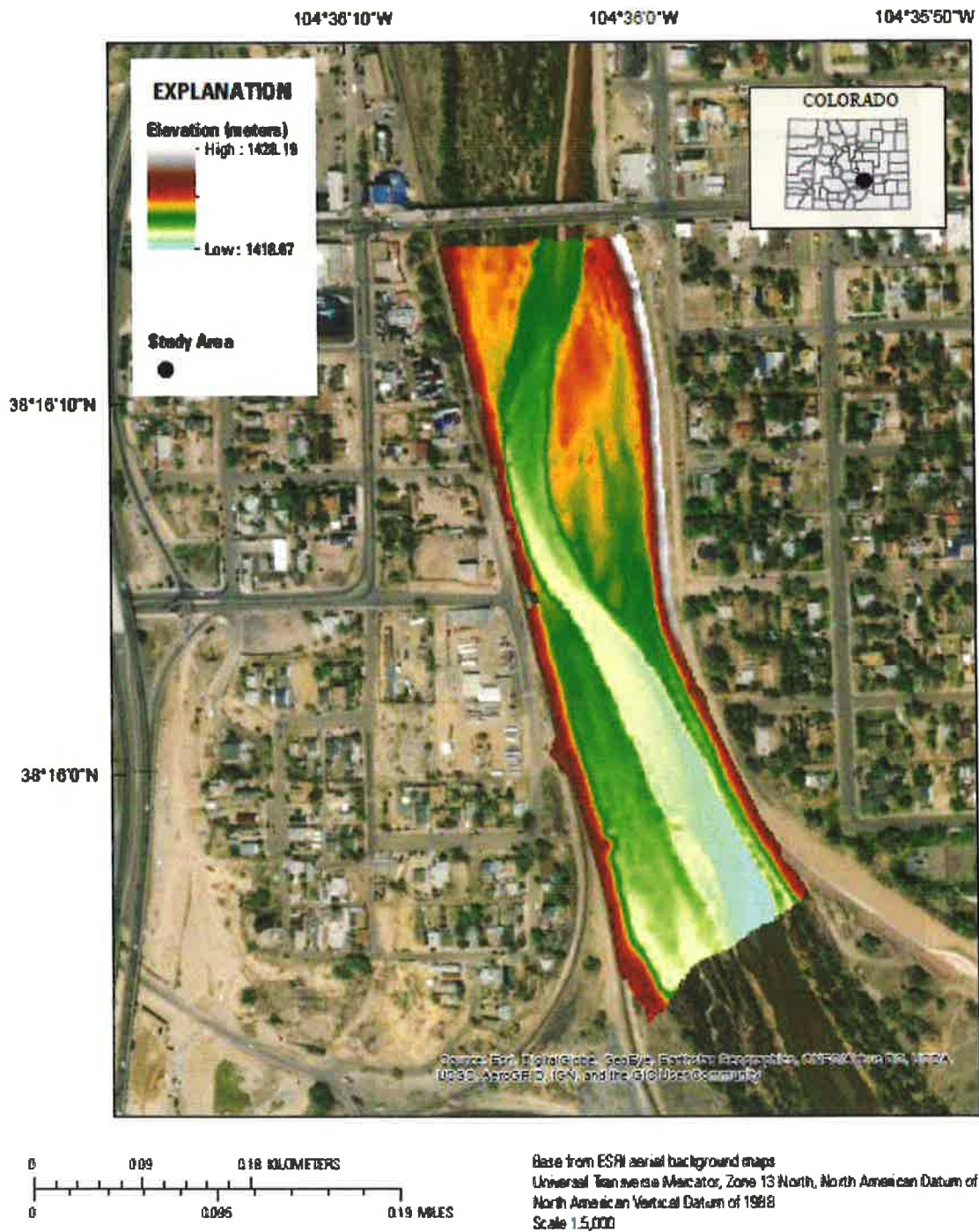


Elevation Map 2015- Site 08

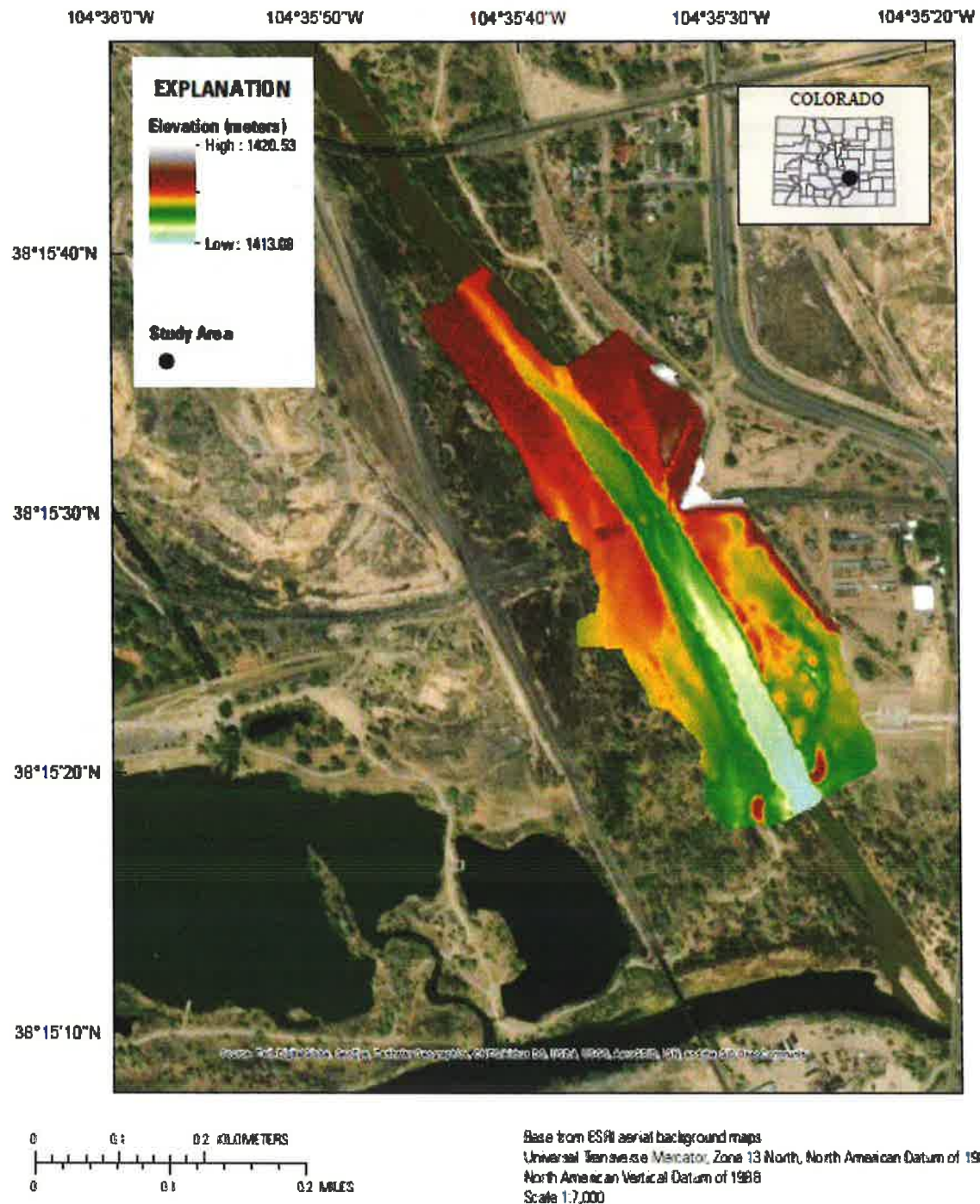


Base from ESRI aerial background maps
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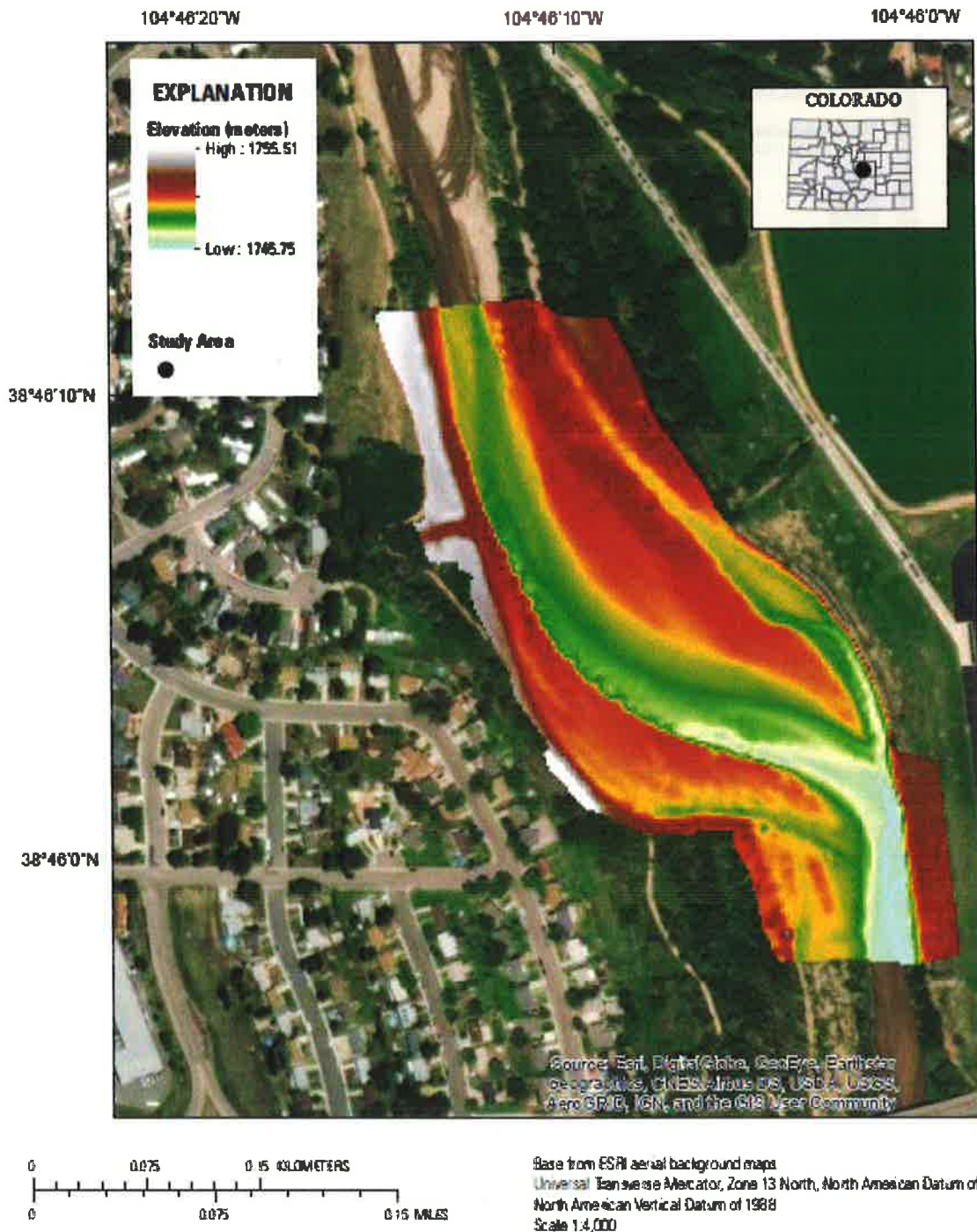
Elevation Map 2015- Site 09



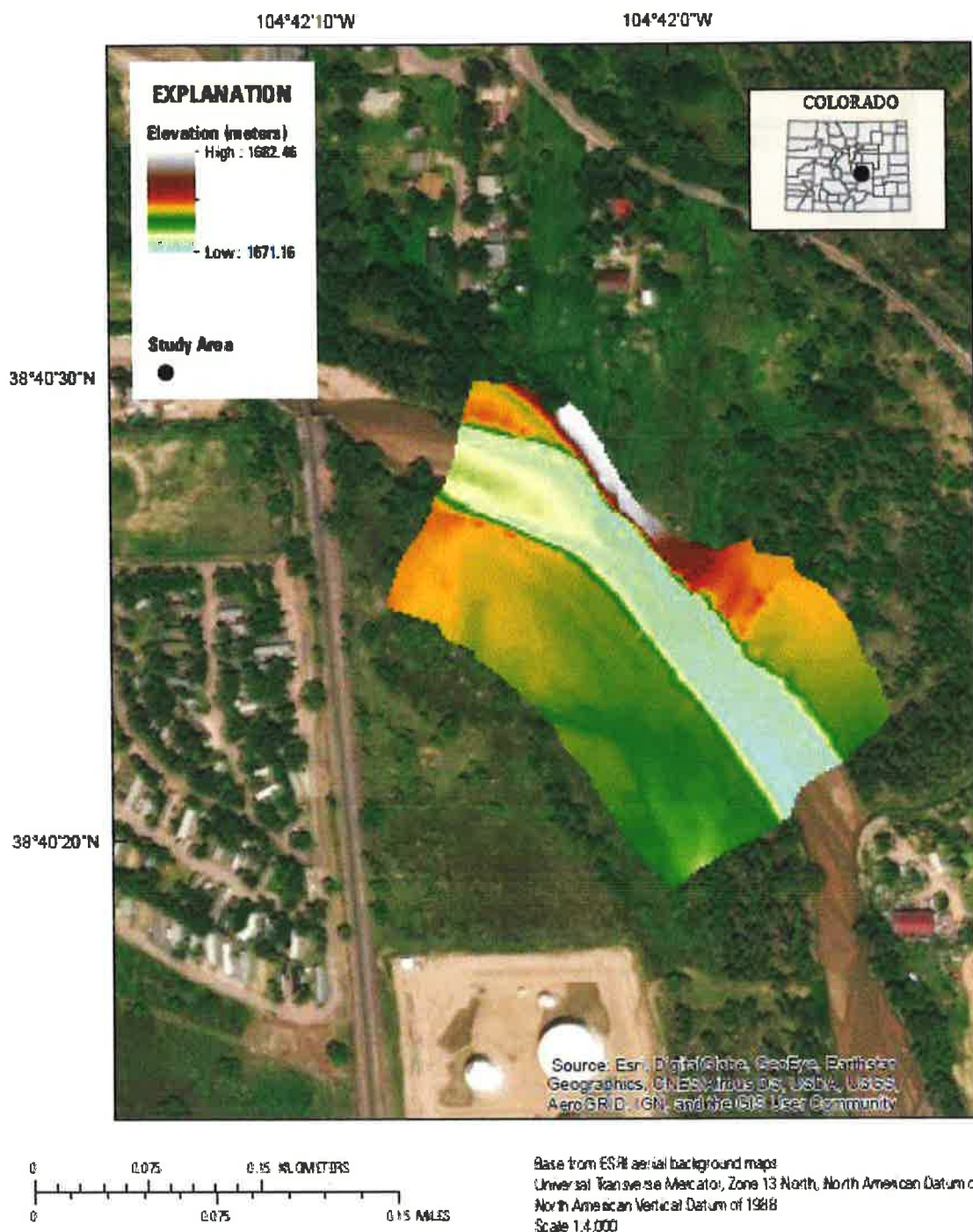
Elevation Map 2015- Site 10



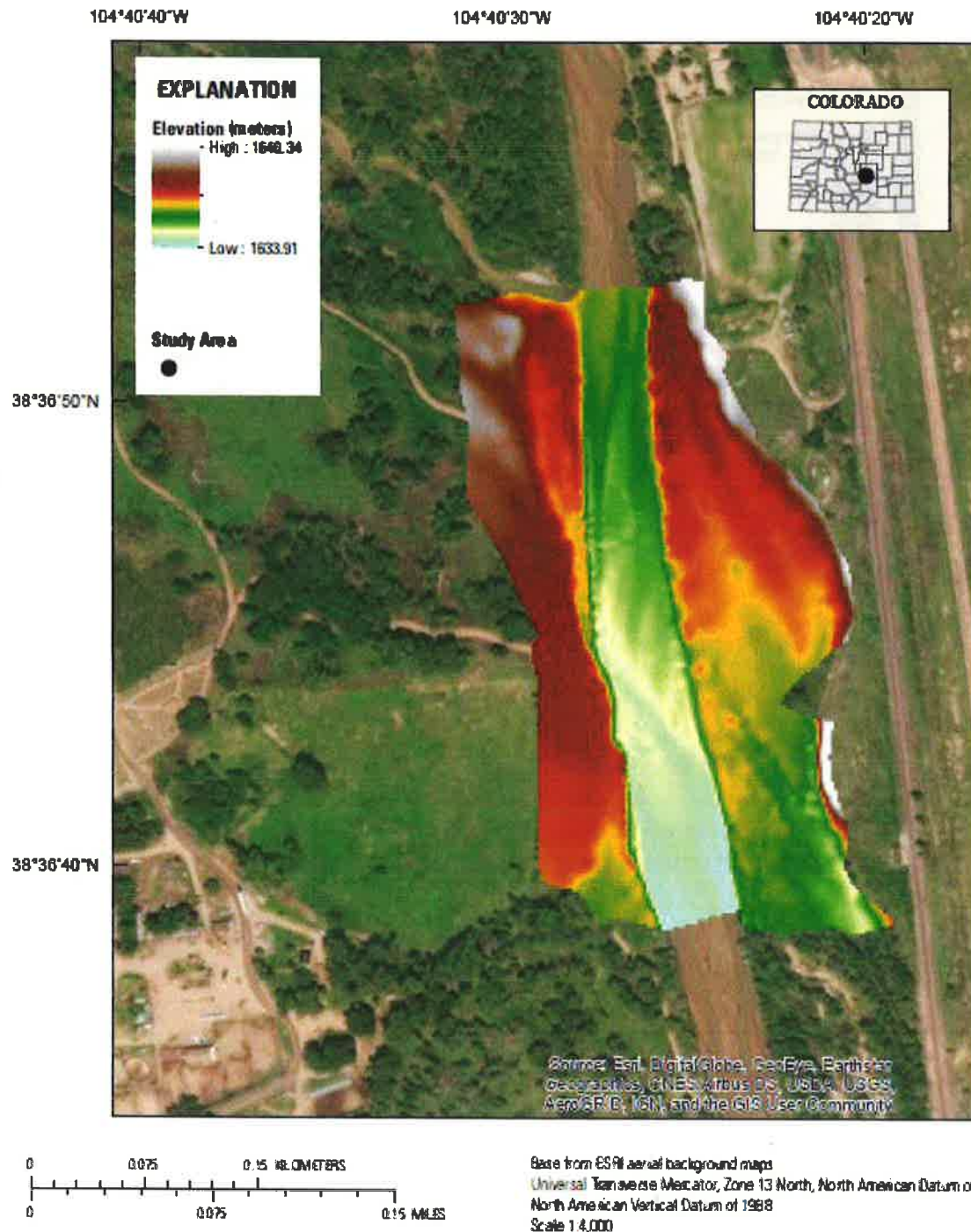
Elevation Map 2018- Site 01



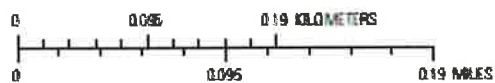
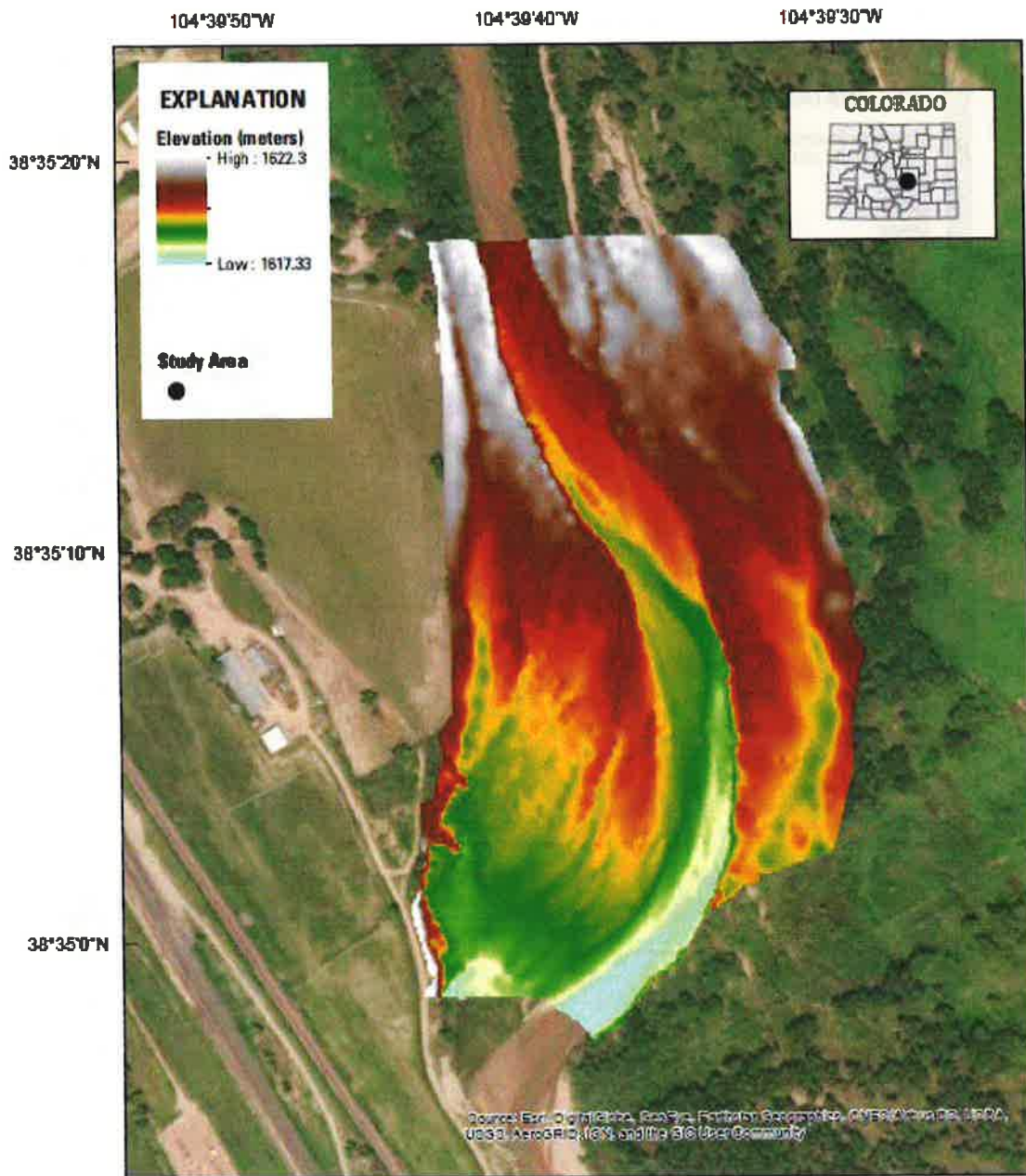
Elevation Map 2018- Site 02



Elevation Map 2018- Site 03

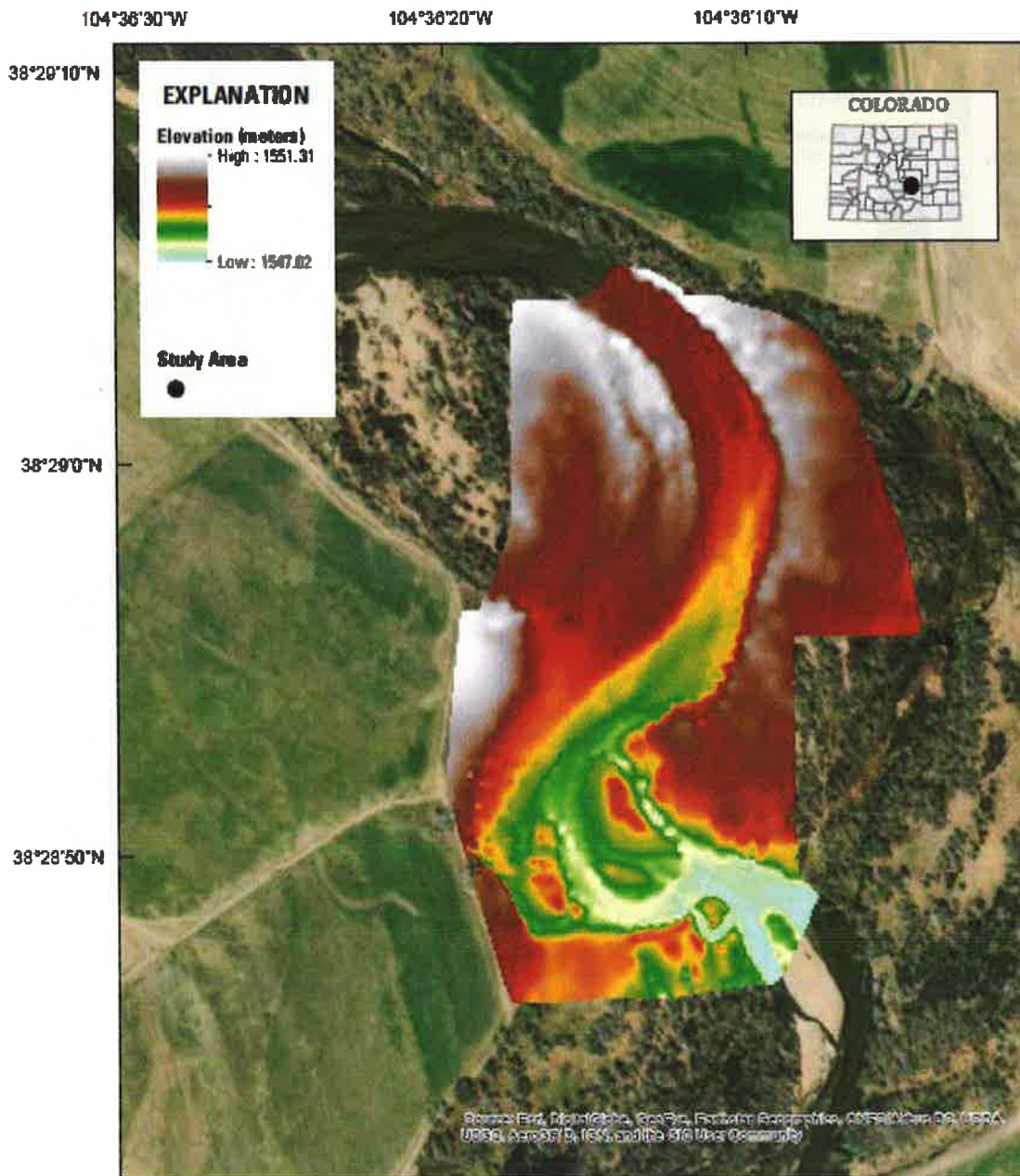


Elevation Map 2018- Site 04



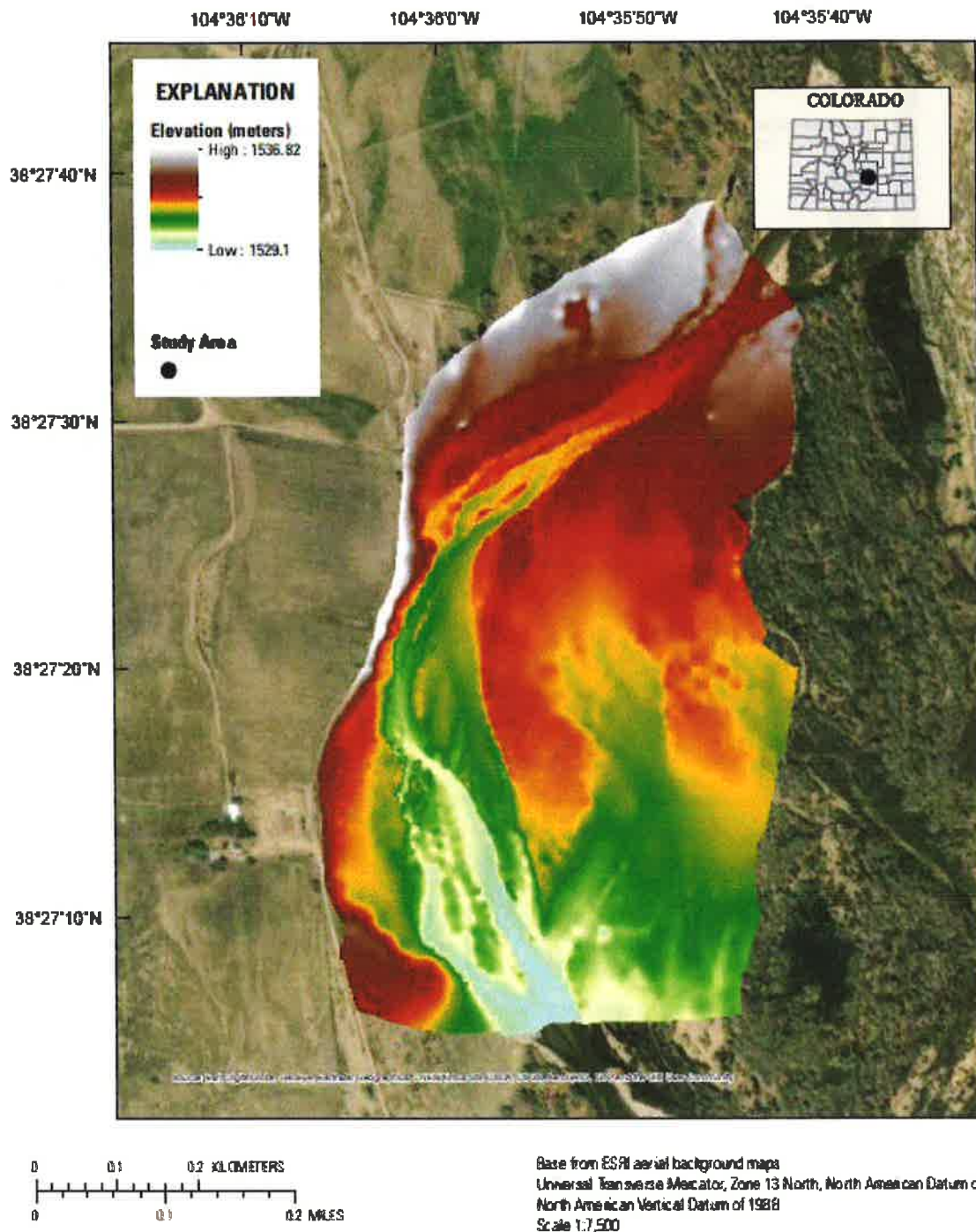
Base from ESRI aerial background maps
 Universal Transverse Mercator, Zone 13 North, North American Datum of 1983
 North American Vertical Datum of 1988
 Scale 1:5,000

Elevation Map 2018- Site 05

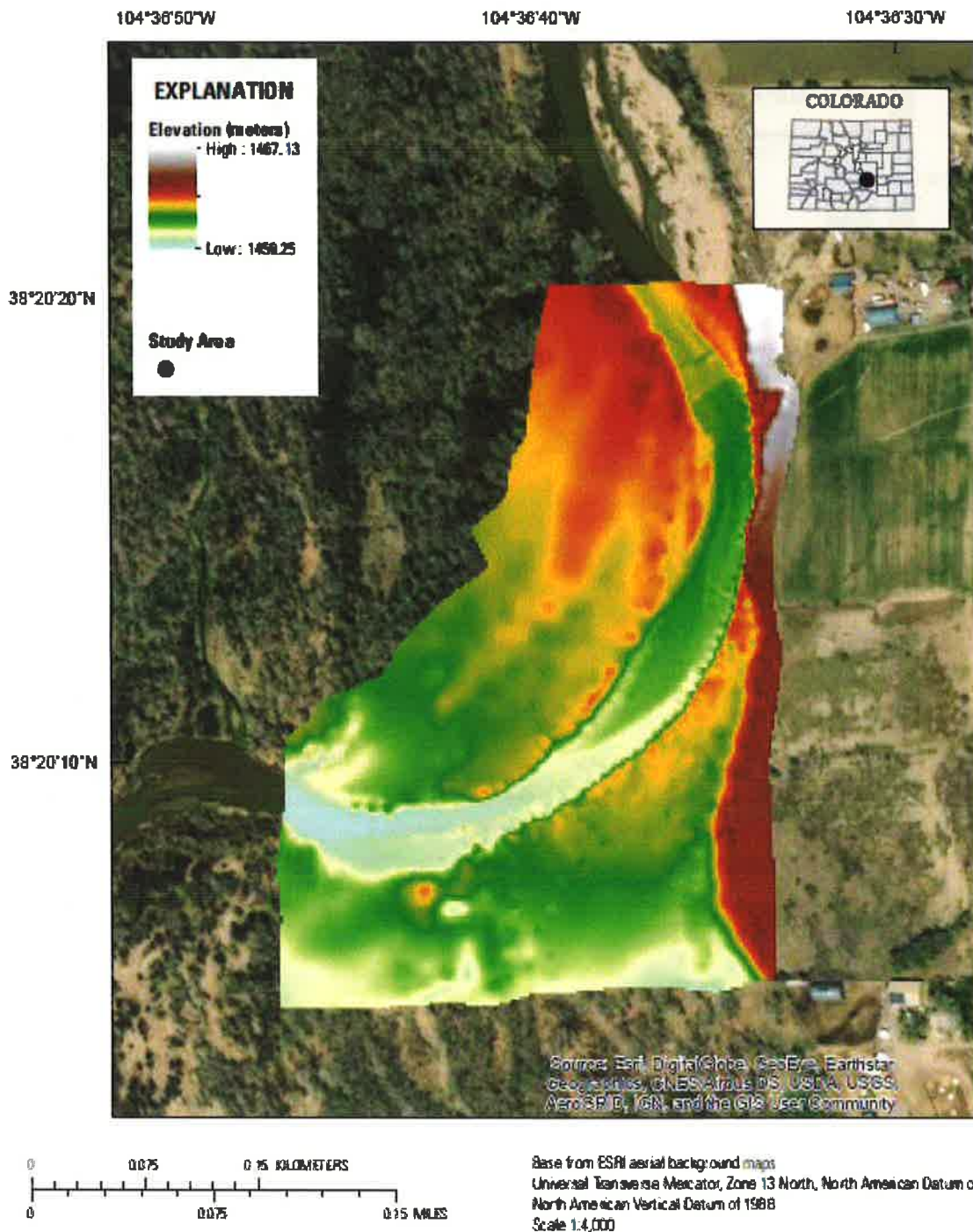


Base from Esri aerial background maps
 Universal Transverse Mercator, Zone 13 North, North American Datum of 1983
 North American Vertical Datum of 1988
 Scale 1:5,000

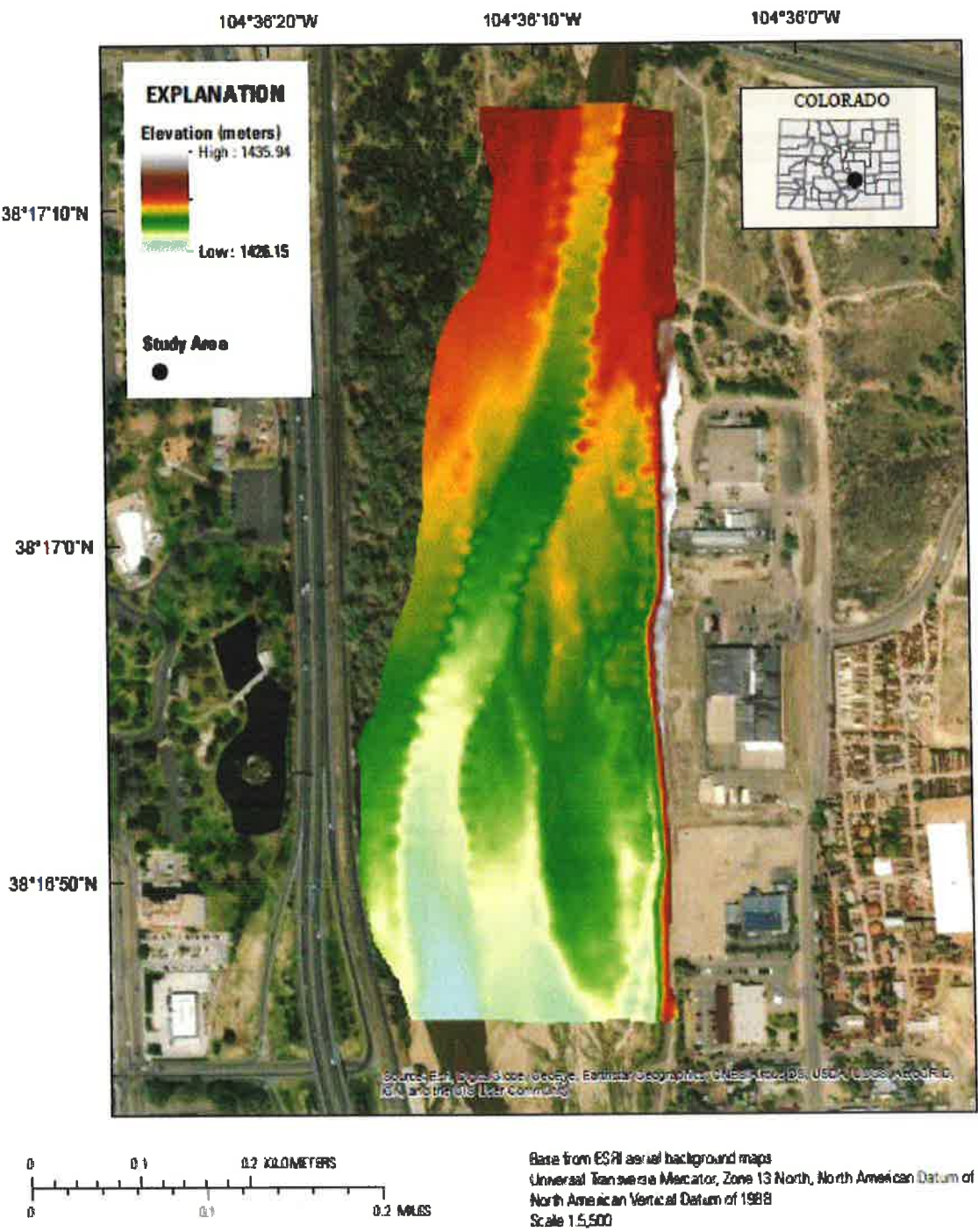
Elevation Map 2018- Site 06



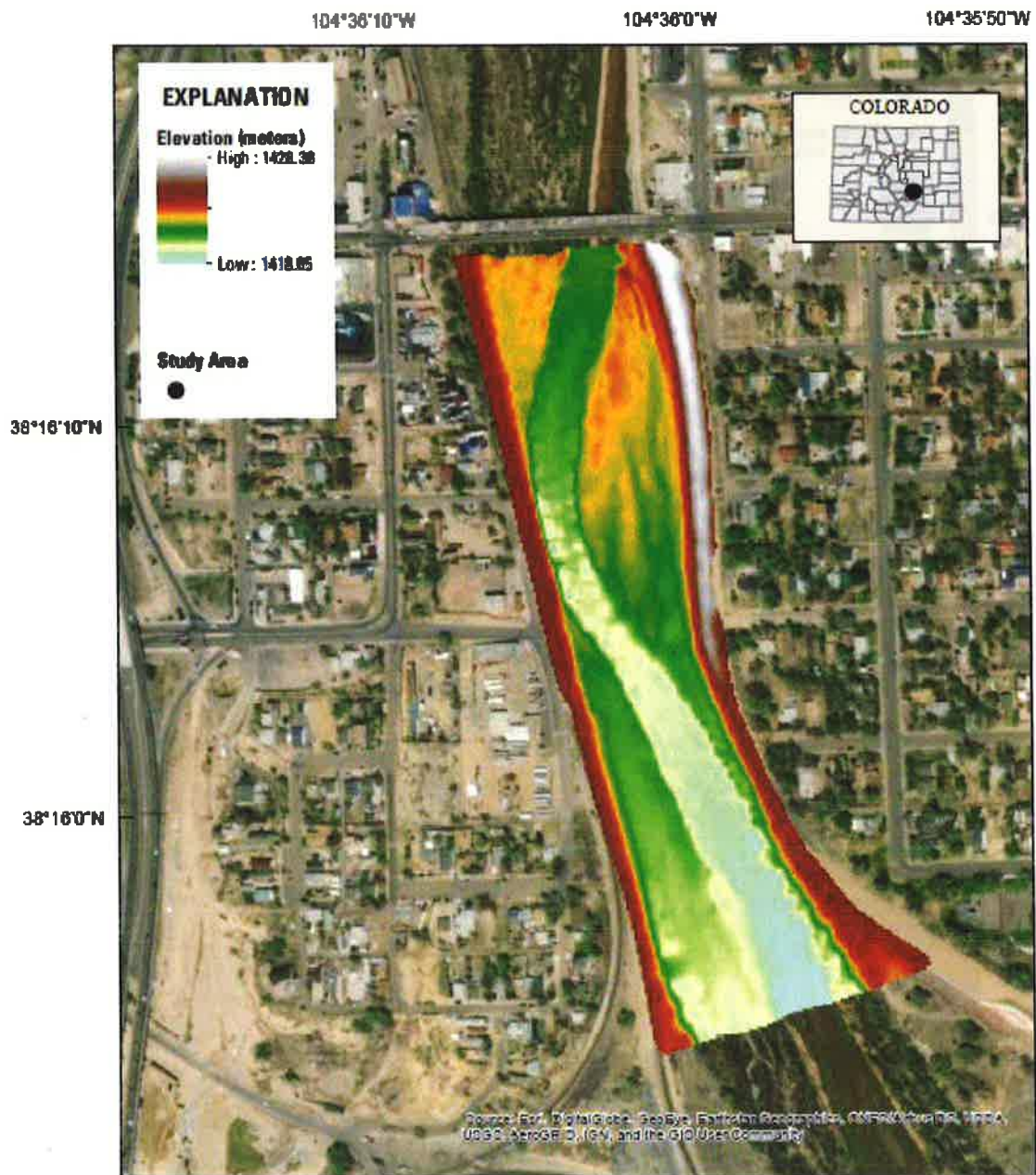
Elevation Map 2018- Site 07



Elevation Map 2018- Site 08



Elevation Map 2018- Site 09



Base from ESRI aerial background maps
 Universal Transverse Mercator, Zone 13 North, North American Datum of 1983
 North American Vertical Datum of 1988
 Scale 1:5,000

Elevation Map 2018- Site 10

