

## **AGREEMENT**

THIS AGREEMENT is made and entered into this 27th day of March, 2013, by and between Pueblo County, Colorado (hereinafter referred to as "COUNTY"), and Keammerer Ecological Consultants Inc., (hereinafter referred to as "CONSULTANT").

## **WITNESSETH**

WHEREAS, the County desires to obtain the professional services of the Consultant, who will evaluate, prepare Report(s), and possibly represent the County as an Expert Witness, regarding County Permitting matters relevant to the site restoration and revegetation measures that have been put in place for certain areas, as defined by the County, that were disturbed in construction of the Southern Delivery System (SDS) pipeline alignment through Pueblo County; and

WHEREAS, the Consultant is a professional Ecological Consultant and is experienced and qualified to accomplish the purpose of this Agreement.

NOW THEREFORE, in consideration of the mutual covenants and promises contained herein, the parties do hereby agree as follows:

### **ARTICLE 1 - DEFINITIONS**

- 1.1 CONSULTANT: "Consultant" shall mean the above named organization designated as "Consultant", its successors, and assigns.
- 1.2 CONSULTANT'S REPRESENTATIVE: "Consultant's Representative" shall mean the Consultant or such other person as may be designated by Consultant via a written notice to County to act as its representative.
- 1.3 COUNTY: "County" or "the County" shall mean the Board of County Commissioners of Pueblo County, Colorado its officers, agents, employees, successors and assigns.
- 1.4 COUNTY'S REPRESENTATIVE: "County's Representative" shall mean and be synonymous with Pueblo County. For the purposes of this AGREEMENT, Joan Armstrong, Director of the Pueblo County Planning department, shall act in this capacity. Other person(s) may be designated by the County via a written notice to Consultant to act as County's Representative.
- 1.5 DATE OF SUBSTANTIAL COMPLETION: "Date of Substantial Completion" of the Work is the date when the Work is sufficiently completed in accordance with the contract documents so the County may use the Work for the purpose for which it is intended.
- 1.6 DAY: "Day" shall mean calendar day unless otherwise specified.
- 1.7 JOB SITE: "Job Site" shall be any area designated by the County or the County's Representative.

- 1.8 PERMIT ADMINISTRATOR: "Permit Administrator" shall mean the 1041 Permit Administrator who is the Director of the Department of Planning and Development.
- 1.9 WORK: "Work" shall mean all labor, materials, supplies and services necessary to produce the design, installation, construction, construction observation, etc., as described in the Scope of Work, required by the contract documents herein.

## **ARTICLE 2 - CONTRACT DOCUMENTS**

2.1 The contract documents shall consist of all of the following, which are incorporated herein by this reference (collectively the "Contract Documents"):

2.1.1 This Agreement (with attachments), and the Request for Proposal, dated November 30, 2012, which are incorporated herein by this reference.

2.2 In the event of a conflict between this Agreement and the provisions of the other Contract Documents this Agreement shall control. In the event of any conflict between the provisions of the contract documents, other than this Agreement, the latest approved documents shall control.

2.3 All contract documents hereinafter submitted by Consultant for approval of the County in connection with the performance of the Work shall be deemed approved at such time documents are executed in writing by the County.

## **ARTICLE 3 - CONSULTANT'S SCOPE OF WORK**

3.1 The totality of the obligations imposed upon the Consultant are the tasks described below, which under the direction of the County's Representative shall constitute the Scope of Services to be provided under this Agreement.

The Consultant's Scope of Work will be focused on a 5.27± miles of the pipeline route within Segment S3, as defined by the County, which will require evaluation and reports by the Consultant.

Evaluation and reports will be done by the Consultant for the revegetation/growing season of 2013, with the same also likely in 2014, as determined by the County. Additional portions of the pipeline route may require evaluation and reports by the Consultant, with specific locations and lengths yet to be determined.

Work by the Consultant on additional portions of the pipeline route, other than the 5.27± section as described, will require another Agreement between the County and the Consultant.

The Consultant's Scope of Work, per this Agreement, will be focused on the following:

- A) Consultant will assist the County in determining whether reclamation and re-vegetation efforts in place for the Project comply with the approved conditions of approval, per the Resolution Approving 1041 Permit No. 2008-002 (Resolution No. P&D 09-22, attached hereto and incorporated by reference), specifically the following conditions:

From Resolution No. P&D 09-22, Condition of Approval No. 22.:

Reclamation of Disturbed Lands:

Upon reclamation of the site, the vegetation cover shall be of the same seasonal variety native to the area of the disturbed land, or a reasonable substitute pursuant to the agreement with the landowner. The revegetated area will be considered acceptable if its cover will be not less than 90 percent of the pre-construction vegetation cover with similar species diversity.

From Resolution No. P&D 09-22, Condition of Approval No. 28., Mitigation Appendix, C-9:

Site Restoration

Applicant shall provide Pueblo County residents with replacement vegetation and property to match pre-construction conditions or better.

Project Detail

- Grade disturbed areas to preconstruction contours so preconstruction drainage paths are reestablished.
- Reclaim disturbed land, except water areas and surface areas of roads, by seeding or planting to achieve a permanent vegetation cover as specified below.
  - Vegetation cover will be of the same seasonal variety native to the area of the disturbed land, or species that support the post-construction land use. In those areas of disturbed vegetation where such seeds are not commercially available, seeds will be collected on-site to be used in revegetation, including, rare plants identified in the FEIS, by the Colorado Natural Heritage Program or by other qualified investigators.
  - Seeding and planting of disturbed areas will be conducted during the first normal period for favorable planting conditions after final preparation for seeding or planting.
  - Soil stabilization practices will be used on all re-graded and topsoiled areas.
  - The revegetated area will be considered acceptable if the revegetated area cover is not less than 90 percent of the pre-construction vegetation cover with similar species diversity.

From Resolution No. P&D 09-22, Condition of Approval No. 28., Mitigation Appendix, C-16:

- Noxious Weed Control

Applicant shall control spread of noxious weeds resulting from project construction.

- Use weed-free seed, mulch, and borrow material.

- Use 100 percent certified weed free seed and mulch. Locally or regionally available seed and mulch will be used when practicable.
  - Disturbed areas will be re-seeded as soon as practicable after the disturbance ends.
- B) Reports shall be submitted to the County which contain detailed analysis and evaluation of the level of compliance with each aspect of the above conditions of approval and other relevant Permit conditions. If a given site, or sites are not in compliance, the reports shall also specify why, and provide general direction to address noncompliance issues. Reports shall be submitted to the Permit Administrator or their field representative at the time of testing or within two (2) weeks after the field analysis has been completed. Three (3) written reports with the inspection results shall be submitted to the County. The reports shall be signed by the Principal and the personnel in responsible charge. Reports and other documents are to be available in hard copy/paper format, as well as electronically (Microsoft Word and Adobe Acrobat).
- C) Consultant may be required to represent the County as an expert witness, testifying in court on the findings presented in the reports that are prepared. In the event that the County requests Consultant's service as an expert witness, Consultant agrees to perform this service for the rate specified within Consultant's proposal.

3.2 The Consultant shall not be liable to the County or otherwise responsible for damage or injury to the Work or for additional costs or delays in the performance of the Work arising out of or caused by reason of Consultant relying upon or acting upon incorrect or inaccurate written information furnished by the County's Representative.

3.3 The Consultant shall exercise reasonable care to see that all Work performed shall be in accordance with those laws, rules, ordinances and regulations applicable to the Work.

#### **ARTICLE 4 - TIME OF COMMENCEMENT AND COMPLETION**

4.1 Consultant agrees to begin Work on the date set for commencement of the Work in the County's Written "Notice to Proceed" and said date shall be the date upon which all contract time counts for completion of the Work shall be based. Thereafter, Consultant shall execute the Work with due diligence and shall fully complete in every detail all the Work to be done and submit the Reports per the Contract Documents.

4.2 Except as may be amended in writing by the County, the Consultant shall perform the work as outlined in Article 3 as specified within the County's Written "Notice to Proceed."

#### **ARTICLE 5 - CONTRACT SUM**

The Consultant shall perform all work described in ARTICLE 3 and the Contract Documents for the sum not to exceed \$32,375.00 in 2013, and \$32,375.00 in 2014, with Consultant billing the County only for hours worked, materials, and expenses.

## **ARTICLE 6 - PROGRESS PAYMENTS**

6.1 Within thirty (30) days after the commencement of the Work and continuing thereafter on or before the 5th day of each succeeding month, Consultant shall submit to County an invoice for payment on a form acceptable to the County, covering all Work performed during the preceding month.

6.2 Each invoice for payment shall contain Consultant's certification that the Work described in each invoice has been completed in accordance with the contract documents, that all due items have been paid, for which previous certificates were issued and payments received, and that the amount of the payment shown on each invoice is now due the Consultant.

## **ARTICLE 7 - CONSULTANTS CORRECTION OBLIGATION**

7.1 If, within forty-five days after the date of completion of the Work and acceptance by County, or within such longer period of time as may be prescribed by law, any of the Work, as defined in Article 3, is found to be negligently prepared or not in accordance with this Agreement, Consultant shall correct the Work promptly at the receipt of a written notice from the County to do so unless County with knowledge of the condition has given Consultant a written acceptance of such condition.

## **ARTICLE 8 - RESPONSIBILITIES OF COUNTY**

The County, at its sole cost and expense, shall:

8.1 Cooperate with Consultant in all respects.

8.2 Designate in writing a person to act as County's Representative for the Work to be performed under this Agreement. Such person shall have authority to transmit instructions to Consultant through Consultant's Representative, receive information, and interpret and define County's policies and decisions with respect to all aspects of the Work covered by this Agreement.

8.3 Provide information with respect to the Scope of the Work to be performed by Consultant.

8.4 Meet the requirements of the Request for Proposal, dated November 30, 2012, which are incorporated herein by this reference, that are not within the scope of services set forth in this Agreement for the Consultant.

## **ARTICLE 9 - RESPONSIBILITIES OF CONSULTANT**

The Consultant shall:

9.1 All services to be performed under this Agreement by Consultant shall be performed in accordance with generally recognized professional practices and standards of Consultant's profession and to the reasonable satisfaction of the County.

9.2 Provide all labor, materials, and other facilities and services necessary to complete the work.

9.3 The parties understand and agree that this Agreement is subject to and incorporates the provisions of Request for Proposal, dated November 30, 2012 which are incorporated herein by this reference.

9.4 **Independent Contractor:** The parties understand and agree that Consultant shall, at all times during the term of this Agreement, be deemed an independent contractor and not an employee of the County, and shall be responsible for, and obligated to pay, all withholding taxes, social security, unemployment, Workers' compensation, and/or other taxes and shall indemnify and hold the County harmless from and against any and all claims for the same period. Consultant acknowledges and agrees that all of its personnel are its employees only, and not employees or agents of the County for any purpose whatsoever, including for purposes of Workers' Compensation.

9.5 **Prohibitions on Public Contracts for Services (Including Construction Contracts) regarding Employment of Illegal Aliens:** If Consultant has any employees or subcontractors, Consultant shall comply with the provisions of C.R.S. § 8-17.5-101, *et seq.* and this Agreement. The Consultant shall not knowingly employ or contract with an illegal alien to perform work under this contract; or enter into a contract with a subcontractor that knowingly employs or contracts with an illegal alien to perform work under this Agreement.

By execution of this Agreement, Consultant certifies that it does not knowingly employ or contract with an illegal alien who will perform work under this Agreement and that the Consultant will participate in either the Federal E-Verify Program or the Colorado Department of Labor & Employment's "Department Program" as identified in C.R.S. §§ 8-17.5-101 (3.7) and (3.3), in order to confirm the eligibility of all employees who are newly hired for employment to perform work under this Agreement.

- A. Consultant shall not:
  - (i) Knowingly employ or contract with an illegal alien to perform work under this Agreement; or
  - (ii) Enter into a contract with a subcontractor that fails to certify to Consultant that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement.
- B. Consultant has confirmed the employment eligibility of all employees who are newly hired for employment to perform Work under this Agreement through participation in either the E-Verify Program or Department Program.
- C. Consultant shall not use either the E-Verify Program or Department Program to undertake pre-employment screening of job applicants while this Agreement is in effect.
- D. If Consultant obtains actual knowledge that a subcontractor performing work under this Agreement knowingly employs or contracts with an illegal alien, Consultant shall:
  - (i) Notify the subcontractor and the County within three (3) days that the Consultant has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

- (ii) Terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to sub-paragraph (i) above, the subcontractor does not stop employing or contracting with the illegal alien; except that Consultant shall not terminate the contract with the subcontractor if during such three days, the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien.
- E. Consultant shall comply with any reasonable request by the Colorado Department of Labor and Employment made in the course of an investigation that the Department is undertaking pursuant to the authority established in C.R.S. § 8-17.5-102(5).
- F. If Consultant violates this provision of this Agreement, the County may terminate this contract for breach of contract and the Consultant shall be liable for actual and consequential damages to the County as required by law.
- G. The County will notify the Office of the Secretary of State if Consultant violates this provision of the Agreement and the County terminates the Agreement for such breach.

#### **ARTICLE 10 - LIABILITY AND INDEMNITY**

10.1 The County shall be responsible for all damages to persons or property caused by it, its agents, subcontractors, employees or representatives, which may arise from the County's negligent or wrongful performance of this Agreement.

10.2 Neither party shall have any liability for loss of product, loss of profit, loss of use, or any other indirect, incidental, special, or consequential damages, whether brought in an action for breach of contracts, tort, or strict liability, and irrespective of whether caused or allegedly caused by either party's negligence.

#### **ARTICLE 11 - CONSULTANT'S LIABILITY INSURANCE**

11.1 The Consultant shall purchase and maintain all of the insurance described in 11.1.1 through 11.1.3 hereof, for not less than the limits of liability therein specified or the amounts specified in the Colorado Governmental Immunity Act, whichever is greater, to protect Consultant from claims under Workers' Compensation Acts and other employee benefits acts, from claims for damages because of bodily injury, including death, and from claims for damage to property which may arise out of or result from Consultant's operations under this Agreement, whether such operations are by Consultant or by any subcontractor or anyone directly or indirectly employed by any of them.

11.1.1 Workers' Compensation Insurance - The Consultant and all levels of Subcontractors shall comply with the requirements of the Workers' Compensation Act of Colorado, as amended, and shall provide Workers' Compensation Insurance, including Occupational Disease Provision, to protect the Consultant and all levels of Subcontractors from and against any and all Workers' Compensation claims arising from performance of Work under the Agreement. The County will not execute the Agreement until the Consultant has submitted evidence, acceptable to the County's Attorney, that

such Workers' Compensation Insurance is in effect and will remain in effect during the term of the Agreement and for such additional time Work on this project is being performed, including all warranty and extended warranty periods.

11.1.2 Comprehensive General Liability Insurance - The Consultant shall procure and maintain at his own expense during the term of the Agreement and for such additional time as Work on this project is being performed, including all warranty and extended warranty periods, Comprehensive General Liability Insurance covering all Work to be performed under this Agreement. This insurance shall be written with a minimum limit of \$1,000,000.00 for any injury, including personal injury or damage to property, to one person in any single occurrence, and a minimum of \$1,000,000.00 for any injury, including personal or damage to property, to two or more persons in any single occurrence. The policy of insurance shall name the County of Pueblo as an additional insured.

11.1.3 Comprehensive Automobile Liability Insurance - The Consultant shall procure and maintain at its own expense during the term of the Agreement and for such additional time as Work on this project is being performed, including all warranty and extended warranty periods, Comprehensive Automobile Liability Insurance. This insurance shall be written with a minimum limit of \$1,000,000.00 for any injury, including personal injury or damage to property, to one person in any single occurrence, and a minimum of \$1,000,000.00 for any injury, including personal or damage to property, to two or more persons in any single occurrence. This insurance shall include uninsured/underinsured motorist coverage. Such coverage must include all automotive equipment used in the performance of the Agreement, both on and off the project site, and must include non-ownership and hired cars coverage.

11.2 Certificates of Insurance covering all of the insurance required to be maintained by Consultant, shall be filed with County upon execution of this Agreement and upon subsequent policy renewals.

## **ARTICLE 12 - TERMINATION OF THE AGREEMENT BY THE COUNTY**

12.1 The County shall have the right to terminate this Agreement at any time, for any reason, upon thirty (30) days notice to the other party. Consultant understands and agrees that this Agreement is expressly made subject to annual appropriation of funds by County for its continuance and upon failure of County to appropriate funds for this Agreement said Agreement shall be terminated without liability to County.

12.2 If through any cause, the Consultant shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if the Consultant shall violate any of the covenants, agreements or stipulations of this Agreement, the County shall thereupon have the right to terminate this Agreement for cause by giving written notice to the Consultant of such termination and specifying the effective date thereof, at least five (5) days before the effective date of such termination.

12.3 Notwithstanding the provisions of Paragraphs 12.1. and 12.2 above, the Consultant shall not be relieved of liability to the County for any obligations to repay funds advanced under this Agreement or for any damages sustained by the County by virtue of any breach of the Agreement by the Consultant, and the County may withhold any payment to the Consultant for



the purpose of setoff until such time as the exact amount of damages due to the County from the Consultant is determined. In addition, upon receipt of any notice to terminate under this Paragraph, any unexpected funds allocated or advanced to the Consultant by this Agreement shall be reverted to the County

### **ARTICLE 13 - TERMINATION OF THE AGREEMENT BY CONSULTANT**

13.1 Consultant may, upon default by the County as provided in 13.2 and upon seven (7) days written notice to the County, terminate this Agreement without prejudice to any legal remedies or rights it may possess, and recover from the County payment for the unpaid balance of the sum due Consultant to perform the Work completed as of the date of termination, including the cost of all supplies, materials, equipment and design services, the cost of which Consultant shall be legally obligated to satisfy.

13.2 The County shall be in default of this Agreement upon the occurrence of any of the following events:

13.2.1 The willful and wanton breach of any provision of this Agreement by the County and the failure by the County to remedy the same within twenty (20) days of receipt of written notice thereof from Consultant.

13.2.2 The willful failure without cause to make payment on any application for payment.

### **ARTICLE 14 - FORCE MAJEURE - DELAYS AND EXTENSION OF TIME**

14.1 If Consultant is delayed at any time in the progress of the Work by any act or omission of the County or its employees, or by any separate contractor employed by the County, or by change orders in the Work, or by labor disputes, fire, weather conditions, materially worse in the aggregate than historical norms, unavoidable casualties, or any causes beyond Consultant's control, or by delay authorized by the County, or by any cause which the County determines may justify the delay, then the contract time shall be extended by change order for such reasonable time as the County may determine.

14.2 All claims for extension of contract time shall be made in writing to the County, not more than fifteen (15) days after the occurrence of the delay; otherwise, they shall be waived. In the case of a continuing cause of delay, only one (1) claim shall be necessary.

14.3 No claim for delay shall be allowed on account of failure to furnish an Agreement interpretation or approval until fifteen (15) days after written request is made for them, and not unless such claim is for a reasonable period.

14.4 This Article 16 does not exclude the recovery of damages for delay by either party under other provisions of the contract documents.

## **ARTICLE 15 - MISCELLANEOUS PROVISIONS**

15.1 Any notices required or permitted under this Agreement shall be deemed to be fully given if placed in a prepaid addressed envelope and sent United States Post Office, Certified Mail, if to County addressed:

Pueblo County Planning and Development  
Joan Armstrong, Director  
229 W. 12th Street  
Pueblo, CO 81003-2810  
Phone: (719) 583-6100  
Fax: (719) 583-6376

and, if to the Consultant addressed:  
Keammerer Ecological Consultants Inc.  
Warren R. Keammerer  
5858 Woodbourne Hollow Road  
Boulder, CO 80301  
(303) 530-1783  
wrkeam@comcast.net

15.2 It is agreed between the parties hereto that the interpretation and enforcement of this Agreement shall be in conformity with the laws of the State of Colorado.

15.3 In the event one or more, but not all of the provisions of this Agreement are declared unlawful or unenforceable by a court of competent jurisdiction, such determination shall not affect the legality or enforceability of the remainder of the terms hereof.

15.4 This Agreement may be executed in three (3) counterparts, each of which so executed shall be deemed to be an original, and such counterparts shall, together, constitute and be one and the same Agreement.

15.5 This Agreement shall inure to the benefit of and be binding upon the parties hereto, their successors or assigns, provided Consultant may not assign this Agreement.

15.6 County and Consultant, by and through their respective signatories to this Agreement, each represent to the other that they are authorized to enter into the Agreement.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be signed by their proper corporate officers and have their corporate seals hereto the day and year first above written.

**Consultant:** Keammerer Ecological Consultants Inc.

By: Walter R. Keammerer

Title: President

Date: 3/20/2013

**Pueblo County**

By: Tommy J. Keith  
Chairman, Board of County Commissioners

Date: 3-27-13

**APPROVED AS TO FORM:**

By: Peter D. Blood  
County Attorney

Date: 3/25/2013

Attachments: Resolution Approving 1041 Permit No. 2008-002 (Resolution No. P&D 09-22)  
Request for Proposal (RFP), d. 11/30/13  
"Estimated Costs -2013," Document from Consultant  
Proposal From Consultant, d. 12/31/12  
Notice to Proceed



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RESOLUTION NO. P&D 09- 22THE BOARD OF COUNTY COMMISSIONERS  
OF PUEBLO COUNTY COLORADOA 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

WHEREAS, the Board of County Commissioners has held public hearings on the Permit referenced above and having considered the testimony and the documentary evidence submitted does hereby find and conclude as is hereinafter set forth:

1. The Pueblo County Board of County Commissioners has adopted regulations for areas and activities of State and local interest pursuant to §§ 24-65.1-101, et seq., C.R.S. (2008) ("HB 1041"), §§ 29-20-101, et seq., C.R.S. (2008) ("HB 1034"), and other applicable land use and regulatory powers of Pueblo County. These regulations, titled "Pueblo County Regulations for Area and Activities of State and Local Interest," are set forth in Title 17, Land Use, Division II of the Pueblo County Code ("Areas and Activities Regulations"). Chapter 17.148 contains the general administrative provisions applicable to all designated areas and activities regulated in the County, and subsequent chapters address each specific area or activity which has been designated by the County for regulation.
2. An Application has been submitted to Pueblo County for approval of a permit to conduct certain activities under Chapters 17.164 and 17.172, Pueblo County Code, for the Southern Delivery System project within Pueblo County (the "SDS Project"). The SDS Project, as proposed and as is more particularly set forth in the Application for this Permit, is a regional water delivery project. As proposed, the SDS Project would use Pueblo Reservoir, a feature of the Fryingpan-Arkansas Project, located in Pueblo County to regulate storage and would deliver untreated water through a proposed 53-mile pipeline to treatment and distribution facilities.
3. Chapter 17.164, "Local Regulations of Site Selection and Construction of Major New Domestic Water and Sewage Treatment Systems and Major Extensions of Existing Domestic Water and Sewage Treatment Systems," contains procedures and criteria for permitting major new water and sewer systems or major extensions of existing systems.
4. Chapter 17.172, "Regulations for Efficient Utilization of Municipal and Industrial Water Projects," contains procedures and criteria for development of municipal and industrial water projects.
5. Section 17.140.010(F) of the Pueblo County Code provides that any proposed activity or use, which requires a permit pursuant to the Areas and Activities Regulations, shall not require application for and issuance of a Special Use Permit otherwise required by Pueblo County zoning regulations.

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6. Colorado Springs Utilities, on behalf of itself and its project partners, filed the Application. Colorado Springs Utilities is an enterprise owned and operated by the City of Colorado Springs. Colorado Springs Utilities is the project manager charged with the responsibility to oversee the permitting, construction, and operation of the SDS Project pursuant to agreement with the other project partners, the City of Fountain ("Fountain"), the Security Water District ("Security"), and the Pueblo West Metropolitan District ("Pueblo West District") (these four partners are collectively the "Applicant" or the "Participants").

7. The proposed SDS Project includes the following features:

(a) **In Pueblo County:**

(i) **Long-Term Storage in Pueblo Reservoir.**

The Participants would use up to 42,000 acre feet (AF) of existing excess ("if and when") storage space in Pueblo Reservoir under proposed renewable contracts (with individual terms of up to 40 years) with the United States Bureau of Reclamation ("Reclamation"), the owner of Pueblo Reservoir, as follows: Colorado Springs Utilities--28,000 AF; Fountain--2,500 AF; Security--1,500 AF; and Pueblo West District--10,000 AF. This water would be delivered to the Participants through the reservoir outlet works.

(ii) **Modification of the Pueblo Reservoir Outlet Works for Pipeline Intakes.**

By proposed renewable contracts with Reclamation (with individual terms of up to 40 years), the North River Outlet Works, located on the north side of the Arkansas River at the Pueblo Reservoir dam, would be modified to allow a connection to be constructed to an untreated water pipeline of the Participants. This north intake connection would serve as the preferred SDS intake. Additionally, a new tie-in to the existing Joint Use Manifold, which serves as a connection to other municipal users on the south side of the River at the dam, might be constructed as an alternate SDS intake. This south intake would involve constructing a buried pipeline under the River to join the north intake pipeline. The Joint Use Manifold is currently used for deliveries to pipelines for the Pueblo Water Board, the Fountain Valley Authority ("FVA"), Pueblo West District, and possibly to the planned Arkansas Valley Conduit to eastern Colorado communities; if an SDS connection to this Manifold were constructed, it would be operated pursuant to a future agreement among Applicant, the Bureau of Reclamation, the Pueblo Board of Water Works, and other entities.

(iii) **Pueblo West Turnout.**

On the north side of the Arkansas River, a turnout from the pipeline from the outlet(s) would be constructed for water delivery to the existing Pueblo West Pump Station and then through an existing pipeline for treatment by Participant Pueblo West Metropolitan District. A pipeline would be constructed from the turnout about 140 feet to the Pueblo West Pump Station. This turnout would be in addition to the proposed river intake pump station of Pueblo West District, which was previously authorized by Reclamation and by a Pueblo County Areas

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and Activities Permit 2003-003 near the same location. Construction of the Pueblo West river intake pump station is necessary to provide system redundancy. Pueblo West District is pursuing construction of the river intake pump station independent of SDS.

(iv) Juniper Pump Station.

Beyond the Pueblo West Turnout, a pipeline would be constructed approximately 1,500 feet to the Juniper Pump Station to be built east of the base of the Pueblo Dam and to the north of the Arkansas River. The building would be approximately 14,000 square-feet and 42 feet high, and it would include an office, parking lot, and auxiliary power facilities, in addition to pumping facilities. The pump station would be operated by Participants on land leased from Reclamation.

(v) SDS Pipeline.

From the Juniper Pump Station, a 66-inch diameter raw water pipeline (with a maximum capacity of 78 million gallons per day ("mgd") from the Juniper Pump Station) would extend approximately 20 miles to the El Paso County line. Along the pipeline, the Applicant would construct various buried appurtenances and structures, including access manways, vaults, valves, air vents, and drainage structures. The pipeline in Pueblo County would be crossing under Hwy. 50 and under about 130 separate parcels, 24 County roads, and 50 drainages within Pueblo County; the pipeline would require about 238 acres of permanent easements and another 92 acres of temporary easements for construction within Pueblo County. The SDS Pipeline would extend northward out of Lake Pueblo State Park into Pueblo West, cross U.S. Highway 50 West approximately 3,600 feet east of Purcell Boulevard, and continue northward through the central portion of Pueblo West north of U.S. Highway 50. The pipeline generally would parallel the existing FVA pipeline right-of-way through most of Pueblo West, thereafter diverge from the FVA pipeline location in portions of northern Pueblo County, and exit Pueblo County approximately 3½ miles west of Interstate 25.

(b) **In El Paso County (outside the terms of this permit):**

(i) SDS Pipeline: Approximately 33 miles of raw water pipeline extending from the El Paso County line to the terminal storage reservoir and water treatment plant.

(ii) Terminal Reservoir and WTP.

An approximately 30,500 AF terminal storage reservoir would be constructed on upper Williams Creek, tributary to Fountain Creek, in El Paso County. Flows from the SDS pipeline would be stored there and/or delivered to a new water treatment plant (WTP) to be constructed by Colorado Springs Utilities. Phase 1 of the new WTP would deliver 50 mgd of treated water to meet the maximum day demand. Security would receive treated water by connection to Colorado Springs' distribution system. Fountain would receive its share of water through the FVA pipeline by an administrative trade with Colorado Springs of an equivalent amount of water and treatment capacity in that system.

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**(iii) Return Flow Reservoir.**

Colorado Springs Utilities would construct a 28,500 acre-foot exchange reservoir on the lower Williams Creek, a tributary to Fountain Creek. The purpose of the reservoir would be to store return flows for later release to Fountain Creek and for exchange upstream on the Arkansas River when higher river conditions allow such exchanges. Releases to Fountain Creek would be by a pipeline at a maximum release rate of 300 cubic feet per second ("cfs").

**(c) Other SDS Project Activities:****(i) Conveyance of Fountain Creek Return Flows.**

Municipal return flows (sewered and non-sewered) and other reusable water is and will be discharged into Fountain Creek after use by the Participants (except for Pueblo West District). This water flows down Fountain Creek to its confluence with the Arkansas River and is exchanged pursuant to existing water rights decrees to Pueblo Reservoir or other decreed points of diversion and/or storage. This river exchange will decrease flows in the Arkansas River below the Reservoir through Pueblo County and the City of Pueblo to the Fountain Creek confluence.

**(ii) SDS Project Operations.**

The assumed operations for purposes of the environmental impact studies by Reclamation are set forth in detail in Appendix D, Operations, Southern Delivery System Final Environmental Impact Statement (December 2008) (the "FEIS").

**(iii) Schedule and Cost.**

The current proposed schedule is to commence construction beginning in 2009, with completion in late 2012, for the Pueblo Reservoir outlet modifications, Juniper Pump Station, SDS pipeline, and WTP (to 50 mgd). Engineering and construction of the terminal storage reservoir (Upper Williams Creek) would occur between 2015 and 2017. Engineering and construction of the exchange reservoir (Williams Creek) and conveyance facilities and the WTP expansion would commence in 2021 and be completed in 2024. The estimated capital cost of the SDS Project is about \$1.1 billion (2007 dollars).

**(iv) Not Related to Pueblo Reservoir Enlargement.**

Enlargement of Pueblo Reservoir by raising the dam is not a component of the SDS Project for purposes of this Application or Permit, nor is reoperation of space in Pueblo Reservoir. According to the FEIS, enlargement is not needed to fulfill the project's purpose or Participants' needs, and the periodic unavailability of storage space under "if and when" storage contracts was considered in evaluating the project yield to the Participants.

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8. On March 26, 2008, the Applicant requested a Finding of No Significant Impact (FONSI) for the SDS Project under the provisions of the Areas and Activities Regulations. On August 28, 2008, the Pueblo County Planning and Development Director determined that the SDS project did not qualify for a FONSI and that the Applicant had to proceed with its application to the County for a permit to conduct the proposed activity. Notice of this determination was given to Applicant and published on August 30, 2008 in accordance with the Areas and Activities Regulations. This FONSI denial was not appealed to the Board of County Commissioners and the time for such an appeal has expired.
9. On August 20, 2008, the Applicant submitted an application for a permit for the Southern Delivery System Project under Sections 17.164 and 17.172 of the Pueblo County Code.
10. On October 24, 2008, the Pueblo County Planning and Development Director determined that the Application was complete.
11. At the request of the Pueblo County Planning and Development Director and upon published notice, the Applicant hosted four public meetings to explain the SDS Project and answer questions. A meeting was held on October 16, 2008 at the Visitor's Center at Lake Pueblo State Park, Colorado, on the topic of impacts to Lake Pueblo State Park. Meetings were held on October 23 and 27, 2008, at the VFW Post in Pueblo West, Colorado, on the topic of pipeline routing and construction. A meeting was held on October 30, 2008 at the Old Pueblo Museum in Pueblo, Colorado, on the topic of impacts to Fountain Creek.
12. On October 15, 2008, the Pueblo County Planning and Development Director mailed a letter to various public agencies and other interested entities requesting comments on the Application.
13. On November 1, 2008, the Pueblo Board of County Commissioners published notice under §17.148.260, Pueblo County Code, that it would hold a public hearing beginning on December 9, 2008, at 6:00 p.m., in the Jackson Conference Room of the Sangre de Cristo Arts and Conference Center, 210 North Santa Fe Avenue, Pueblo, Colorado, to review and consider action regarding the Application.
14. Under direction of Pueblo County planning staff, the Applicant mailed notice of the public hearing to owners of property located within 500 feet of the SDS Project.
15. A hearing was held on December 9, 2008, at which time Applicant and County staff made their presentations. The hearing was continued to December 11, 2008, December 29, 2008, January 21, 2009, February 25, 2009, and March 18, 2009 pursuant to Section 17.148.260, Pueblo County Code.
16. On December 3, 2008, the Pueblo County staff issued its written comments on the Application, and on December 8, 2008, issued an addendum to those comments. At the hearings on January 21, 2009 and February 25, 2009, the Pueblo County staff, consultants, and attorneys presented additional written comments, updates on federal agencies' reviews of the SDS Project, and recommended terms and conditions if a permit were to be approved by the Board.



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17. On December 23, 2008, the Applicant submitted Rebuttal Submissions to the Pueblo Board of County Commissioners in response to the written comments of the Pueblo County staff and written and public comments received at the December 11, 2008 hearing. The Applicant also responded to questions by the County Commissioners and County staff, consultants, and attorneys. The Applicant also submitted another written Rebuttal Submission on January 21 in response to testimony and additional written comments.

Public comment on the proposed Permit was received by the Board of County Commissioners on December 11, 2008, with further written comment accepted for the record until closure of the public comment portion of the hearing on December 29, 2008. Additional public comment regarding mitigation and proposed conditions was allowed by the Board of County Commissioners, up to the closure of this additional comment period on March 18, 2009.

The matter was tabled to April 2, 2009 to allow for further consideration of the proposed terms and conditions by the City of Colorado Springs City Council. To further accommodate this review the matter was again tabled by the Board of County Commissioners to April 21, 2009 for final deliberation and final action on the Permit request.

18. In support of the Application, the Applicant incorporated and relied upon analyses produced for the Environmental Impact Statement required by the Bureau of Reclamation under the National Environmental Policy Act ("NEPA"). A draft Environmental Impact Statement (DEIS) was released in February 2008. A Supplemental Information Report (SIR) was released in October 2008, as a result of Applicant's changes to the proposed SDS Project and in response to public comments on the project. A final Environmental Impact Statement (FEIS) was released on December 12, 2008, which contains recommended mitigation measures for a Reclamation action. Applicant has agreed to perform significant additional mitigation activities under this permit for the 78 mgd SDS Project. Reclamation executed its Record of Decision ("ROD") on March 20, 2009, selecting the SDS Project as outlined in this Application as the preferred alternative for implementation. As of the date hereof, Reclamation has not entered into contracts with the Participants.

19. The Applicant has demonstrated a need for the SDS Project to provide water for the projected demand of the Participants' communities for the reasonably foreseeable future, to provide water delivery system redundancy, and to increase drought protection.

20. The SDS Project would benefit citizens in Pueblo West by, amongst other matters, providing a water delivery capacity for its projected build-out. Pueblo West's use of the pipeline from the North Outlet Works would provide valuable redundancy to its pipeline from the Joint Use Manifold.

21. According to the FEIS, there are several other reasonable alternatives to the SDS Project pipeline from Pueblo Reservoir, but these alternatives are substantially more expensive and not as operationally efficient. The FEIS estimates that the pipeline from Pueblo Reservoir would save the Applicant over \$215 million in capital costs and \$50 million in operating costs when compared to the next likely alternative. Upon the issuance of a satisfactory permit by Pueblo County for the SDS Project, the Applicant has agreed that a portion of such savings would be used for mitigation of impacts and improvements on Fountain Creek specified as commitments in the permit.

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22. The SDS Project will decrease flows in the Arkansas River between Pueblo Reservoir and the Fountain Creek confluence under some hydrologic conditions. Without mitigation, such reduced flows could further impair water quality, endanger aquatic life and the riparian environment, and adversely impact recreation, boating, and angling.

23. In anticipation of permitting for the SDS Project and to mitigate its effects, the City of Colorado Springs, Fountain, and other water supply entities entered into agreements to manage flows between Pueblo reservoir and the Fountain Creek confluence ("Pueblo Flow Management Program" or "PFMP"). Its purpose is to provide a reasonable level of protection for streamflows to protect the Arkansas River Corridor Legacy Project (riparian and channel restoration, preservation of aquatic life, and boat chutes, constructed and financed by the City of Pueblo and the U.S. Army Corps of Engineers). The parties agreed to forego certain exchanges of water and changes of water rights to assist in providing both year-round flow and recreational flows at specified target flow levels. The PFMP agreements provide that Colorado Springs can terminate its participation if Colorado Springs is unable to reasonably construct the SDS Project from Pueblo Reservoir due to terms, conditions or requirements contained in any federal, State, or local permit, permission or license including Reclamation's Record of Decision or this Permit. The continuation of the PMFP and the achievement of its purposes are necessary to address the decreased flows referenced in these findings. Accordingly, it will be necessary for all Project Participants to continue to abide by its terms.

24. At some times and under certain hydrologic conditions, the SDS Project will decrease lake levels and surface acreage in Pueblo Reservoir with potential adverse effects on recreation, boating, and angling.

25. The SDS Project will increase flows in Fountain Creek in Pueblo County. New development and growth serviced by the SDS Project, without proper management, could increase flows and volumes and pollutant loads in Fountain Creek. Without mitigation, such increased flows would aggravate problems of erosion, sedimentation, flooding, and water quality degradation.

26. The SDS Project, even with mitigation, will have unavoidable construction impacts on Pueblo West and other Pueblo County residents due to truck hauls, increased traffic, noise, disruption of roads, excavation, and easement acquisition. Offsetting such impacts, Applicant estimates the capital construction costs of facilities in Pueblo County would be approximately \$193 million through 2012 which Applicant represents would benefit the local economy in Pueblo County through opportunities for employment and purchases of goods and services in Pueblo County.

27. In its testimony and written submittals, the Applicant made the following commitments to Pueblo County:

"We will:

- Build SDS in environmentally responsible manner
- Mitigate SDS impacts
- Use water rights we own
- Ensure that Pueblo County won't pay for SDS
- Continue doing our part to improve Fountain Creek"

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28. With mitigation pursuant to the terms and conditions of this Permit, the Board finds that the benefits of the SDS Project outweigh the losses of resources and environmental and socioeconomic impacts to the County and its residents.

29. Subject to Applicant's compliance with the terms and conditions of the Permit and its satisfaction of its commitments herein described, the SDS Project complies with the criteria set forth in Sections 17.164.030 (A) through (O), and 17.172.130 (B)(1) through (29).

**NOW, THEREFORE, BE IT RESOLVED** that the Board of Pueblo County Commissioners does hereby approve a permit for construction, operation and use of the SDS Project within Pueblo County, Colorado, on the basis and terms of the findings set forth above in this Resolution, and further based upon the Record made in this matter including specifically, but not limited to, the documentary and other evidence submitted by Pueblo County staff and consultants, and subject to the following general terms, conditions and commitments, together with the detailed descriptions of those terms, conditions and commitments contained in the Mitigation Appendix referenced herein and incorporated herein:

1. **Commitments of Applicant.**

The following terms and conditions contain the specific commitments of the Applicant and shall be met as herein described.

2. **Term of Permit.**

This Permit is valid indefinitely for the life of the SDS Project, provided Applicant is in compliance with this Permit. If the Applicant fails to take substantial steps to construct the permitted development within thirty-six (36) months from the date of the Permit, then the Permit may be revoked or suspended by the County in accordance with its Areas and Activities Regulations. The Applicant may submit a written request to Pueblo County for an extension of the time period to begin construction under the Permit for good cause.

3. **Transfer of Permit.**

This Permit may be transferred in whole or part to another party only with the written consent of the Board of Pueblo County Commissioners. A proposed transferee shall demonstrate that it can and will comply with all the requirements, terms, and condition contained in the Permit.

4. **Compliance with other Regulatory Requirements.**

Applicant shall comply with applicable local, State, and federal regulatory requirements and permits. *See Mitigation Appendix C-7.* Prior to commencement of construction of any phase or work package of the SDS Project in Pueblo County, and within 60 days of said permit approvals, Applicant shall provide copies to Pueblo County of permits applicable to that work package of construction. If any such permits or approvals result in a material change in the SDS Project or are inconsistent with the terms and conditions of this Permit, Applicant shall notify Pueblo County, and Pueblo County shall determine whether a Permit amendment or suspension is required.

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**4.1. Other Pueblo County Regulations.**

This permit shall not constitute an exemption from Pueblo County zoning, building, health, or other applicable regulations and codes (except as provided in Section 17.140.010(F) of the Pueblo County Code regarding special use permits).

**4.2. Flood Hazard Area Development Permits.**

The Applicant shall obtain a Flood Hazard Area Development permit(s) for construction proposed within any designated 100-year floodplain in Pueblo County (as identified by the most current FEMA Flood Insurance Rate Maps for Pueblo County). These permits require review and approval by the Pueblo County Department of Planning and Development prior to any construction within a floodplain.

**4.3. Permit for New Electrical Substation and Transmission Lines.**

Construction of a new substation and transmission lines for the Juniper Pump Station shall require approval by Pueblo County of a Use-by-Review as specified in the Public Use District (S-1) zoning regulations if less than 115 Kv. If 115 Kv or greater, a separate permit application shall be submitted under the applicable Areas and Activities Regulations.

**5. Permit Amendment.**

Any material change in either the construction, use, or operation (exceeding 78 mgd pumping by the Juniper Pump Station) of the SDS Project from that approved herein, or with the Applicant's performance of the terms and conditions approved herein, shall require a permit amendment. For these purposes, a material change shall be any change in the Project which significantly changes the nature of impacts addressed by the Permit. The Applicant shall notify Pueblo County of any material change in the SDS Project (not including routine maintenance, repair, or operation of an existing facility) and the County will determine whether an amendment or new permit is required. Any disagreement about the materiality of a change shall be subject to the Dispute Resolution Process outlined herein.

**5.1. Use of New Water Supplies Delivered Through SDS Project.**

Although Applicant currently has no firm plans to acquire by purchase or lease additional water rights in the Arkansas Basin either downstream or upstream of Pueblo Reservoir, the possibility exists that additional water supplies will be required in the future. In addition, if third-party contracts or agreements are executed meeting the other terms and conditions of this permit, those entities might well seek to acquire new or additional water rights for transportation of water through the SDS Project. Pueblo County asserts that it possesses the legal authority to regulate and control such additional water and water rights transportation through the SDS project. Nothing in the terms and conditions of this 1041 Permit is intended to prevent Pueblo County from asserting that jurisdiction and regulatory authority, subject to the right of any such third-party and/or Applicant to assert any defenses to the exercise of the County's authority that may then exist.

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5.2. Carriage Of Water To Entities That Are Not SDS Project Participants.

Although Applicant has no existing permits or agreements with third-parties not listed as Applicants on 1041 Permit Application No. 2008-002, except all existing service agreements already disclosed to Pueblo County, it does not intend to foreclose the potential of making additional agreements for the long-term delivery of water to third parties via the SDS Project. In the event any such third-party contracts are entered into under which Applicant would deliver water to such a third-party in El Paso County, Applicant shall require that the following conditions be included in any contract, permit, or agreement with such third-party:

- A. A clear acknowledgment of support for the Fountain Creek Watershed Flood Control and Greenway District, together with a commitment to participate in the financing of said district;
- B. A clear and irrevocable commitment not to serve property located outside of the natural drainage of the Arkansas River or to market, transfer, wheel, or otherwise provide water to properties or entities located outside the natural drainage of the Arkansas River;
- C. The adoption and maintenance of a financing mechanism similar to the Colorado Springs Stormwater Enterprise capable of financing, constructing, and maintaining storm water detention and retention facilities intended to insure that the storm flows of the Fountain Creek Basin do not increase above existing conditions, along with the adoption and maintenance of regulations and ordinances requiring stormwater detention, retention, and management no less strict than those in place in the City of Colorado Springs. This condition can only apply to such third-parties who have the legal authority to regulate in this manner;
- D. An agreement to accept and comply with the City of Pueblo Flow Management Program and the Pueblo Recreational In-channel Diversion Decree both impacting the Arkansas River between Pueblo Dam and its confluence with Fountain Creek, in any application for a change of water rights or exchange implicating that reach of the river;<sup>1</sup>
- E. Pro rata participation in any water quality monitoring or studies to the same degree and extent as undertaken by the Applicant under this permit; and
- F. Support of any studies of a flood control dam or dams on Fountain Creek.

Upon the submission of contracts or agreements to Pueblo County evidencing the acceptance of the foregoing terms and conditions, Applicant shall be entitled to enter into third-party contracts for the delivery of water from Pueblo Reservoir to entities located in El Paso County or Teller County within the Arkansas River Basin. Nothing herein shall provide a right in the Applicant or any other entities to operate the SDS Project at a rate of flow in excess of 78

<sup>1</sup> The term "Pueblo RICD" refers to Case No. 01CW160, District Court, Water Division 2, Colorado.

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mgd without applying for and receiving an amended 1041 Permit satisfying any additional terms and conditions which might then be imposed.

5.3. Reservation of Permit Authority.

Colorado Springs currently does not have the authority to enlarge the storage capacity of Pueblo Reservoir. Should the enlargement of Pueblo Reservoir occur in the future, and should Colorado Springs become a participant in that enlargement, Pueblo County reserves the right to assert, at that time, that those actions constitute a permissible activity under its 1041 regulations, subject to the right of Colorado Springs to assert any defenses to the exercise of the County's authority that may then exist.

6. Monetary Mitigation for Fountain Creek Impacts.

In order to mitigate the impacts of SDS to Fountain Creek in Pueblo County, Applicant will pay fifty million dollars (\$50,000,000) to the Fountain Creek Watershed, Flood Control and Greenway District ("District") described in the Intergovernmental Agreement for the Management and Conservation of Fountain Creek executed by El Paso County on December 15, 2008 and Pueblo County on December 16, 2008.

Three hundred thousand dollars (\$300,000) of that amount shall be paid in equal annual installments of one hundred thousand dollars (\$100,000), commencing July 1, 2009. These payments shall be used to assist in the identification and prioritization of projects, and to fund a study or studies of opportunities for constructing flood control and sediment control facilities which may include the feasibility of a dam or dams on Fountain Creek or its tributaries in order to improve the flood protection for the City of Pueblo and the Fountain Creek Basin.

Payment shall be made as to the remaining forty-nine million seven hundred thousand dollars (\$49,700,000) as follows: nine million seven hundred thousand (\$9,700,000) on January 15, of the year following completion and commencement of water deliveries through the SDS Pipeline from Pueblo Reservoir to Colorado Springs; and in equal annual installments of ten million dollars (\$10,000,000) on January 15 of each of the four years thereafter.

Payments shall be made to the District, provided: it is created by legislation supported by Pueblo County and El Paso County for the management and conservation of Fountain Creek; it provides for participation by Pueblo County and the City of Colorado Springs as voting members of the board of directors; it has equal representation of entities from Pueblo County and El Paso County as voting members of the board of directors; and it has power to levy taxes and impose fees. If the District is not so created, then Pueblo County and Colorado Springs will establish a not for profit corporation pursuant to the Colorado Revised Nonprofit Corporation Act, C.R.S. § 7-121-101, et seq, governed by a board of directors having an equal number of directors from Pueblo County and from Colorado Springs, for the purposes specified herein. The Foundation, if established, will be referred to as the Fountain Creek Restoration Foundation. ("FCRF").

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The District (or if not created, the FCRF) may use funds provided by the Applicant under this permit condition only for one or more new projects in the Fountain Creek watershed between Colorado Springs and the Arkansas River confluence in Pueblo that create a significant and not merely incidental benefit to Fountain Creek within Pueblo County for improvement of water quality, for flood control, or for prevention of erosion and sedimentation. Subject to these criteria, acceptable projects may include:

- A. those projects that have been identified by the United States Army Corps of Engineers ("Corps") as high priority erosion, sedimentation, or flood control projects in a formal Corps' recommendation for Fountain Creek;
- B. erosion, sedimentation, flood control or water quality improvement projects identified as part of the Fountain Creek Corridor Master Plan adopted by Colorado Springs Utilities and the Lower Arkansas Valley Water Conservancy District;
- C. any other sedimentation and erosion control, flood control, including a dam or dams, or stream improvement project that is found to be acceptable by the District or, if not created, the FCRF.

In the event completion of the SDS Project is delayed beyond 42 months after the effective date of the permit because of an affirmative decision made by Applicant, then the payments to be made by the Applicant pursuant to this paragraph shall begin to be made on such date, without regard to project construction status, or such payments shall be subject to annual indexing commencing 42 months after the effective date of the permit, to increase the amount of such payments as required to preserve their present values, using the Colorado Front Range Producer Price Index, but not to exceed a maximum annual increase of 3.5%.

**7. 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, 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.

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8. **Sediment Control/Dredging and Clear Springs Ranch.**

It is acknowledged by Pueblo County and Applicant that one mitigation commitment will be a project to reduce the sediment load in lower Fountain Creek through dredging and the construction of sediment collection devices. These efforts will occur prior to the construction of the SDS Project. These sediment removal activities are of vital importance to Pueblo County because they will assist the City of Pueblo in preserving the flood protection of the Fountain Creek levees at or above the 100-year flood level. This mitigation commitment may be conducted in cooperation with a project or projects of the U.S. Army Corps of Engineers. It is acknowledged that there will have to be sampling done on the bed sediments in Fountain Creek to insure that no hazardous materials exist that would make a dredging and sediment removal project technically or financially impracticable. Applicant, as a condition of this permit, will pursue vigorously its efforts to complete this sediment removal project at the levels committed to in the final Environmental Impact Statement process. In the event that sediment removal is not practicable because of the quality of the bed sediments, Applicant will commit an equal amount of money that would have been expended on this sediment removal project at the level required by the FEIS for another project designed to assist the City of Pueblo in restoring and maintaining sufficient flood protection to allow the existing levee systems to withstand a 100-year flood, subject to approval of the Bureau of Reclamation.

In addition, Applicant has committed, as part of the EIS process, to construct new wetlands and redirect a portion of the channel of Fountain Creek adjacent to the wetlands area at the Clear Springs Ranch to reduce the slope and improve channel stability through this area subject to the approval of Reclamation. The redirected channel is proposed to have an increased length and sinuosity to stabilize the channel. The purpose of this mitigation activity is to reduce sediment transport down Fountain Creek into Pueblo County, improve water quality and reduce flood threat downstream. This project will be completed to the levels required by Reclamation.

Applicant has submitted a letter to Reclamation, dated April 20, 2009, stating its intention and desire to achieve its obligations set forth in the Final Environmental Impact Statement, Sections 5.2.4 and 5.2.6, in the manner described in this paragraph 8. A copy of the letter has been made a part of the record.

9. **Continuation of Pueblo Flow Management Program.**

All SDS Participants shall cooperate in and comply with the PFMP (including Pueblo West and Security who are not signatories to the PFMP agreements at this time) and its requirements for maintaining target flows through Pueblo below Pueblo Reservoir by cessation of exchanges.

10. **Implementation of Arkansas River Low Flow Program.**

Colorado Springs Utilities shall promptly submit a signed Memorandum of Understanding between the Pueblo Board of Water Works and Colorado Springs Utilities which shall provide 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 designed to permit the release of water into the Arkansas River during times when the flow in the River could fall dangerously low, to levels at or below 50 cubic feet per second (cfs). SDS participants shall not exchange against reservoir releases made by the Board of Water Works of Pueblo or Colorado Springs Utilities for the Arkansas River Low Flow Program.



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11. **Construction and Use of North River Outlet Works.**

Colorado Springs Utilities shall promptly submit to Pueblo County an executed Memorandum of Understanding with the Pueblo Board of Water Works designed to describe the manner in which the two entities will use the South Outlet Works & Joint Use Manifold and the North Outlet Works of Pueblo Dam for the provision of municipal water supplies. If approved by the Bureau of Reclamation, the North Outlet Works shall be constructed and used as the primary outlet works for SDS.

12. **Safety Review of Design and Construction of Structures at Pueblo Dam.**

No construction shall occur at or near Pueblo Reservoir Dam (outlet modifications and pipelines west of the Pueblo West turnout) until the Bureau of Reclamation has performed its dam safety review and has accepted the design construction plans. Prior to commencement of construction, Applicant shall provide Pueblo County with written proof of such acceptance by the Bureau of Reclamation and any other required regulatory agency.

13. **County Road Improvements and Restoration.**

The Applicant shall obtain and comply with Excavation Permits from the Pueblo County Public Works Department ("Department") for each road crossing within the County, and Access Permits from the Department for each access point onto a County road. The Applicant shall submit a Traffic Control Plan to the Department for review and approval. The Applicant shall submit a Staging Area Plan to the Department for review and approval to define construction work times, material delivery hours, noise suppression, dust abatement, construction methods, and other mitigation of construction nuisances. The Applicant shall provide a Haul Route Plan to the Department for review and approval; the Haul Route Plan shall identify the roads utilized for construction vehicle traffic, maintenance of those roads at Applicant's expense during the project, and rehabilitation of those roads to current Pueblo County Roadway Design and Construction Standards at Applicant's expense. Within thirty (30) days of the Applicant issuing a notice to proceed to its contractors to perform pipeline installation activities that require use of roads in the Haul Route Plan, the Applicant shall establish a cash payment, escrow, or other financial instrument such as a performance bond, acceptable to the County, in an amount estimated by the Department to cover the total costs for rehabilitation of the roads to County Standards (currently estimated at approximately \$6.1 million), plus estimated increases in costs over time as represented by the Construction Cost Index. The Applicant shall coordinate, design, and construct the SDS pipeline facilities so as to anticipate and accommodate future roadways and utilities across the SDS easement so as not to unreasonably preclude them or increase their costs. See *Mitigation Appendix, CR-1 through CR-11 with Exhibits 1-5.*

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14. **Cultural and Archaeological Resource Protections.**

Applicant shall execute the Programmatic Agreement in a form substantially similar to that set forth in the FEIS with the applicable federal and State agencies and Native American Tribes. Applicant shall comply with the standards and procedures of the Programmatic Agreement to ensure the identification, avoidance, protection and disposition of cultural and archaeological resources which may be encountered during construction in Pueblo County, as required by federal and State laws and in accordance with landowner agreements. Proof of execution of the Programmatic Agreement shall be provided to Pueblo County prior to land disturbance.

15. **Acquisition of Property Interests.**

Applicant shall acquire necessary property interests required for each individual work package or phase of the SDS Project in Pueblo County prior to the initiation of construction of that work package. Private property owners shall be treated fairly by the Applicant and the SDS Project shall not create undue financial burdens on existing or future residents of Pueblo County. The Applicant shall commit to using the power of eminent domain only as a last resort. The Applicant shall offer to compensate landowners to have their own appraisal done if they disagree with the Applicant's appraisal. Applicant shall reimburse landowners for relocation costs, title work, and closing costs in accordance with the City of Colorado Springs Procedure Manual for the Acquisition and Disposition of Real Property Interests. No landowner should have out-of-pocket expenses from the Project. Applicant shall provide proof to the County that it has secured the necessary interests in property required to construct the Project prior to starting construction at any given location. See *Mitigation Appendix SE-1*.

16. **Lake Level Management at Pueblo Reservoir.**

Colorado Springs Utilities commits to Pueblo County as a part of the 1041 process that it will voluntarily participate, when and if the Southeastern Colorado Water Conservancy District, the Bureau of Reclamation, and any other affected party agree to participate, in developing a reservoir management plan for Pueblo Reservoir designed to protect reservoir levels and recreational opportunities on Pueblo Reservoir to the extent feasible given the potential for future changes in hydrology and water demands by project beneficiaries.

17. **Payments In-Lieu Of Property Tax.**

Applicant shall minimize to the extent practicable the number of private properties acquired in fee to support construction and operation of SDS facilities. For those private properties purchased and owned in fee, Applicant shall make an annual payment in lieu of taxes equal to the value of the taxes assessed by the Pueblo County Assessor. Payment shall be made to the Pueblo County Treasury on or before April 30 of each calendar year. See *Mitigation Appendix SE-2*.

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18. **Monitoring Program and Adaptive Management for Fountain Creek and the Arkansas River.**

Applicant shall implement a monitoring program to provide information on the current water quality and geomorphology (including erosion, sediment loading, and channel stability conditions) in Fountain Creek and the Arkansas River, and to track changes over time. The monitoring will assist in the selection of mitigation measures and in the assessment of the effectiveness of SDS mitigation measures on Fountain Creek and the Arkansas River. To collect data that supports the evaluations related to impacts on water quality and geomorphology, Applicant shall implement monitoring activities at defined monitoring locations in the Fountain Creek Basin and the Arkansas River. See *Mitigation Appendix E-1*.

Pursuant to the Environmental Impact Statement process, Applicant has committed to engage in adaptive management, which contemplates that Applicant will undertake modified or different mitigation activities for impacts that have been identified in the EIS. If additional mitigation activities are required in order for Applicant to comply with the requirements of the ROD, any costs associated with that additional mitigation activity shall be the sole responsibility of Applicant.

To the extent that the monitoring and the adaptive management program causes Pueblo County to request or require that additional mitigation activities occur over and above those required by the Bureau of Reclamation, Applicant's obligation to conduct those mitigation activities shall be the responsibility of the Fountain Creek District (or FCRF, if the District is not formed) and not directly the responsibility of Applicant. Pueblo County shall be a stakeholder in the Adaptive Management Program, for purposes of this paragraph.

19. **Colorado Springs Utilities - Wastewater Collection System Management Practices to Protect Water Quality.**

Colorado Springs Utilities has committed as a condition of this Permit to continue to implement and maintain wastewater collection system improvements within the Fountain Creek drainage to prevent and minimize the impact of its wastewater system overflows or spills through prevention programs and response activities. Since 2000, it has spent \$114 million for these programs. In addition, Colorado Springs has established a Stormwater Enterprise Fund to finance the capital costs of needed stormwater control infrastructure. See *Mitigation Appendix E-2*.

20. **Construction Impact Mitigation.**

Applicant shall mitigate the impacts of project construction, as set forth in the Mitigation Appendix C-1 through C-22, to include the following:

- Proof of required permits and compliance
- Pre-existing condition assessment of affected properties
- Public information measures and responses to public complaints
- Pre-mobilization readiness
- Sustainable design and construction
- Protection of open excavations and trenches
- Construction site maintenance
- Provisions for access to properties
- Limits on work hours
- Dewatering control

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- Lighting control
- Dust control
- Noise control
- Drainage and erosion control
- Traffic control
- Weed control
- Protection of plants and wildlife/vegetation surveys
- Hazardous waste management
- Management of surface and ground water flows
- Protection of livestock
- Site restoration

Applicant shall assign a point of contact for responding to public questions, comments, and concerns during construction in Pueblo County and one-year following final construction in Pueblo County. Applicant shall also develop notices to affected residents and a website for information on construction scheduling.

**21. Juniper Pump Station Architectural Review.**

Applicant shall allow Pueblo County to appoint a representative who will participate in the final selection of the architecture and landscaping for the Juniper Pump Station, along with representatives of Colorado State Parks and the Bureau of Reclamation.

**22. Reclamation of Disturbed Lands.**

Applicant shall conduct a preconstruction evaluation of existing vegetation to be disturbed during construction of the SDS Project within Pueblo County. Upon reclamation of the site, the vegetation cover shall be of the same seasonal variety native to the area of the disturbed land, or a reasonable substitute pursuant to agreement with the landowner. The revegetated area will be considered acceptable if its cover will be not less than 90 percent of the pre-construction vegetation cover with similar species diversity. Applicant shall provide to Pueblo County a security bond equal to \$2,000/acre of land in permanent or temporary construction easement in each work package. The security bond shall be released upon establishing 90 percent of pre-construction vegetation cover on the impacted land segment. See *Mitigation Appendix C-9*.

**23. Stormwater Management.**

The Applicant shall maintain stormwater controls and other regulations intended to ensure that Fountain Creek peak flows resulting from new development served by the SDS project within the Fountain Creek basin are no greater than existing conditions. This requirement can only apply to Project Participants who have the legal authority to regulate in this manner. Regulations shall comprehensively address peak flow conditions, runoff volumes, and flood hazards, incorporating at a minimum all relevant components of existing regulations of Colorado Springs and the other Project Participants including: regional drainage planning for low-flow and major storm events; detention; erosion and sediment control for land disturbance, construction, and similar activities; structural measures such as channel protection and engineered outfalls; prohibition of activities that infringe on the designated floodway; water quality controls, including water quality capture volume and a determination of the need for

**RESOLUTION NO. P&D 09-22 (CONT.)**

permanent best management practices (BMPs); and adequate provision for maintenance of all drainage-related facilities so required. This condition shall not prevent Colorado Springs and other local jurisdictions subject to this condition from revising and improving stormwater regulations from time to time, to incorporate new technologies, management techniques, or otherwise modify regulations consistent with the intent of not exceeding historical peak flows. See *Mitigation Appendix E-2*.

**24. Conservation and Reuse.**

In recent years, Applicant has demonstrated a commitment to water conservation programs and local reuse. Continued commitment and local reuse will reduce the Applicant's diversions from the Arkansas River and Pueblo Reservoir and reduce flows on Fountain Creek, below what they would have been without such conservation and reuse, thereby reducing the impacts of the SDS Project in Pueblo County. Applicant has specifically committed itself to continue such conservation and reuse despite the availability of additional water from the SDS Project.

**25. Compliance Monitoring and Reporting.**

Applicant shall monitor and periodically report to Pueblo County on its compliance with this Permit. During project construction in Pueblo County, Applicant will submit a quarterly report to Pueblo County summarizing the activities during that period, forecasting activities scheduled for the upcoming period, and addressing compliance with the terms and conditions of the Permit. After commencing deliveries of water through the SDS pipeline, Applicant shall submit annual reports to Pueblo County summarizing its activities related to the SDS Project, the Permit, and addressing compliance with the terms and conditions of the Permit. Pueblo County may, at its discretion, hold public reviews of the reports and Permit compliance, including hearings in accordance with its regulations. See *Mitigation Appendix ENF-1*.

**26. Noncompliance.**

Substantial noncompliance with the terms and conditions set forth herein shall be subject to the provisions governing revocation or suspension of a permit set forth in Section 17.148.320(A) of the Pueblo County Code. The final resolution of issues related to non-compliance (except for the failure to pay the monetary mitigation payments as set forth in Paragraph 6 herein) and any further act of revocation or suspension of the Permit will be accomplished through the dispute resolution process described below.

**27. Approval by Colorado Springs.**

The Colorado Springs City Council must take formal action to recognize the commitments herein prior to Pueblo County's final issuance of a 1041 permit for SDS.

**28. Mitigation Appendix.**

The provisions of that certain Mitigation Appendix previously referenced herein and attached hereto is hereby incorporated by this reference as though fully set forth. In the event of a conflict between the provisions of the Mitigation Appendix and the terms and conditions set forth in this Resolution, then the terms and conditions set forth in this Resolution shall prevail.

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29. Dispute Resolution.

If a dispute between the Applicant and the County arises relating to any term or condition contained in this Permit (except for the failure to pay the monetary mitigation payments as set forth in Paragraph 6), the following procedure shall be followed:

- A. A joint management team, comprised of three (3) representatives of each Party shall first consider any of the circumstances and contentions related to any disputed matter. If the County Manager for Pueblo County [or another representative of the County as designated by the Board of Commissioners] (County Manager) determines that Pueblo County requires technical assistance to assess a disputed matter, Applicant will pay the costs, not to exceed a total of \$150,000 for all disputes related to the Permit, of hiring a technical consultant for that purpose.
- B. If not resolved by agreement of the members of the joint management team, the disputed matter shall be referred by either Party to the Administrative Officers of the Parties defined below. The Administrative Officers shall hold a meeting promptly, but in no event later than fifteen (15) working days from the referral of the dispute, also attended by other staff members with direct responsibility regarding the dispute, to attempt in good faith to negotiate a resolution or cure of the dispute; provided, however, that no such meeting shall be deemed to vitiate or reduce the obligations and liabilities of the Parties or be deemed a waiver by a Party hereto of any remedies to which such Party would otherwise be entitled unless otherwise agreed to by the Parties in writing. For purposes of this dispute resolution provision, "Administrative Officers" means the Chief Water Services Officer for Colorado Springs Utilities and the County Manager [or another representative of the County as designated by the Board of Commissioners].
- C. If, within fifteen (15) working days after such meeting, the Parties have not succeeded in negotiating a resolution of the dispute, they agree to submit the dispute to non-binding mediation with Applicant to bear the costs of the mediation.
- D. The Parties agree to participate in good faith in the mediation and related negotiations for a period of 30 calendar days. The substantive and procedural law of the State of Colorado shall apply to the proceedings. If the Parties are not successful in resolving the dispute through mediation, then the Parties shall be free to pursue any other legal remedy including the remedies contained in any conditions or commitments appended to or made a part of the Permit. The Parties agree to reasonably expedite any legal proceedings brought hereunder in order to obtain a prompt resolution. The venue for these legal proceedings shall be the District Court of Pueblo County.

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30. Integrated Terms and Conditions.

In issuing this Permit, the Board of County Commissioners has determined that the benefits accruing to the County and its citizens from the SDS Project (subject to the terms and conditions set forth herein) outweigh the unavoidable impacts and losses of resources within the County. Consequently, if any term or condition herein is deemed invalid and unenforceable, this Permit shall be rescinded or suspended unless the Board of County Commissioners, in its discretion, approves a Permit amendment.

The foregoing resolution is hereby made the official act of Pueblo County by and through the action of the Board of County Commissioners on this 21<sup>st</sup> day of April, 2009. In addition to the Board's approval and adoption of this resolution, the Board further directs that this resolution is certified by the Clerk to the Board through his attestation and signature below and that it shall be delivered for recordation to the Office of the Pueblo County Clerk and Recorder.

  
J.E. Chostner, Chairman

  
Anthony Nuñez

  
John B. Cordova, Sr.

ATTEST:

By:   
Gilbert Ortiz, County Clerk



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**MITIGATION APPENDIX**

Resolution No. P&D 09- 27

A Resolution Approving Pueblo County  
1041 Permit No. 2008-002  
Southern Delivery System



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## ENVIRONMENTAL CONDITIONS / MITIGATIONS

E-1	Water Quality and Sediment Monitoring Program
	Applicant shall implement a monitoring program to provide information on water quality and sediment conditions in Fountain Creek and Arkansas River, and track changes over time.
<p align="center"><b>PROJECT DETAIL</b></p> <p>Conduct monitoring to assess the effectiveness of proposed SDS mitigation measures. Monitoring along Fountain Creek and the Arkansas River will focus on water quality and geomorphic features. To collect data that supports the evaluations related to impacts on water quality and geomorphology, Colorado Springs Utilities will implement the following monitoring activities at defined monitoring locations in the Fountain Creek Basin and the Arkansas River near the mouth of Fountain Creek.</p> <p><u>Water Quality Monitoring</u></p> <p>Colorado Springs Utilities will monitor specific water quality constituents to include dissolved selenium, E. coli, ammonia, and salinity as measured by specific conductance. To monitor water quality, samples will be taken from each of the 13 monitoring locations, shown in Figures 1 through 3 within the Fountain Creek Basin and along the Arkansas River monthly, starting at the beginning of project construction, until the SDS project begins operation and then quarterly once the project is online. Pre-operation monitoring shall consist of no less than 2 years of monthly-collected data before or during construction of the project. At least two samples will be taken at each monitoring site following standard procedure according to the National Field Manual for the Collection of Water-Quality Data (Field Manual). One sample from each monitoring location will be filtered for inorganic solid constituents in the field according to section 5.2 of the Field Manual to get an accurate reading of dissolved selenium. The other sample from each monitoring location will be analyzed for E. coli, ammonia and salinity. All samples will be managed in accordance with the Field Manual or approved EPA criteria for sample collection and management and analyzed by a State-certified laboratory capable of detecting each constituent below the Maximum Contaminant Level (MCL) or other applicable compliance criterion. Samples will be analyzed in accordance with standard ASTM or EPA-approved methods.</p> <p>In addition to the water quality constituents referenced above, Springs Utilities will monitor both the inlet and outlet to Lower Williams Creek Reservoir for methyl mercury on a quarterly basis following the start of reservoir operations for a period of one year, then annually for four years thereafter. Samples will be collected and analyzed following standard procedures according to the Field Manual and EPA Method 1630.</p> <p>Springs Utilities will use effluent monitoring data from its wastewater treatment plants to demonstrate the plants are operating in accordance with all required specifications and standards. In addition, Springs Utilities will conduct additional monitoring in accordance with monitoring requirements adopted and participated in by all other regional wastewater treatment agencies (i.e., those in the Fountain Creek basin, Pueblo and Pueblo West wastewater treatment plants) including monitoring programs associated with emerging contaminants or other contaminant analyses. CSU will take into consideration and maintain records of other reliable information presented to it by outside sources.</p>	

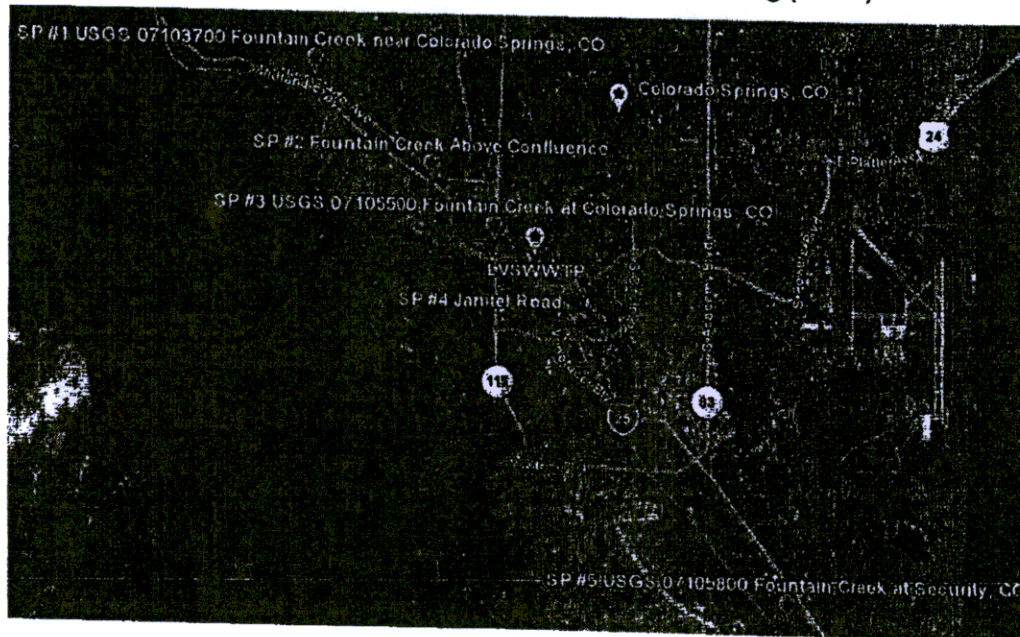
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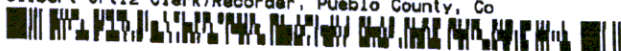
Figures 1 through 3 present the general location of the sampling locations for water quality monitoring efforts. The rationale used to select sampling locations are as follows:

- SP #1 – USGS Gage 07103700 Fountain Creek near Colorado Springs, CO and a baseline upstream of Colorado Springs
- SP #2 – USGS Gage 07104905 on Monument Creek at Bijou St. at Colorado Springs and point below the Northern Wastewater Treatment Plant
- SP #3 – USGS Gage 07105500 Fountain Creek at Colorado Springs, CO and point above the Las Vegas Wastewater Treatment Plant
- SP #4 – Point below the Las Vegas Wastewater Treatment Plant
- SP #5 – USGS Gage 07105800 Fountain Creek at Security, CO
- SP #6 – Point above the CSR wetland mitigation
- SP #7 – USGS Gage 07106000 Fountain Creek near Fountain, CO and point below the CSR wetland mitigation
- SP #8 – USGS Gage 07106300 Fountain Creek near Pinon, CO
- SP #9 – Point above the Pueblo levee system
- SP #10 – USGS 07106500 Fountain Creek at Pueblo, CO and a point within the Pueblo levee system
- SP #11 – Point below the Pueblo levee system
- SP #12 – USGS Gage 07099970 Arkansas River at Moffat Street at Pueblo, CO and point on Arkansas River above confluence to establish baseline
- SP #13 – USGS 07109500 Arkansas River near Avondale, CO and point below confluence to determine exit conditions

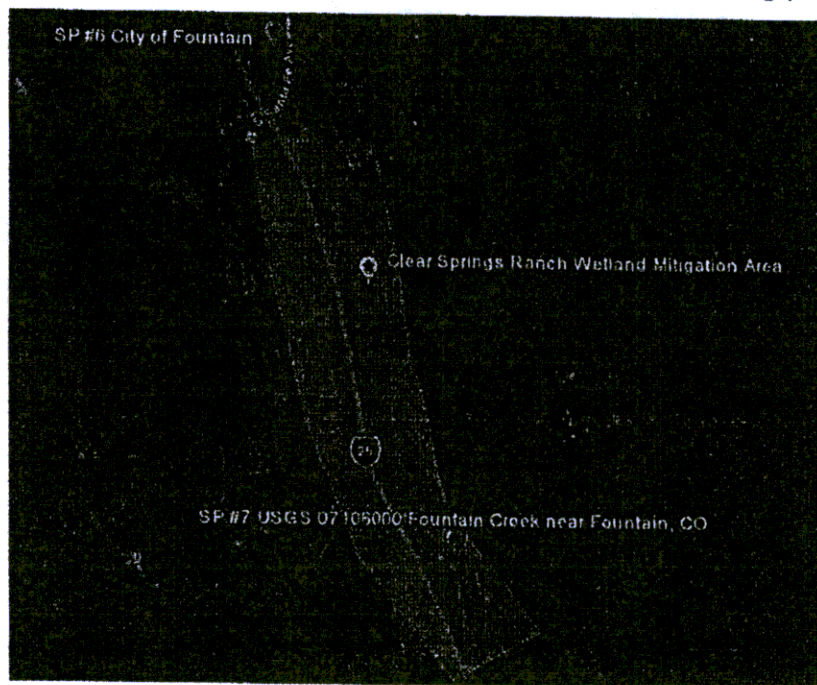
Figure 1 - General Locations of SDS Water Quality Monitoring (North)



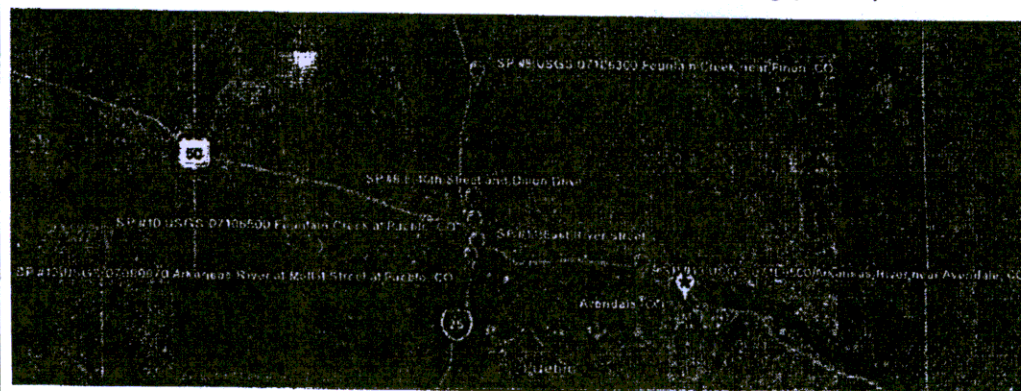
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**Figure 2 - General Locations of SDS Water Quality Monitoring (Central)**



**Figure 3 - General Locations of SDS Water Quality Monitoring (South)**





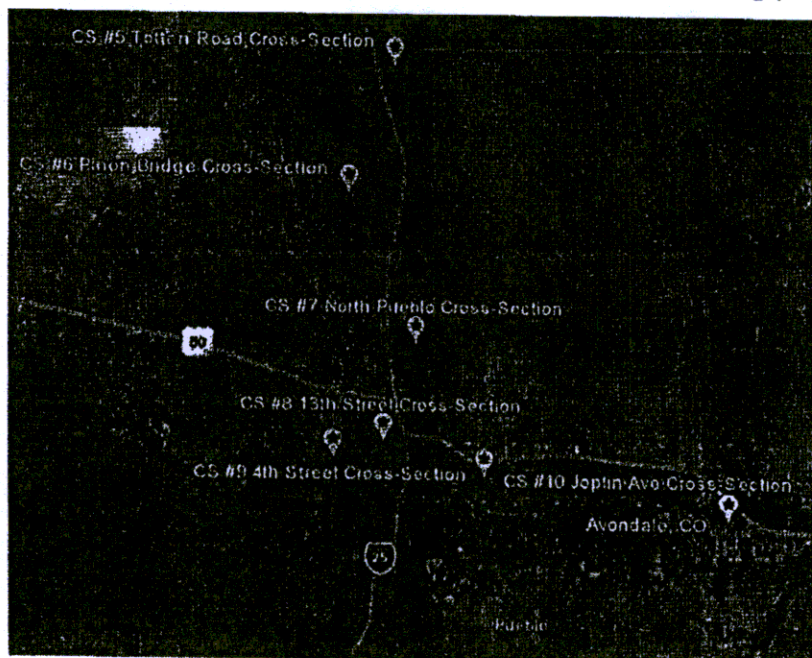
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### Geomorphic Monitoring

In addition to water quality monitoring, geomorphic monitoring is also required. Ten cross-sections will be established at designated points along Fountain Creek to monitor for degradation, aggradation, and other changes to the geomorphologic surface. Each cross-section will be 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. Cross-sections will be accurate to standards for normal transect surveys, with a vertical tolerance of approximately 0.01 foot in measurements of channel elevation.

**Figure 4 - General Locations of SDS Geomorphology Monitoring (South)**



Data gathered by the water quality and geomorphic monitoring programs will be assembled and entered into an electronic database accessible to Pueblo County upon request. Monthly data gathered before SDS comes online will be used as a baseline to compare against once flows from SDS start entering Fountain Creek in 2012. Data will be categorized by type, date, and location. These data, along with other data collected through independent sampling and monitoring efforts will be the basis for making decisions as part of the adaptive management strategy.

Estimated Start Date	Within 60 days of approval of Pueblo 1041 permit.
Estimated Completion Date	December 31, 2046.
Permits	None.

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E-2	<b>Drainage Regulations</b>
	At all times water is delivered through the Southern Delivery System, the Applicant, including all participants, shall maintain stormwater controls and other regulations intended to ensure that Fountain Creek peak flows and runoff volumes received from development served by the SDS project are no greater than existing conditions, or at levels as appropriate to prevent damage to presently existing downstream facilities. Regulations shall address peak flow and runoff volume, conditions and flood hazards, incorporating at a minimum all relevant components of existing Colorado Springs regulations, including: regional drainage planning for low-flow and major storm events; detention; erosion and sediment control for land disturbance, construction, and similar activities; structural measures such as channel protection and engineered outfalls; prohibition of activities that infringe on the designated floodway; water quality controls, including water quality capture volume and a determination of the need for permanent best management practices (BMPs); and adequate provision for maintenance of all drainage-related facilities so required. This condition shall not prevent Colorado Springs and other local jurisdictions subject to this condition from revising and improving stormwater regulations from time to time, to incorporate new technologies, management techniques, or otherwise modify regulations consistent with the intent of preventing the exceedence of historical peak flows.

### **CONSTRUCTION CONDITIONS / MITIGATION**

C-1	<b>Protection of Open Excavations and Trenches</b>
	Applicant shall provide safe work sites for the residents of Pueblo County.
<b>PROJECT DETAIL</b>	
<ol style="list-style-type: none"> <li>1. Comply with applicable Codes, Standards, Laws and Regulations relating to the safety of persons or property or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain safeguards for such safety and protection.</li> <li>2. Provide and maintain temporary security fences to protect the Work Sites. Temporary security fencing is described in more detail in Construction Conditions C-3.</li> <li>3. Inspect open excavations and trenches for compliance with safety plans and document in daily inspection reports.</li> <li>4. Limit the maximum length of open trench to 400 linear feet.</li> </ol>	

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5. Shore or bench excavations as required by OSHA regulations.
6. Protect streets, roads, highways, and other public thoroughfares that are closed to traffic by barricades with warning signs per Manual of Uniform Traffic Control Devices (MUTCD).
7. Provide signage and lighting to alert general public of construction hazards, which could include surface irregularities, unramped walkways, grade changes, and trenches or excavations in roadways and in other public access areas.
8. Designate a qualified and experienced safety representative at the Work Site whose duties and responsibilities shall be the maintaining, supervising and enforcement of safety plans and programs.

C-2	Lighting
	Applicant shall minimize adverse light impacts to Pueblo County residents during night time hours.
<b>PROJECT DETAIL</b>	
1.	Comply with applicable Codes, Standards, Laws and Regulations relating to providing lighting for the safety of persons or property, or to the protection of property from damage, injury, or loss.
2.	Notify property owners within 500 feet of the site 48 hours prior to any night work, except in the case of emergency night work.
3.	Design lighting to prevent spillover, nuisance, or hazard effects of light and glare on adjacent locations and uses of land.
4.	Position, to the extent practical, lighting used for security around equipment storage areas away from residences and oncoming traffic. The use of cut-off type luminaires is required. Light bulbs and light sources shall be shielded so that they are not directly visible from any adjacent lot or public roadway. Spillover of lighting for adjacent properties will not exceed one-half of one (.50) footcandle measured at any point ten feet (10') beyond a property line.
5.	Provide individual light sources not exceeding 150,000 lumens per light source (typical of a 1250W metal halide light). Light standards will not exceed 24 feet in height. Generators used to power light sources will not exceed 70 dB at 25 feet from the source.

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C-3	Construction Site Maintenance
	Applicant shall maintain construction sites and equipment in a safe and secure manner for the protection of the public.
<b>PROJECT DETAIL</b>	
<ol style="list-style-type: none"> <li>1. Comply with applicable Codes, Standards, Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss, and shall erect and maintain safeguards for such safety and protection.</li> <li>2. Protect open trenches as described in Construction Condition C-1.</li> <li>3. Close open ends of installed pipeline during non-working periods.</li> <li>4. Close access manholes during non-working hours.</li> <li>5. Provide barricades and light as necessary to prevent unauthorized entry to construction areas and affected roads, streets, and alleyways, inside and outside of fenced area, and as required to ensure public safety and the safety of project personnel and others who may be affected by the Work.</li> <li>6. Lock or otherwise disable construction equipment during non-working hours.</li> <li>7. Store materials and equipment in secure areas and arrange partitions to provide security of contents and ready access for inspection and inventory. Combustible materials (paints, solvents, fuels) shall be stored in a well-ventilated building meeting safety standards. Hazardous materials shall be stored according to product specification, codes, and manufacturer's instructions.</li> <li>8. Lock controlled access points (private property gates) providing entry to construction sites and maintain a secure key control to prevent unauthorized access.</li> <li>9. Perform work within right-of-way and easements in a systematic manner that minimizes inconvenience to property owners and the public and interferes as little as possible with public travel, whether vehicular or pedestrian. This will include that no residence or business will be cut off from vehicular traffic for a period exceeding 4 hours unless special arrangements have been made. Whenever it is necessary to cross, close, or obstruct roads, driveways, and walks, whether public or private, safe bridges, detours, or other temporary expedient access for accommodation of public and private travel will be provided and maintained.</li> <li>10. Sweep roadways, streets, and walkways affected by the work and adjacent to the work when necessary.</li> <li>11. Erect temporary security fencing around active construction areas. Fences around open trenches, staging areas, material storage areas and equipment storage areas may be standard plastic orange construction fence, 4 feet high, with posts at intervals no greater than 20 feet. Temporary 4-strand barbed wire fences shall be installed wherever necessary to prevent livestock from migrating out of their designated pasture. Temporary fences shall be maintained as needed during the construction period. Material selection for fencing between work area and adjacent property will be agreed upon between Applicant and the property owner.</li> </ol>	



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12. Inspect site safety measures each work day and periodically during non-working days.
13. Provide 24/7 security services including mobile patrols, lighting and video surveillance.

C-4	Control of Access to Properties
	Applicant shall prevent unauthorized access to properties.
<b>PROJECT DETAIL</b>	
<ol style="list-style-type: none"> <li>1. Work with property owners, both public and private, to understand the conditions of ingress and egress, security issues, property control and protection issues, regarding the property, prior to mobilization to a specific work area.</li> <li>2. Establish mutually agreeable conditions of access with property owner, and require all personnel accessing the site to sign a statement indicating that they understand and will abide by the conditions of access.</li> <li>3. Grant access to enter the property only to those individuals that have a legitimate SDS related need to access the property, and then shall only do so under the previously agreed access conditions.</li> <li>4. Provide signs at gates and access points notifying individuals that specific conditions of entry exist.</li> <li>5. Close and secure gates and entry points by a locking mechanism when not in use. Conditions of entry will specify approved access times and conditions on open gates.</li> <li>6. Strictly control access to keys to entry point locks. Recipients of keys will be required to sign when receiving the key, and again when returning the key. Recipients will be required to advise the Site Health &amp; Safety Officer when they have lost or misplaced a key. Keys will be required to be of a non-duplicating type. Locks and keys will be changed when a key is reported lost or misplaced.</li> <li>7. Designate the Site Health and Safety Officer to monitor the access control system.</li> </ol>	

C-5	Pre-existing Condition Assessment
	Applicant shall determine the condition of Pueblo County residents' existing property so that it can be restored to preconstruction condition or better.
<b>PROJECT DETAIL</b>	
<ol style="list-style-type: none"> <li>1. Perform an examination of pre-construction existing conditions of land surface, drainage, vegetation and structures adjacent to the construction site that could be damaged or altered by construction operations. The property owner will be invited to attend.</li> <li>2. Perform periodic reexaminations, if required, to document any changes, including, but not limited to, cracks in structures, settlement, leakage, and similar conditions.</li> </ol>	

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Examinations may include photography, sampling and expert assessments of existing or current conditions.	
3.	Document examinations in writing, and by photographs and audio-video recordings. Photography shall be by a professional commercial photographer, experienced in shooting interior/exterior construction photos, in daylight and nighttime conditions, and in good and inclement weather.
4.	Provide a copy of documentation to property owner for review and acceptance. A copy of the documentation shall be provided to the County. Applicant and the County shall each maintain a copy of the documentation. Such documentation shall be used as indisputable evidence in ascertaining whether and to what extent damage occurred as a result of Applicant's operations.

C-6	Work Hours
	Applicant shall limit work hours to minimize disturbance to Pueblo County residents.
<b>PROJECT DETAIL</b>	
1.	Perform work within the hours of 7:00 am to 6:00 pm Monday through Friday. Work outside of these hours will be restricted to maintenance of traffic, safety, and construction controls, maintenance of construction equipment, and approved exceptions. Pueblo County and residences within 500 feet of the affected portion of the work site shall be notified 48 hours in advance of work outside of these hours, other than maintenance or emergency work.

C-7	Permitting
	Applicant shall obtain all applicable permits.
<b>PROJECT DETAIL</b>	
1.	Obtain permits and comply with permit conditions and applicable regulations. Permits may include those listed below and in Section C, Table C-1 of the 1041 Application, as well as other permits that may be required under Federal, State, County, or local regulatory jurisdiction. <ul style="list-style-type: none"> <li>• Bureau of Reclamation               <ul style="list-style-type: none"> <li>○ Execution of Contracts (Reclamation Project Act 43 CFR 427)</li> <li>○ Record of Decision (ROD)</li> </ul> </li> <li>• U.S. Fish and Wildlife Service               <ul style="list-style-type: none"> <li>○ Depredation Permit</li> <li>○ Section 7 Consultation (Endangered Species Act 50 CFR 402)</li> </ul> </li> <li>• U.S. Army Corps of Engineers               <ul style="list-style-type: none"> <li>○ 404 Permit (Clean Water Act 33 CFR 320)</li> </ul> </li> <li>• Colorado Department of Transportation (CDOT)</li> </ul>

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- Utility/Special Use Permit
- State Highway Access Permit
- Colorado Department of Public Health and Environment (CDPHE)
  - Air Pollution Emission Permit for Land Development
  - Stormwater Construction Permit
  - Construction Dewatering General Permit
  - Minimal Discharge Industrial Wastewater General Permit
  - Water Quality Control Division Plan Approval
- Other State Permits/Approvals
  - 401 Certification (Clean Water Act 40 CFR 121)
  - Reservoir Plan and Dam Safety Emergency Preparedness Plan Approval
  - Section 106 Review (National Historic Preservation Act 36 CFR 800)
- Union Pacific/Burlington Northern Santa Fe Railroad Permits
  - Utility License/Pipeline Crossing Agreements
- Potential Regional Permits\*
  - Various Building related Permits (i.e., electrical, mechanical, HVAC, structural, etc.)
  - Floodplain Permits
- Potential County Permits\*
  - Excavation/Grading Permits
  - Driveway Access Permits
  - Land Use/Zoning Permits
  - Building Permits
  - Grading and Erosion and Stormwater Quality Control Permits
  - Air Quality Construction Permits
  - Individual Sewage Disposal System Permits
  - Floodplain Permits
- Potential City Permits\*
  - Excavation/Grading Permits
  - Land Use/Zoning Permits
  - Grading and Erosion and Stormwater Quality Control Permits
  - Driveway Access Permits

\*As required by local agency with jurisdiction over the specific SDS Project work location. These may include the Pueblo Regional Building Department, Pueblo County, and Pueblo West Metropolitan District Department of Public Works.

2. Provide copies to Pueblo County within 60 days of obtaining permits.

C-8	Dewatering
	Applicant shall minimize dewatering impacts on Pueblo County properties and watercourses.
<b>PROJECT DETAIL</b>	
1. Obtain a construction dewatering permit from the Colorado Department of Public Health and the Environment (CDPHE).	
2. Create and implement a water control plan that includes descriptions of proposed	

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ground and surface water control facilities including, but not limited to: equipment, methods, standby equipment and power supply, pollution control facilities, discharge locations, and provisions for temporary water supply; drawings showing locations, dimensions, and relationships of elements of each system; design calculations demonstrating accuracy of proposed dewatering system and components. Copies of plan will be provided to Pueblo County within 60 days of approval by CDPHE.

3. Control water during the course of construction, including weekends and holidays and during periods of work stoppages. Adequate backup systems shall be in place to maintain control of water.
4. Remove surface water controls when they are no longer needed.
5. Furnish, operate and maintain dewatering systems of sufficient size and capacity to continuously maintain excavations free of water, regardless of source, until backfilled to final grade.
6. Design and operate dewatering systems to prevent loss of soil as water is removed, to avoid inducing settlement or damage to existing facilities, completed work, or adjacent property, and to relieve artesian pressures and resultant uplift of excavation bottom.
7. Be responsible to obtain and comply with the requirements set forth in any applicable well permits required by the State.

C-9	Site Restoration
	Applicant shall provide Pueblo County residents with replacement vegetation and property to match pre-construction conditions or better.
<b>PROJECT DETAIL</b>	
1.	Grade disturbed areas to preconstruction contours so preconstruction drainage paths are reestablished.
2.	Reclaim disturbed land, except water areas and surface areas of roads, by seeding or planting to achieve a permanent vegetation cover as specified below. <ol style="list-style-type: none"> <li>a. In accordance with Construction Condition C-5, a pre-construction evaluation of existing vegetation will be conducted to determine species diversity, woody plant density, and seasonal variety.</li> <li>b. Vegetation cover will be of the same seasonal variety native to the area of disturbed land, or species that support the post-construction land use. In those areas of disturbed vegetation where such seeds are not commercially available, seeds will be collected on-site to be used in revegetation, including, rare plants identified in the FEIS, by the Colorado Natural Heritage Program or by other qualified investigators.</li> <li>c. Seeding and planting of disturbed areas will be conducted during the first normal</li> </ol>

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period for favorable planting conditions after final preparation for seeding or planting.

- d. Soil stabilization practices will be used on all regraded and topsoiled areas.
  - e. The revegetated area will be considered acceptable if the revegetated area cover is not less than 90 percent of the pre-construction vegetation cover with similar species diversity. The pipeline access road will not be included in the 90 percent coverage calculation.
3. Restore roads and driveways so that:
    - a. Surfaces are finished level with existing surfaces.
    - b. Sealed roadways are finished to match existing seal (asphalt, spray seal, etc).
    - c. Unsealed roadways are to be finished to match existing surface. Concrete roadways/driveways shall be reinstated in such a manner as to match existing surface. Portions of slab damaged or rendered unstable by undermining (whether inadvertently or deliberately) should be included in the portion to be restored.
  4. Restore damaged or injured property including outbuildings, to a condition similar or better to that existing before the damage or injury occurred, by repairing, rebuilding, or restoring the property.
  5. Restore or replace fences and gates that are disturbed during construction.
  6. Provide Pueblo County a security bond equal to \$2,000 per acre of land in permanent or temporary construction easement in each work package. The security bond shall be released in full to the Applicant two years following the final completion of the construction contract, upon successful revegetation, as described above. If successful revegetation is not achieved, the security bond will be forfeited in the amount of \$2,000 for each acre, or fraction of an acre, that has not been successfully revegetated.

C-10	Public Communications
	Applicant shall keep Pueblo County residents informed of the SDS project and upcoming construction activities.

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1. Assign a point of contact for responding to public questions, comments and concerns. The point of contact shall continue for one year following the final construction in Pueblo County.
2. Establish a local telephone number (a "hot-line") to allow citizens' access to the Public Communications Office and team throughout the duration of the Project. This telephone number will be included in the public information measures listed below, as well as on job site signage. The hot-line will be a combination of pre-recorded and live operator communications.
3. Develop and maintain a website that will include details of current and future project activities (i.e., schedules, type of work, phases, etc.)
4. Deliver individual resident "mailers" notifying each resident of future construction activity near their home. Residences within 500 feet of an upcoming construction zone will be informed thirty (30) days prior to construction. The mailers will include details of when construction will begin, when completion is planned, what types of activities are expected, an overview of the Project; and the hotline number.
5. Distribute individual resident "door hangers" to properties within 500 feet of the construction site. These will serve as reminders of future construction activities, and will be distributed approximately seven (7) days prior to construction.

C-11	Dust and Other Air Emission Controls (Dust Control)
	Applicant shall minimize fugitive dust impacts to County residents.
<b>PROJECT DETAIL</b>	
1.	Prepare, submit and implement a fugitive dust control plan as required by the Colorado Department of Public Health and Environment (CDPHE) Air Pollution Control Division. A copy of the plan will be submitted to Pueblo County.
2.	Implement standard fugitive dust control practices as specified in the fugitive dust control plan, including: <ol style="list-style-type: none"> <li>a. Watering unpaved roads on site.</li> <li>b. Limiting vehicle speeds to 30 mph on site.</li> <li>c. Covering excavated material with synthetic or natural cover or preventing sediment movement from the pile using silt fence.</li> <li>d. Installing vehicle tracking control at access points to the site.</li> <li>e. Re-vegetating disturbed areas as described in Construction Condition C-9 as soon as appropriate to reduce dust sources.</li> <li>f. Sweeping paved streets as necessary to remove construction dust.</li> </ol>
3.	Perform particulate monitoring using real-time particulate monitors that are capable of

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monitoring particulate matter less than ten microns (PM10). Particulate levels will be monitored immediately downwind of the working site and integrated over a period not to exceed 15 minutes. Monitoring will be conducted a minimum of once a day, with additional testing conducted if complaints are received. Instrumentation shall require necessary averaging hardware to accomplish this task. In order to ensure the validity of the fugitive dust measurements performed, there will be appropriate Quality Assurance/Quality Control (QA/QC) that includes the following features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and record keeping.

The action level will be established at 150 µg/m<sup>3</sup> over the integrated period not to exceed 15 minutes. If particulate levels are detected in excess of 150 µg/m<sup>3</sup>, the upwind background level must be measured immediately using the same portable monitor. If the working site particulate measurement is greater than 100 µg/m<sup>3</sup> above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust.

4. Use construction equipment that meets Colorado opacity standards for operating emissions. Construction equipment will be emissions tested at an approved facility prior to use on the site. This test will be performed each year that the equipment is used on the project. The certificates of approval for each item of construction equipment will be maintained by Applicant and be available for inspection by Pueblo County if requested.
5. Do not burn waste materials, rubbish, or other debris on or adjacent to the construction site.

C-12	Drainage and Erosion Control (Sediment Control)
	Applicant shall maintain soil within construction zone.
<b>PROJECT DETAIL</b>	
1.	Obtain a permit for Drainage and Erosion Control within a construction site: General Permit - Stormwater Discharges Associated with Construction Activity (Permit No: COR-030000).
2.	Implement a Stormwater Management Plan (SWMP) and Best Management Practices (BMPs) per Colorado Department of Transportation (CDOT) Erosion Control and Stormwater Quality Guide.
3.	Perform a pre-existing condition assessment of areas potentially subject to sedimentation from SDS construction as described in Construction Condition C-5.
4.	Restore lands outside of the work area that have been impacted by sediment from SDS construction consistent with Construction Condition C-9.
5.	Shall not release sediment impacting more than 4 square feet of land outside of the work.

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C-13	Pre-Mobilization Readiness Review
	Applicant shall perform pre-mobilization readiness reviews prior to Applicant's contractor's beginning on-site construction activities.
<b>PROJECT DETAIL</b>	
<ol style="list-style-type: none"> <li>1. Prepare a Project Execution Plan (PEP) for each Work Package of the SDS Project (i.e., Pump Station, Pipeline Segment, Water Treatment Plant). The PEP will be structured to standardize and codify the project planning process for consistency and quality of implementation.</li> <li>2. Perform a Pre-Mobilization Readiness Review to determine the project's readiness for mobilization of field activities. Pueblo County will be invited to participate in the review. Subject mater of a Readiness Review ill, at a minimum, include:               <ol style="list-style-type: none"> <li>a. Safety management and Emergency Preparedness policies and procedures.</li> <li>b. Quality Assurance/Quality Control programs and procedures.</li> <li>c. Required local, state, and federal permits and agency approvals have been acquired, the Contractor is aware of permit requirement and limitations, and appropriate Contractor policies and procedures are in place for compliance.</li> <li>d. Site and security controls are in place.</li> <li>e. Communications systems are in place and operational.</li> <li>f. Temporary facilities are in place where required.</li> <li>g. Safety plan and safety representative.</li> <li>h. Utility Locations have been verified.</li> <li>i. Agency Approvals (incl. Pueblo County).</li> <li>j. Applicant shall verify that land, easement, and right-of-way acquisitions are complete and what limitations are related to Project access.</li> </ol> </li> </ol>	

C-14	Traffic Control
	Applicant shall provide for safe vehicular and pedestrian traffic.
<b>PROJECT DETAIL</b>	
<ol style="list-style-type: none"> <li>1. Develop a traffic control plan complying with the applicable standards of the Manual on Uniform Traffic Control Devices. The Traffic Control Plan will be signed by an individual certified by the Colorado Department of Transportation (CDOT) or the American Traffic Safety Services Association (ATSSA), as a Worksite Traffic Control Supervisor, whose signature shall constitute certification that the plan meets or exceeds MUTCD standards. The plan will include drawings(s) of the project location showing phases of the project, a list of the posted speed limits throughout the project, and a drawing(s) of the traffic control measures to be employed at the project site.</li> </ol>	



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2. Comply with the Haul Route Plan accepted by Pueblo County.

C-15	Protection of Plants and Wildlife
	Applicant shall control impacts to native endangered and threatened flora and fauna.
<b>PROJECT DETAIL</b>	
<ol style="list-style-type: none"> <li>1. Protect native endangered and threatened flora and fauna in accordance with the Final Environmental Impact Statement.</li> <li>2. Submit a wildlife mitigation plan to the Colorado Division of Wildlife in accordance with their regulations prior to construction. This Plan will include actions the Applicant proposes to mitigate impacts that the SDS Project may have on fish and wildlife. As required by statute, the Wildlife Commission will evaluate the probable impact of the project on fish and wildlife. The Applicant shall provide the official wildlife mitigation plan and official state position to Pueblo County Staff prior to construction.</li> <li>3. Coordinate with Bureau of Reclamation to release flows to the Arkansas River through the flood control gates when the North Outlet Works is unavailable due to construction activities.</li> </ol>	

C-16	Noxious Weed Control
	Applicant shall control spread of noxious weeds resulting from project construction.
<b>PROJECT DETAIL</b>	
<ol style="list-style-type: none"> <li>1. Provide a person experienced in field identification of noxious weeds to locate existing noxious weeds that will be disturbed during construction in advance of ground-disturbing construction activities.</li> <li>2. If List A species are found, provide to the State Weed Coordinator mapping data pertinent to each population including:               <ol style="list-style-type: none"> <li>a. Species name</li> <li>b. Population location(s) including distribution and abundance</li> <li>c. Estimated infested acreage</li> </ol> </li> <li>3. Implement an eradication program within the project limits. Eradicate existing Class A and B noxious weed populations.</li> <li>4. Adopt the following methods to prevent the spread of noxious weeds during</li> </ol>	

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construction.

- a. Major equipment (track equipment, rubber tire loaders, and backhoes) will be cleaned by high pressure air or water spray before being delivered to the project site.
  - b. Use weed free seed, mulch, and borrow material.
  - c. Use 100-percent certified weed free seed and mulch. Locally or regionally available seed and mulch will be used when practicable.
5. Disturbed areas will be re-seeded as soon as practicable after the disturbance ends.

C-17	Hazardous Waste Management
	Applicant shall ensure that hazardous wastes are appropriately managed.
<b>PROJECT DETAIL</b>	
1.	Follow regulations to the handling, storage, transportation, and disposal of hazardous materials as set forth in the Code of Federal Regulations (CFR) 1910.120, DOT, EPA and NRC regulations, as applicable. The type and quantity of these materials will be small quantities (paints, solvents, fuels, etc.).
2.	Development and implement Health, Safety and Environmental plans including hazardous material management in compliance with Federal, State and Local regulations prior to mobilizing on-site for Project construction.

C-18	Sustainable Design
	Applicant shall, where practical, design SDS facilities to be sustainable or "green".
<b>PROJECT DETAIL</b>	
1.	Make an effort to balance cut and fill for site grading and backfill to reduce imported or exported material.
2.	Use site and building design to promote energy and resource conservation.
3.	Motors and electrical equipment will be high-efficiency rated. Efficiencies will be determined by testing as set forth in ANSI/IEEE 112-Standard Test Procedures for Polyphase Induction Motors and Generators, Method B or Method F.

C-19	Sustainable Construction Practices
	Applicant shall, where practicable, use sustainable construction practices.
<b>PROJECT DETAIL</b>	

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1. Create opportunities for sustainable construction.
2. Prepare a materials handling plan including recycling and reuse. This plan shall identify materials expected to be encountered during demolition, site clearing, field office operations, equipment maintenance, etc. In this plan, the Applicant shall define how these materials will be handled to maximize recycling and reuse opportunities and to minimize permanent disposal of such items including used motor oil, waste paper, removed asphalt, removed concrete, used tires, etc.
3. Use minimum 10-percent bio diesel in construction equipment.
4. Purchase local goods and services to the maximum extent possible consistent with sound procurement practices and local availability. Such purchases may include bulk commodities where longer shipping distances are not economical, such as fuel, lubricants, oils, sand and gravel, masonry and concrete.

C-20	Surface Water and Groundwater Flows
	Applicant shall restore ground and surface water supplies to pre-construction conditions.
<b>PROJECT DETAIL</b>	
1.	Restore disturbed surfaces to pre-construction contours, as defined by the aerial survey and mapping.
2.	Perform pre-construction hydrologic investigations on properties that have active springs along the pipeline route. Design and construct the pipeline to prevent injury to springs. <ol style="list-style-type: none"> <li>a. Use "flowable fill" for bedding and pipe zone material.</li> <li>b. Use native material that was removed from the trench in the trench zone above the pipe.</li> <li>c. Use trench plugs in areas where groundwater is encountered to prevent flow along the trenchline.</li> </ol>

C-21	Protection of Livestock
	Applicant shall protect livestock on lands crossed by the project during construction.
<b>PROJECT DETAIL</b>	
1.	Work jointly with landowners and livestock owners to determine grazing areas, watering points and livestock pathways to food and water.

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2. Provide access for livestock through farm areas, do not cut off ready access points of farmlands in which livestock are pastured, provide alternate accessible water sources, maintain existing fences required to restrain livestock, and keep gates closed and secure.
3. Temporarily relocate livestock away from construction activities if requested by livestock owner.

C-22	Noise Control
	Applicant shall minimize noise impacts to adjacent property owners.
<b>PROJECT DETAIL</b>	
<ol style="list-style-type: none"> <li>1. Comply with applicable OSHA, State of Colorado, and local noise control standards, requirements, and regulations.</li> <li>2. Measure baseline noise conditions prior to construction work commencing. The baseline will be the average noise reading over three 24-hour periods at each receptor lot-line location or at 1-mile intervals, whichever is greater.</li> <li>3. Periodically monitor generated sound levels and record decibel levels. Should noise levels exceed appropriate standards, the operation will be ceased and noise mitigation measures will be implemented.</li> <li>4. Develop a noise control plan to mitigate construction noise and to comply with appropriate standards.</li> <li>5. Any excessively high decibel level work, such as blasting or pile driving will be performed between the limited hours of 9:00 am and 5:00 pm to minimize disruptions.</li> </ol>	

### **SOCIO-ECONOMIC/CONTRACTING PRACTICES**

SE-1	Securing Land Through Easements, Fee Purchase, or Condemnation
	Applicant shall secure land necessary for construction of the project in a fair and equitable manner.
<b>PROJECT DETAIL</b>	
<ol style="list-style-type: none"> <li>1. Treat private property owners fairly and commit to using the power of eminent domain only as a last resort.</li> <li>2. Offer to compensate landowners to have their own appraisal done if they disagree with the applicant's appraisal.</li> <li>3. Reimburse landowners for relocation costs, title work, and closing costs. No landowner</li> </ol>	

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should have out-of-pocket expenses from the project for these activities.

4. Provide proof to Pueblo County that they have secured the necessary rights to construct the project prior to starting construction at any given location.

SE-2	Payment in Lieu of Property Taxes
	Applicant shall reimburse Pueblo County for property taxes lost due to acquisition of land in fee.
<b>PROJECT DETAIL</b>	
<ol style="list-style-type: none"> <li>1. Preferentially acquire easements and minimize to extent practicable, the number of private properties acquired in fee to support construction and operation of SDS.</li> <li>2. For those private properties purchased and owned in fee, make an annual payment in lieu of taxes equal to the value of the taxes assessed by the Pueblo County Assessor.</li> <li>3. Payment shall be made to Pueblo County Treasury on or before April 30 of each calendar year.</li> <li>4. Upon successful closing of private property purchase.</li> <li>5. This mitigation is ongoing until private properties purchased are sold or conveyed to another private owner.</li> </ol>	

### OPERATIONAL PRACTICES

O-1	Release Rate Limit
	Applicant shall limit the maximum release rate from the Williams Creek Reservoir to 300 cubic feet per second.
O-2	Pipeline Drainage
	Applicant shall limit the release rate of drains from the pipeline to a drainageway to the equivalent of less than a 2-year storm event in that drainageway, except in the case of emergency.
O-3	Pipeline Capacity
	Applicant shall limit the rate of water pumped by the Juniper Pump Station to 78 mgd.

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## **ENFORCEMENT PRACTICES**

ENF-1	Compliance Monitoring and Reporting
	Applicant shall monitor and report on compliance with the conditions of the 1041 permit.
<p style="text-align: center;"><b>PROJECT DETAIL</b></p> <p>1. Submit a quarterly report during project construction in Pueblo County that will provide a summary of activities related to the Conditions of the permit. The report will summarize the activities occurring in the reporting period, and a forecast of activities planned in the upcoming period.</p> <p>Contents of the report will include (as applicable):</p> <ul style="list-style-type: none"> <li>a. Safety incident log.</li> <li>b. Citizen call log.</li> <li>c. Description of mitigation and restoration activities (i.e., quantity and location of repaired road surface, reseeding, etc.).</li> <li>d. List of non-compliance issues by contractors (silt releases, work hour infractions, fines and penalties).</li> <li>e. Sustainable construction practices employed.</li> <li>f. Schedule and key milestones met and forecast.</li> <li>g. Location and extent of excavations.</li> <li>h. Instances of work outside normal work hours, except maintenance activities.</li> <li>i. Status of site maintenance, security and access control to properties.</li> <li>j. Location and extent of dewatering activities.</li> <li>k. Status of other required permits, including compliance with the programmatic agreement to protect cultural resources.</li> <li>l. Dust monitoring summary.</li> <li>m. Status of drainage and erosion control measures.</li> <li>n. Status of plant and wildlife protection requirements.</li> <li>o. Status of measures to protect surface and groundwater flows.</li> <li>p. Status of livestock protection measures.</li> <li>q. Status of Clear Spring Ranch project.</li> <li>r. Status of pump station architectural review.</li> <li>s. Status of land acquisition.</li> <li>t. Status of compliance with requirements concerning Pueblo County Roads.</li> </ul>	

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- u. Status of dredging at the levees on Fountain Creek in Pueblo.
  - v. Status of reclamation and bonding for disturbed areas.
  - w. Status of the written MOU for construction and use of the North River Outlet Works.
  - x. Acceptance of the design of structures at Lake Pueblo Dam by the BOR.
  - y. Status of conservation strategies, local reuse, stormwater management, drainage regulations and enforcement.
  - z. Status of stormwater and wastewater system improvements per permit commitments.
  - aa. Status of NEPA, ROD, contract negotiations with BOR and notice of NEPA-required required mitigation and any project changes resulting from contract negotiations.
  - bb. Status of payments in lieu of property taxes.
  - cc. Copies of the annual reports on the SDS Project submitted to Reclamation.
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:
- a. Summary of storage, diversion, delivery of water in Pueblo County.
  - 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).
  - c. Summaries of exchanges by Participants between Pueblo Reservoir and the Fountain Creek confluence (monthly and annual rates of flow and quantities).
  - d. Use of any new water rights to be delivered or stored through SDS (amount, time, source).
  - e. Water quality monitoring.
  - f. Geomorphology monitoring.
  - g. Status of adaptive management plans on Fountain Creek.
  - h. Status of payments into the Fountain Creek monetary mitigation fund.
  - i. Status of expenditures for wastewater system improvements for Participants (and third party users in the Fountain Creek basin) per Permit Conditions.
  - 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,

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and reception documentation).

- k. Status of lake level management cooperative efforts with other entities at Pueblo Reservoir.
- l. Status of conservation and local reuse.
- m. Payments to Pueblo County in lieu of property taxes.
- n. Copies of the annual reports on the SDS Project submitted to Reclamation.

### **COUNTY ROADS – CONDITIONS / MITIGATION**

CR-1	Excavation Permit
	Applicant shall make application for an Excavation Permit with the Pueblo County Public Works Department (Department) for each road crossing and comply with all conditions of that permit.

CR-2	Access Permit
	Applicant shall make application for an Access Permit with the Department for each access point onto a County roadway and comply with all conditions of that permit.

CR-3	Traffic Control Plan
	Applicant shall submit a Traffic Control Plan to the Department for review and approval, for the project which conforms to applicable standards of the Manual on Uniform Traffic Control Devices.

#### **PROJECT DETAIL**

1. The traffic control plan shall be developed and administered by a certified Traffic Control Supervisor or their authorized personnel.

CR-4	Plan – Route/Easement Construction Staging Area
	Applicant shall provide a plan to the Department defining the use of the pipeline route/easement as a construction "Staging Area" for approval.
<b>PROJECT DETAIL</b>	



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1. The Staging Area Plan shall define construction work times, material delivery hours, noise suppression, dust abatement, construction methods, and other mitigation of construction nuisances. Deviation from the plan will require approval by the Department prior to a change in use.

CR-5	Haul Route Plan
	Applicant shall provide a Haul Route Plan, for use of the public road system to provide access to the Staging Area/pipeline easement, to the Department for review and approval.
<b>PROJECT DETAIL</b>	
<ol style="list-style-type: none"> <li>1. The Haul Route Plan will identify the roads utilized by the applicant for construction vehicle traffic, maintenance of those roads during the project and rehabilitation of those roads. For the purpose of this plan, "construction vehicle" shall mean those vehicles requiring operators to possess a Commercial Drivers License (CDL) and/or weighing more than 10,001 pounds.</li> <li>2. The Haul Route Plan shall identify the final treatment for utilized roads and be developed cooperatively between Colorado Springs Utilities and the Department.</li> <li>3. The roads utilized in the Haul Route Plan shall be maintained by the applicant during pipeline construction periods such that they are passable by the motoring public at all times except when identified in an approved Traffic Control Plan as "Closed" or as otherwise approved by the Department.</li> <li>4. All road rehabilitation and maintenance work on the Haul Route Plan roads shall comply with the Pueblo County Roadway Design and Construction Standards.</li> <li>5. Costs for maintenance of the Haul Route Plan roads shall be borne solely by the applicant.</li> <li>6. The applicant shall initiate maintenance at the discretion of the Pueblo County Director of Public Works.</li> </ol>	

CR-6	Haul Route to Staging Area
	Applicant shall limit the haul route from the "Staging Area" to the State Highway System to those roads identified in the above defined "Haul Route Plan Map" dated 12-31-08 ("Exhibit 1" and Haul Route Plan Road Table "Exhibit 2") or Haul Route Plan approved by the Department prior to commencement of pipeline installation activities that require use of roads identified in the Haul Route Plan.
<b>PROJECT DETAIL</b>	
<ol style="list-style-type: none"> <li>1. Said plan shall be incorporated within construction plan and specification</li> </ol>	

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documents. Identification by the applicant of additional roads they desire to be included in the Haul Route Plan for dedicated project use will require approval by the Department.

2. The Department may include roads in the plan if it is determined that they are being used by the applicant's representative or their contractor by above identified "construction vehicles".
3. The Department will notify the applicant, prior to inclusion in the Haul Route Plan, of the observed use of non Haul Route Plan roads. Incidental use of roads not specifically designated on the Haul Route plan is approved for the applicant, their representatives or contractor's vehicles weighing less than 10,001 pounds and/or not requiring a CDL license.

CR-7	Cash Payment / Escrow / Other Financial Instrument
	Applicant shall establish a cash payment, escrow, or other financial instrument such as a performance bond, acceptable to the Department and the Pueblo County Attorney, to Pueblo County, in an amount estimated by the Department to cover the total costs for rehabilitation of the roads identified in the approved Haul Route Plan, to Pueblo County Roadway Design and Construction Standards (Standards) as noted in "Exhibit 4" within thirty days of the applicant issuing a notice to proceed to its contractors to perform pipeline installation activities that require use of roads identified in the Haul Route Plan.
<b>PROJECT DETAIL</b>	
1.	If a financial instrument is selected, said financial instrument shall be held by Pueblo County until such time as the rehabilitation of Haul Route Plan roads are accepted by the County.
2.	The financial instrument is to be for an amount sufficient to cover the estimated costs established in "Exhibit 4", for rehabilitation of the Haul Route Plan roads plus estimated increases in costs over time as represented by the Construction Cost Index.
3.	It will be at the discretion of the Public Works Director to determine when it is necessary to commence rehabilitation of individual roads identified in the Haul Route Plan.
4.	Upon request of the Public Works Director, the applicant will be required to submit funds to the Department necessary to perform the rehabilitation of the individual roads selected by the Director of Public Works.
5.	The applicant will have 30 days to provide the requested funds to the Department. Upon such a request and payment of the funds, the applicant will be relieved of any further rehabilitation, maintenance or warranty obligation for that road section. Upon receipt of the requested funds, the total value of the financial instrument may be

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reduced by a same amount, less any increased cost over estimated costs in "Exhibit 4", at the discretion of the applicant.

6. Pueblo County will commence maintenance of rehabilitated roads upon their completion and final acceptance by the County. Attached as "Exhibit 3" is the minimum defined cross-section and treatment for identified Haul Route Plan roads. The minimum pavement section may change based upon the outcome of a "Pavement Structure Design" which conforms to the Standards. In any event, all reasonable costs associated with rehabilitation of Haul Route Plan roads will be borne solely by the applicant including engineering design, construction, drainage, etc.

CR-8	Drainage Calculations / Blow-off Valves
	Applicant shall provide to the Department for review and approval, drainage calculations performed by a professional engineer licensed to practice in the State of Colorado, detailed plans on the "Blow-off Valves".
<b>PROJECT DETAIL</b>	
1.	The plans shall include any necessary drainage structures and erosion control measures and be incorporated into the construction plans.

CR-9	Stormwater Management Plan
	Applicant shall submit a Stormwater Management Plan accepted by the responsible jurisdiction to the Department and incorporate that Stormwater Management Plan into the construction plans.

CR-10	Future Roadways / Utilities
	Applicant shall not unreasonably prohibit the installation of future roadways and utilities across the utility easement. Future roadways are expected to be surface crossings at existing grade for a typically defined roadway section in the Pueblo County Roadway Design and Construction Standards today or as modified in the future.
<b>PROJECT DETAIL</b>	
1.	Future roadways are expected to be surface crossings at existing grade for a typically defined roadway section in the Pueblo County Roadway Design and Construction Standards today or as modified in the future.

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CR-11	<b>Final Plans / Specifications</b>
	Applicant shall submit to Pueblo County, which reserves the right to review, the final construction plans and specifications, final Haul Route Plan, final Staging Area Plan, and other supporting documents and to modify these conditions of approval based upon that review to conform to final documents.

**Including Exhibits:**

(Previously submitted for record, not included in this appendix)

- Exhibit 1 - Haul Route Plan Map
- Exhibit 2 - Haul Route Plan Roads Table
- Exhibit 3 - Haul Route Plan Treatment
- Exhibit 4 - Haul Route Plan Cost Estimates
- Exhibit 5 - Pueblo County Roadway Design and Construction Standards

## **REQUEST FOR PROPOSAL**

### **EVALUATION, ANALYSIS AND ASSESSMENT OF RECLAMATION AND RE-VEGETATION FOR THE SOUTHERN DELIVERY SYSTEM WATER PIPELINE ROUTE IN PUEBLO COUNTY, COLORADO**

#### **PUEBLO COUNTY DEPARTMENT OF PLANNING AND DEVELOPMENT PUEBLO COUNTY, COLORADO**

Issue Date: November 30, 2012

Closing Date: December 30, 2012

#### **PURPOSE**

The purpose of this RFP is to obtain competitive proposals from qualified individuals or firms interested in performing site inspection, evaluation, and analysis of the reclamation, site restoration, and re-vegetation measures that have been put in place for areas disturbed in construction of the Southern Delivery System (SDS) Project. This RFP is specific only to that portion of the Project, approximately 20 miles in length, located within Pueblo County.

#### **BACKGROUND**

The SDS Project is a municipal water pipeline proposed to extend from Pueblo Reservoir to treatment and distribution facilities in El Paso County (see Attachment 1). That portion of the Project within Pueblo County was conditionally approved under a 1041 Permit, including conditions of approval requiring reclamation of disturbed lands and site restoration. The Project within Pueblo County is divided into Project Segments S1, S2, and S3.

#### **SCOPE OF WORK**

The Consultant's tasks will be focused on the following:

1. Consultant will assist Pueblo County in determining whether reclamation and re-vegetation efforts in place for the Project comply with the approved conditions of approval for the Permit, including:
  - Upon reclamation of the site, the vegetation cover shall be of the same seasonal variety native to the area of the disturbed land, or a reasonable substitute pursuant to the agreement with the landowner. The revegetated area will be considered acceptable if its cover will be not less than 90 percent of the pre-construction vegetation cover with similar species diversity.

- Site Restoration

Applicant shall provide Pueblo County residents with replacement vegetation and property to match pre-construction conditions or better.

#### **Project Detail**

- Grade disturbed areas to preconstruction contours so preconstruction drainage paths are reestablished.
- Reclaim disturbed land, except water areas and surface areas of roads, by seeding or planting to achieve a permanent vegetation cover as specified below.
  - Vegetation cover will be of the same seasonal variety native to the area of the disturbed land, or species that support the

post-construction land use. In those areas of disturbed vegetation where such seeds are not commercially available, seeds will be collected on-site to be used in revegetation, including, rare plants identified in the FEIS, by the Colorado Natural Heritage Program or by other qualified investigators.

- Seeding and planting of disturbed areas will be conducted during the first normal period for favorable planting conditions after final preparation for seeding or planting.
- Soil stabilization practices will be used on all re-graded and topsoiled areas.
- The revegetated area will be considered acceptable if the revegetated area cover is not less than 90 percent of the pre-construction vegetation cover with similar species diversity.

- Noxious Weed Control

Applicant shall control spread of noxious weeds resulting from project construction.

- Use weed-free seed, mulch, and borrow material.
- Use 100 percent certified weed free seed and mulch. Locally or regionally available seed and mulch will be used when practicable.
- Disturbed areas will be re-seeded as soon as practicable after the disturbance ends.

2. Reports shall be submitted to Pueblo County which contain detailed analysis and evaluation of the level of compliance with each aspect of the above conditions of approval and other relevant Permit conditions. If a given site, or sites are not in compliance, the reports shall also specify why, and provide general direction to address noncompliance issues. Reports shall be submitted to the Permit Administrator or their field representative at the time of testing or within two (2) weeks after the field analysis has been completed. Three (3) written reports with the inspection results shall be submitted to the County. The reports shall be signed by the Principal and the personnel in responsible charge. Reports and other documents are to be available in hard copy/paper format, as well as electronically (Microsoft Word and Adobe Acrobat).

3. The possibility of acting as an expert witness, testifying in court on the findings presented in the reports that are prepared.

The total length of the pipeline within Pueblo County is approximately 20 miles, divided into Segments S1, S2, and S3. Pueblo County has defined 5.27 miles of the pipeline in Segment S3 which will require evaluation and reports by the Consultant. Additional portions of the pipeline will likely require evaluation and reports by the Consultant, with specific locations and lengths yet to be determined.

#### **SUBMITTAL OF PROPOSALS**

Consultants responding to this RFP must at a minimum address the following:

- ♦ Consultant's general knowledge, experience, and ability to analyze site restoration, reclamation, and revegetation.

- ♦ Knowledge of vegetation, botany, biology, and soils specific to Pueblo County.
- ♦ Ability to work collaboratively with Pueblo County staff and Plan stakeholders in the required evaluation and reporting process.
- ♦ The relevant experience of crew members performing the work.
- ♦ Qualifications of personnel of persons providing supervision or are in responsible charge of the work.
- ♦ Consultant's ability to act as an Expert Witness for Pueblo County
- ♦ Consultant's hourly fee schedule.
- ♦ Consultant's anticipated work load and anticipated lead time.

The proposal must include information regarding any existing or prior work, compensation and contracts performed for any of the SDS Participants (City of Colorado Springs, Pueblo West Metropolitan District, City of Fountain, and the Security Water District). At least two references with experience and details of similar revegetation and reclamation assessments should be included, with current contact information for each.

All Proposers are to submit three (3) hard/paper copies of their Proposal, and also provide the proposal in electronic format, no later than 4:00 p.m. on the December 30, 2012. Respondents must provide a cover letter with a description of interest in performing work described herein. The letter shall include the primary contact's name, address, telephone and email information. All materials submitted shall become the property of Pueblo County and will not be returned. Each copy of the proposal is to be bound as a stand-alone document.

The proposals shall be marked "RFP, Site Restoration of SDS Project" and mailed to:

Pueblo County Department of Planning and Development  
229 W. 12<sup>th</sup> Street  
Pueblo, CO 81003-2810

#### **FAMILIARIZATION WITH THE WORK**

Before submitting a Proposal, each prospective Proposer shall familiarize himself with the Work, the site where the Work is to be performed, local labor conditions and all local, state and federal laws, ordinances, rules, regulations and other factors affecting performance of the Work. He shall carefully correlate his observations with requirements of the Contract Documents and otherwise satisfy himself of the expense and difficulties attending the performance of the Work.

The submission of a Proposal will constitute an incontrovertible representation by the Proposer that he has complied with every requirement of this paragraph.

#### **PROPOSAL PREPARATION**

The Proposal must be complete, in detail, and signed by the Proposer. Proposals by partnerships must be executed in the partnership name and signed by a partner. His title must appear under his signature and the official address of the partnership must be shown below the signature (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature. Names of, all persons signing must be printed below their signatures. A power of attorney must accompany the signature of anyone not otherwise authorized to bind the Proposer. A Proposal shall be deemed non responsive if it is unclear to the Evaluation Committee that all contractual responsibility rests solely with the Proposer.

**GENERAL INSTRUCTIONS, INQUIRIES**

Any prospective Proposer who discovers ambiguities or is in doubt as to the true meaning of any part of the RFP shall request an interpretation from the Permit Administrator. Interpretations will be made only by Addenda, duly issued, and copies of each Addendum will be mailed or delivered to each RFP holder of record. Because of the time required to publish and deliver, no interpretation Addenda will be issued within the last three (3) days before the RFP due date. The Proposer shall be solely responsible for any interpretation of the Contract Documents/RFP other than by duly issued Addenda. In an attempt to insure consistency of responses, all questions relative to this RFP are to be directed to:

Joan Armstrong, Permit Administrator  
Director of Planning and Development  
229 W. 12<sup>th</sup> Street  
Pueblo, Colorado 81003  
Telephone: (719) 583-6100  
Fax: (719) 583-6376  
Email : [armstron@co.pueblo.co.us](mailto:armstron@co.pueblo.co.us)

**RESERVED RIGHTS**

- A. All Proposers are hereby notified that the execution of a Contract pursuant to this RFP is dependent upon appropriation by Pueblo County of the necessary funds, and upon the negotiation of a mutually acceptable Contract with the successful Proposer.
- B. Pueblo County also reserves the right to reject all offers and resolicit or cancel this procurement if deemed to be in its best interest.
- C. Pueblo County also reserves the right to enter into a Contract with any Proposer based upon the initial proposal or on the basis of a best and final offer without conducting oral discussions.

**DEBRIEFING**

Unsuccessful Proposers will be notified by letter to that effect upon execution by the County of an agreement with the successful Proposer, if any. Unsuccessful Proposers may request a debriefing.

**COST OF PROPOSAL PREPARATION**

No reimbursement will be made by Pueblo County to any Proposer for any costs incurred for the preparation of proposals or supporting documentation.

**PROHIBITED INTEREST**

No officer, member, or employee of Pueblo County, and no members of its governing body, and no other public official or employee of the governing body of the locality or localities included within the City and County of Pueblo, (for governing bodies, only as to contracts performed within the jurisdiction of such governing body), during his or her tenure or for one year thereafter, shall have any personal interest, direct or indirect, in this solicitation or any Contract executed subsequently, or the proceeds thereof.

**BASIS OF AWARD**

Only firm Proposals will be considered. The award of the Contract, if it is awarded, will be to the lowest responsible Proposer whose Proposal compares favorably upon evaluation with other Proposals. The Owner will award the work as one contract, with separate Purchase Orders executed for each Project Segment. The contract will be awarded to one firm whose proposal best meet the needs of the County. The Owner reserves the right to reject any/all Proposals, or to delete or increase portions of the Contract as provided for in the Contract.



**HOURLY RATE SCHEDULE**

Please provide rates in the proposal per the rate schedule below.

DESCRIPTION	HOURLY RATE
Principal	\$
Project Investigator	\$
Clerical	\$
Research/Review of Existing Material	\$
Report Preparation	\$
Report Presentation	\$
Meetings	\$
Site Visits	\$
Travel Mileage Charges	\$/mile
Acting as an Expert Witness	\$

**EVALUATION OF PROPOSALS AND METHOD OF AWARD**

Upon review of the Proposals, the Evaluation Committee will designate the most qualified Proposer. The finalist may be invited to make an oral presentation and participate in a question and answer session with the Evaluation Committee. The evaluation includes evaluation of proposed subcontractors and suppliers. The Evaluation Committee will rank the finalists in order of preference; based on the Evaluation Criteria.

**EVALUATION CRITERIA.**

Pueblo County reserves the right to award the contract without discussion, based upon the initial Proposals. Accordingly, each initial Proposal shall be submitted on the most favorable terms from a price and technical viewpoint. If negotiations are conducted, they will be conducted with all finalist firms in the competitive range. If the Evaluation Committee is unable to negotiate a satisfactory contract and Scope of Work with the first-ranked Proposer at a fair and reasonable price, negotiations will be formally terminated. Negotiations will then be undertaken with the second-ranked Proposer, and so on, until a satisfactory contract is negotiated. The negotiated contract recommendation will then be presented to the Pueblo Board of County Commissioners for approval.

Proposals will be evaluated based upon the following criteria:

- a. Firm Experience
- b. Project team
- c. Office location
- d. Past performance on similar projects
- e. Workload and schedule
- f. Proposed Cost

A copy of the form used to evaluate proposals is attached for reference. See Attachment 2.

### **CONTRACT EXECUTION**

The successful Proposer shall be required to execute the Contract and to furnish the annulment of the Award and, in the event of such annulment, the Award may then be made to another Proposer or the Owner may reject all Proposals or call for other Proposals. The Owner, within ten (10) days of receipt of an acceptable signed Contract from the successful Proposer will issue the Notice to Proceed.

### **EQUAL EMPLOYMENT OPPORTUNITY**

All Proposers, or Consultant, defined as the entity with whom the Pueblo Board of County Commissioners enters into an Agreement as a result of this RFP, shall comply with all laws, ordinances, rules and regulations related to discrimination and unfair employment practices.

The Consultant agrees to comply with the letter and spirit of the Colorado Antidiscrimination Act of 1951, as amended, and other applicable laws respecting discrimination and unfair employment practices (24-34-402. CRS 1982 Replacement Vol.), and as required by Executive Order, Equal Opportunity and Affirmative Action, dated April 26, 1975.

Upon preparation and submittal of this Proposal and in fulfilling the terms of any Agreement resulting there from, the Proposer/Consultant agrees as follows:

- A. The Consultant will not discriminate against any employee or applicant for employment because of race, creed, color, national origin, sex, marital status, religion, ancestry, mental or physical handicap, or age. The Consultant will take affirmative action to insure that applicants are employed, and that employees are treated during employment, without regard to the above mentioned characteristics. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; lay-offs or terminations; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth provisions of this nondiscrimination clause.
- B. The Consultant will, in all solicitations or advertisements for employees placed by or on behalf of the Consultant; state that all qualified applicants will receive consideration for employment without regard to race, creed, color, national origin sex, marital status, religion, ancestry, mental or physical handicap, or age.
- C. The Consultant will send to each labor union or representative of workers with which he has collective bargaining agreement or other contract or understanding, notice to be provided by the contracting officer, advising the labor union or workers' representative of the Consultant's commitment under the Executive Order, Equal Opportunity and Affirmative Action, dated April 26, 1975, and of the rules, regulations, and relevant Orders of the Governor.
- D. The Consultant and labor unions will furnish all information and reports required by Executive Order, Equal Opportunity and Affirmative Action of April 26, 1975, and by the rules, regulations and Orders of the Governor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the office of the Governor or his designee for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- E. A labor organization will not exclude any individual otherwise qualified from full membership rights in such labor organization, or expel any such individual from membership in such labor organization or discriminate against any of its members in the full

enjoyment of work opportunity, because of race, creed, color, sex, national origin, or ancestry.

F. A labor organization, or the employees or members thereof will not aid, abet, incite, compel or coerce the doing of any act defined in this contract to be discriminatory or obstruct or prevent any person from complying with the provisions of this contract or any order issued there under; or attempt either directly or indirectly, to commit any act defined in this contract to be discriminatory.

G. In the event of the Consultant's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the Consultant may be declared ineligible for further State contracts in accordance with procedures, authorized in Executive Order, Equal Opportunity and Affirmative Action of April 26, 1975 and the rules, regulations, or orders promulgated in accordance therewith, and such other sanctions as may be imposed and remedies as may be invoked as provided in Executive Order, Equal Opportunity and Affirmative Action of April 26, 1975, or by rules, regulations, or orders promulgated in accordance therewith, or as otherwise provided by law.

H. Prohibitions on Public Contracts for Services (Including Construction Contracts) regarding Employment of illegal Aliens. Consultant certifies that the Consultant shall comply with the provisions of C.R.S. § 8-17.5-101, et seq. The Consultant shall not knowingly employ or contract with an illegal alien to perform work under this contract; or enter into a contract with a subcontractor that knowingly employs or contracts with an illegal alien to perform work under this contract. Consultant represents, warrants and agrees that it has confirmed or attempted to confirm the employment eligibility of all employees who are newly hired for RFP 5 of 10 employment in the United States through participation in the Basic Pilot Employment Verification Program administered by the Department of Homeland Security. Information on applying for the Basic Pilot Employment Verification Program can be found at <https://www.vis-dhs.com/employerregistration>. If the Consultant is not accepted into the Basic Pilot Verification Program prior to entering into a public contract for services, the Consultant shall apply to participate in the Program every three (3) months until the Consultant is accepted, or the public contract for services has been completed, whichever is earlier. Consultant shall not use the Basic Pilot Verification Program procedures to undertake pre-employment screening of job applicants while the public contract for services is being performed. Consultant shall comply with all reasonable requests made in the course of an investigation by the Colorado Department of Labor and Employment. If the Consultant obtains actual knowledge that a subcontractor performing work under this contract knowingly employs or contracts with an illegal alien, the Consultant shall:

(a) Notify the subcontractor and the County within three (3) days that the Consultant has actual knowledge that the subcontractor is employing or contracting with an illegal alien; and

(b) Terminate the subcontract with the subcontractor if within three (3) days of receiving the notice required pursuant to sub-paragraph (a) above, the subcontractor does not stop employing or contracting with the illegal alien, unless the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien. If the Consultant fails to comply with any requirement of this provision or C.R.S. § 8-17.5-101, et seq., the County may terminate this contract for breach of contract and the Consultant shall be liable for actual and consequential damages to the County. The Consultant will include the provisions of paragraph (A) through (I) in every sub-contract and subcontractor purchase order unless exempted by rules, regulations, or orders issued pursuant to Executive Order, Equal Opportunity and Affirmative Action of April

26, 1975, so that such provisions will be binding upon each subcontractor or vendor. The Consultant will take such action with respect to any sub-contracting or purchase order as the contracting agency may direct, as a means of enforcing such provisions, including sanction for noncompliance provided however, that in the event the Consultant becomes involved in, or is threatened with, litigation with the subcontractor or vendor as a result of such direction by the contracting agency, the Consultant may request the State of Colorado to enter into such litigation to protect the interest of the State of Colorado.

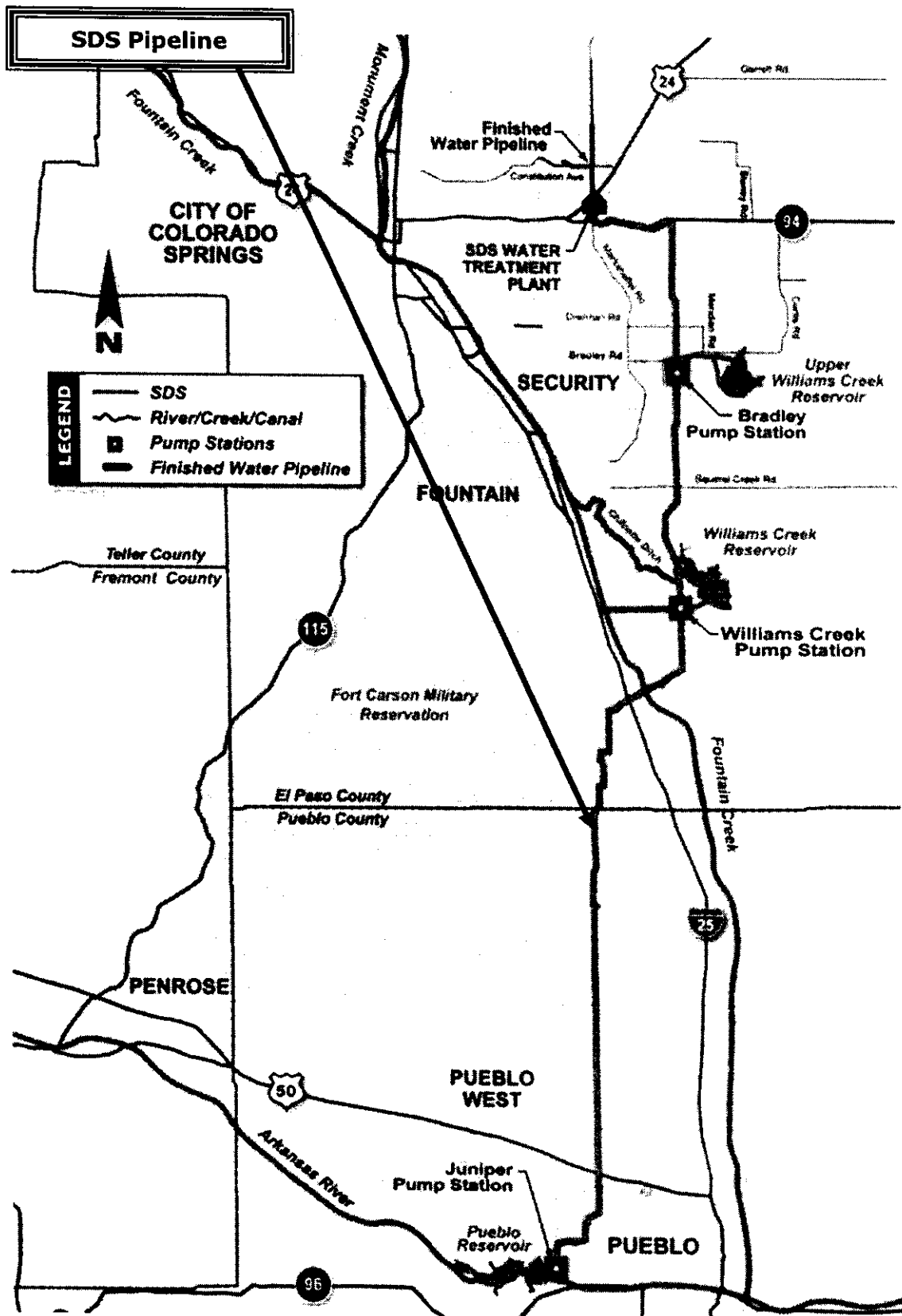
**AVAILABLE INFORMATION**

All documents associated with the SDS Pipeline Project (1041 Permit No. 2008-002) can be accessed at the following link:

<http://www.co.pueblo.co.us/cgi-bin/webformbroker.wsc/cases3.p?CaseNum=1041 2008-002>

For more information, contact Jeffrey Woeber, Pueblo County Department of Planning and Development: [jeff.woeber@co.pueblo.co.us](mailto:jeff.woeber@co.pueblo.co.us)  
Tel. (719) 583-6385

RFP respondents who are interested in accessing the Project site may use an access point for each of the three SDS Project sections, as shown on the attached maps (Attachment 3). All access to the SDS Project site shall be coordinated by the Permit Administrator.



**PUEBLO COUNTY DEPARTMENT OF PLANNING AND DEVELOPMENT  
CONSULTANT EVALUATION**

**PROJECT: ANALYSIS AND REPORTING, REVEGETATION REQUIREMENTS  
FOR SOUTHERN DELIVERY SYSTEM (SDS) PROJECT 1041 PERMIT**

Selection Committee Member: \_\_\_\_\_

Consultant: \_\_\_\_\_

Award 1 to 5 points for each category according to the following:

- 1 = Unsatisfactory
- 2 = Satisfactory minus
- 3 = Satisfactory
- 4 = Satisfactory plus
- 5 = Superior

Weight values for each category are as indicated. Score : points x weight.

**EVALUATION CRITERIA**

<u>Firm experience</u>	points	weight	score
	_____	<u>10</u>	_____
Comments/Notes: _____			
_____			
_____			
_____			

<u>Project Team</u>	points	weight	score
	_____	<u>10</u>	_____
Comments/Notes: _____			
_____			
_____			
_____			

<u>Office Location</u>	points	weight	score
	_____	<u>5</u>	_____
Comments/Notes: _____			
_____			
_____			
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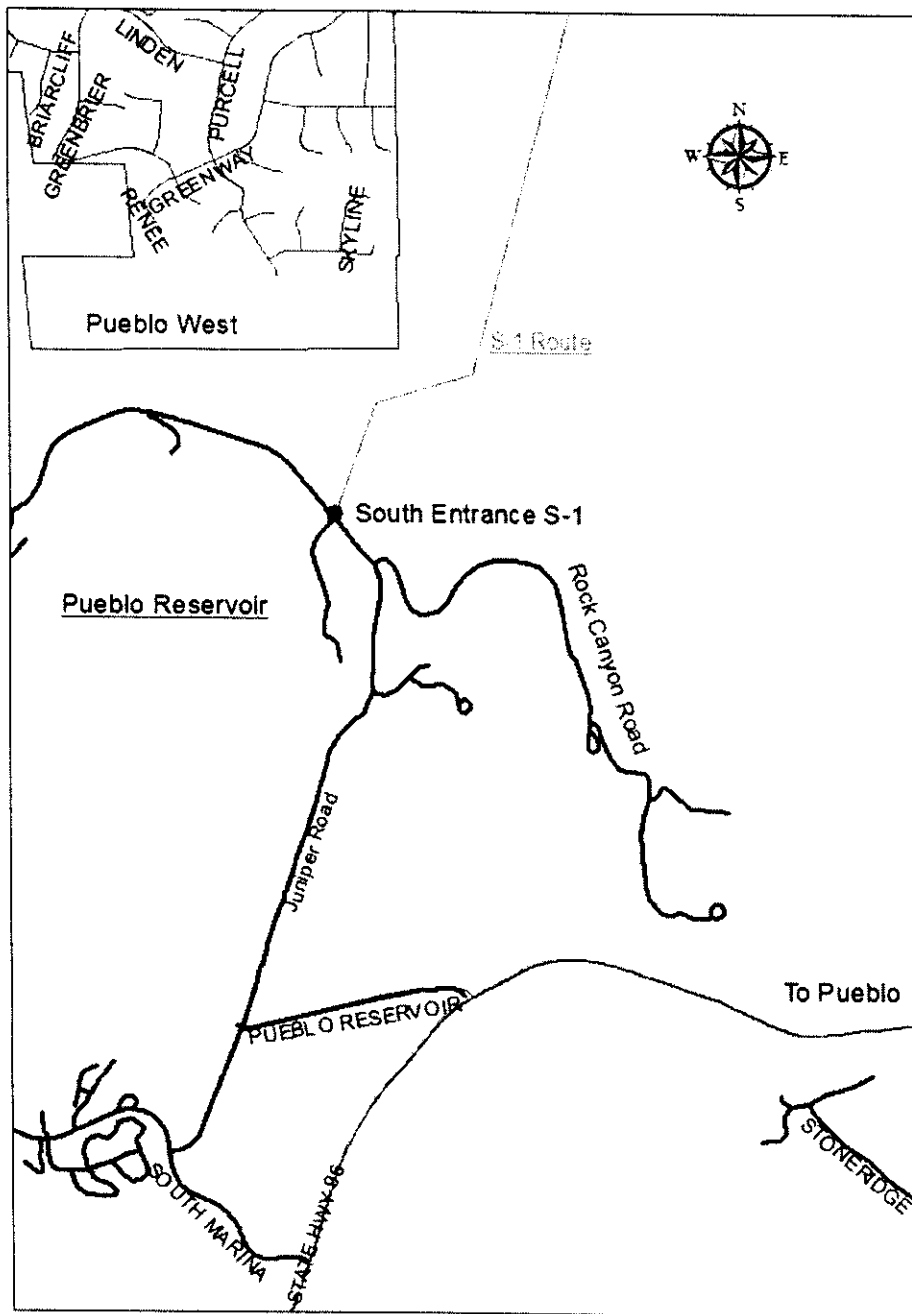
<u>Past Performance</u>	points	weight	score
	_____	<u>10</u>	_____
Comments/Notes: _____			
_____			
_____			
_____			

<u>Workload/Schedule</u>	points	weight	score
	_____	<u>5</u>	_____
Comments/Notes: _____			
_____			
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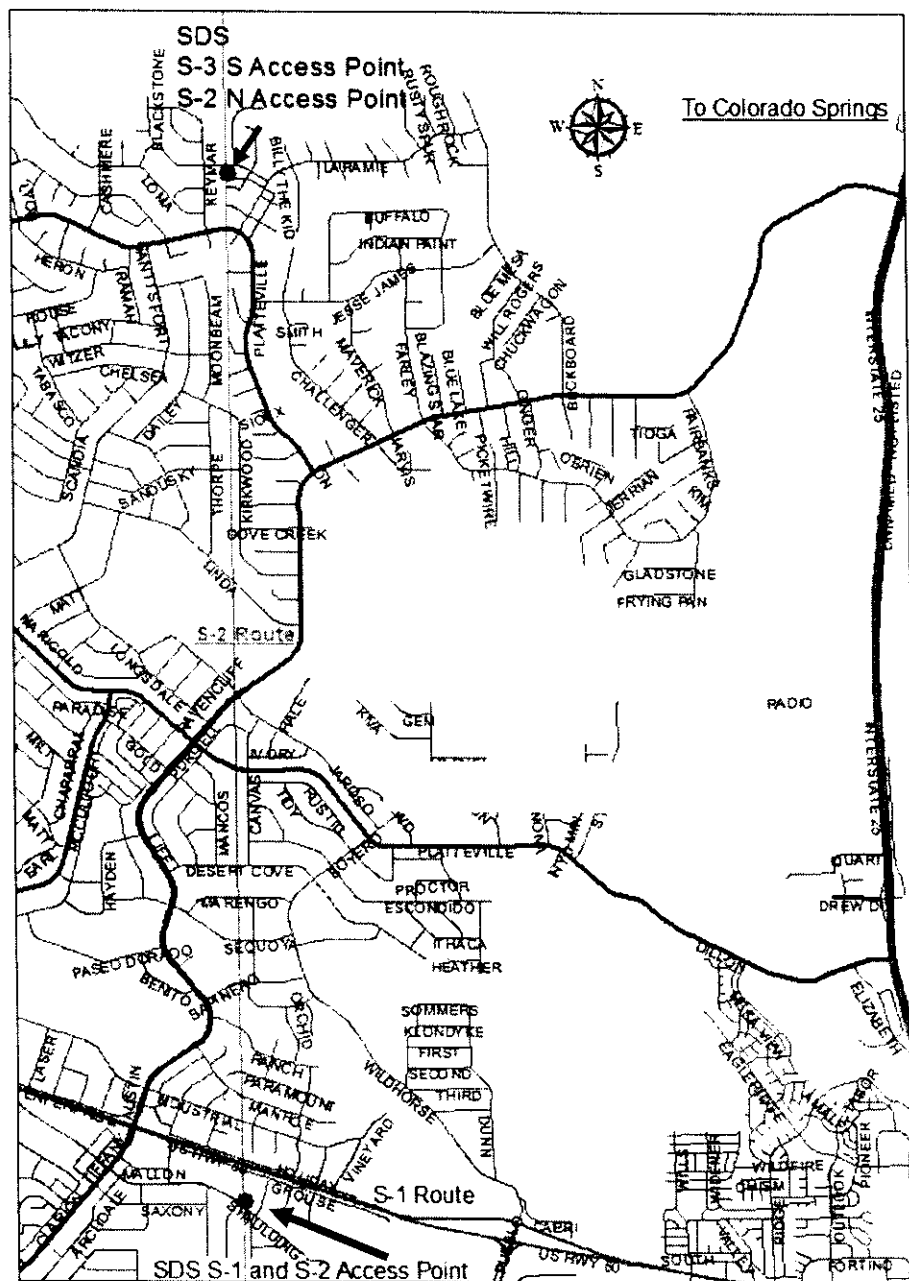
<u>Project Cost</u>	points	weight	score
	_____	<b>5</b>	_____
Comments/Notes: _____			
_____			
_____			
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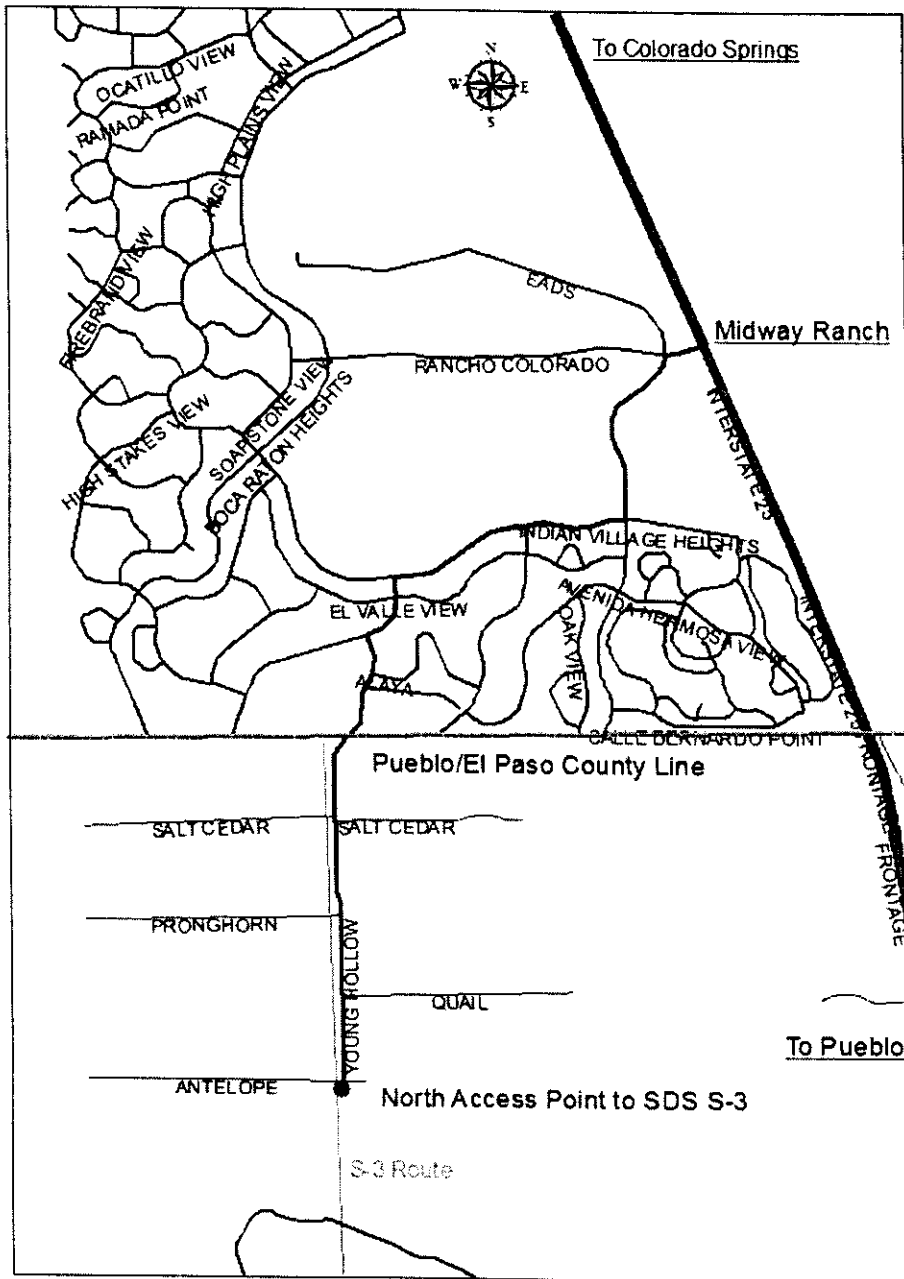
TOTAL SCORE: \_\_\_\_\_





Southern Delivery System S-1 Access Point Pueblo Reservoir





Southern Delivery System S-3 Access Point

**Evaluation, Analysis and Assessment of Reclamation and Revegetation for the  
Southern Delivery System Water Pipeline Route in Pueblo County, Colorado**

Estimated Costs – 2013

Keammerer Ecological Consultants, Inc.

Prepared by: Warren R. Keammerer (303)530-1783

5858 Woodbourne Hollow Road, Boulder, Colorado 80301

wrkeam@comcast.net

Tasks	Rate	Hours	Cost
Initial Site Visit			
W. Keammerer	\$130.00	10	\$1,300.00
Meetings/Project Mgmt.			
W. Keammerer	\$130.00	30	\$3,900.00
Review Existing Materials			
W. Keammerer	\$130.00	10	\$1,300.00
H. Keammerer	\$110.00	5	\$550.00
Spring Evaluation (May)			
W. Keammerer	\$130.00	20	\$2,600.00
H. Keammerer	\$110.00	20	\$2,200.00
Summer Evaluation (July)			
W. Keammerer	\$130.00	20	\$2,600.00
H. Keammerer	\$110.00	20	\$2,200.00
Late Summer Evaluation (September)			
W. Keammerer	\$130.00	20	\$2,600.00
H. Keammerer	\$110.00	20	\$2,200.00
Preparation of Reports			
W. Keammerer	\$130.00	40	\$5,200.00
H. Keammerer	\$110.00	25	\$2,750.00
Total Fees			\$29,400.00
Expenses	Rate/mi	Miles	
Travel Expenses			\$2,000.00
Vehicle	\$0.65	1500	\$975.00
Total Expenses			\$2,975.00
Estimated Total Budget for 2013			\$32,375.00

**"RFP, Site Restoration of SDS Project"**

**PROPOSAL TO ADDRESS:**

**EVALUATION, ANALYSIS AND ASSESSMENT OF RECLAMATION AND  
REVEGETATION FOR THE SOUTHERN DELIVERY SYSTEM WATER  
PIPELINE ROUTE IN PUEBLO COUNTY, COLORADO**

December 31, 2012

Prepared for:

Pueblo County Department of Planning and Development  
229 W. 12<sup>th</sup> Street  
Pueblo, CO 81003-2810

Prepared by:

Warren R. Keammerer, Ph.D.

Keammerer Ecological Consultants, Inc.  
5858 Woodbourne Hollow Road  
Boulder, CO 80301  
(303) 530-1783  
wrkeam@comcast.net

## INTRODUCTION

This proposal addresses the scope of work and requested services described in the Pueblo County Department of Planning and Development request for proposal dated November 30, 2012 regarding the "Evaluation, Analysis and Assessment of Reclamation and Revegetation for the Southern Delivery System (SDS) Water Pipeline Route in Pueblo County, Colorado". The proposal will present information regarding the qualifications and experience of Keammerer Ecological Consultants, Inc. relative to their ability to conduct this work and will discuss how this study can be conducted so that the results will be legally defensible if unsuccessful revegetation leads to litigation.

## SCOPE OF WORK

The RFP describes the SDS pipeline right-of-way as crossing approximately 20 miles of Pueblo County with the route divided into three sections (S1, S2 and S3). The scope of work presented in the RFP addresses only Section S3, which includes the northernmost 5.27 miles of the route.

The primary focus of the RFP is to evaluate whether the revegetation work in Section S3 is meeting the performance standards that were included as conditions of the approved Permit. The main performance standard for vegetation establishment is that the vegetation cover on the reclaimed areas will be considered acceptable if it attains 90 percent of the cover of the pre-construction vegetation cover. There are also general performance criteria that address post construction grading and weed control, but the only quantitative measure relates to vegetation cover. It is important to note that the information in the RFP does not present a time frame in which the cover performance standard is to be met. Since it can take several years for vegetation to become established on severely disturbed sites, performance standards often are placed within a time context. For example, the standards must be met during two growing seasons within a ten-year period following seeding or, possibly during one year within a five-year period following seeding. In a semi-arid climate, like in Pueblo County, it is very unlikely that the cover standard would be met during the first growing season (2013) along the S3 Section of the route.

Pre-Construction Vegetation. The pre-construction vegetation maps show that most of Section S3 supported an upland native grassland vegetation type. Some scattered patches of upland native shrubland also occur. Wetland vegetation types occur to a very limited extent in places where the pipeline route crosses small stream courses. Rare plant species that were encountered in the pre-construction vegetation studies were found in the more southern sections of the route and were not observed in Section S3. The pre-construction vegetation report may include detailed tabular summaries for the vegetation types that occur in Section S3. These data, if they exist, will be useful in documenting the species composition and vegetation cover values that were present in the plant communities prior to disturbance. One of the project tasks will be to review existing documents for any information that will be useful for evaluating the reclaimed areas. For the purposes of evaluating revegetation success, however, it will be necessary to make comparisons based on data from native vegetation growing adjacent to the route since yearly differences in precipitation can greatly affect the amount of vegetation cover during the growing season. Conditions that were present when the pre-disturbance data were collected may not be the same as future growing seasons.

Extent of Disturbance. Based on interpretation of existing aerial photos, it appears that the average width of the pipeline right-of-way is approximately 125 feet. Over the 5.27 mile length of Section S3, this amounts to approximately 80 acres of disturbance. As noted above, most of this disturbance occurred in native upland grasslands.

Evaluation of Revegetation Success. The evaluation of revegetation success will be conducted using both qualitative and quantitative approaches. Qualitative evaluations will focus on general assessments of the uniformity of vegetation establishment. It is possible that many sections of the pipeline route will meet the performance standards, however, it is also possible that some sections will show only limited vegetation development. Lack of success could be related to a variety of causes such as soil problems, seeding times, problems related to drill seeding, or precipitation timing and amounts. It will be important to identify the location and extent of areas that do not meet the performance standards. It may be necessary to obtain post-construction aerial photographs of the pipeline route to assist in determining the extent of unsuccessful areas. Field work for qualitative evaluations will consist of walking all of Section S3 to determine the extent of successful revegetation. Observations on noxious weed abundance and locations where weed control is needed will be made during site walk-throughs.

Quantitative sampling approaches will be used to determine vegetation cover on the reclaimed areas as well as on adjacent native vegetation sites. Vegetation cover will be measured using an optical point sampling approach. With this method, vegetation cover is determined using an optical sighting device positioned at one-meter intervals along a 25 meter transect. The sighting device includes an objective lens with a set of crosshairs and a mirror which allows for vertically viewing the vegetation. Data recording consists of identifying what appears in the crosshairs of the field of view of the objective lens (hits). Vegetation hits are recorded by species. Other cover attributes that are recorded include plant litter, bare soil or rock. For each sampled transect, data for 50 points are recorded. Cover summaries can be prepared based on mean values for each species that is encountered. Species can also be grouped in a variety of ways for comparative purposes. For example, cover values for species that were seeded can be tabulated and can be compared with the seed mixes that were used. Species can also be tabulated based on life forms and can then be compared with results from the adjacent native plant communities. Data from the cover transects will allow for a comprehensive evaluation of not only the 90 percent cover comparison, but also the requirement for the vegetation on the reclaimed areas to be of the same seasonal variety native to the area. It will be important to sample enough transects in both the reclaimed and native areas so that statistical comparisons can be made. Also, it is important for all sampling locations to be randomly located so that assumptions of the statistical tests can be met. Because of the time required for vegetation development, cover sampling during the first growing season (2013) is not recommended. If the vegetation on the reclaimed sites develops quickly, it may be possible to initiate cover comparisons with adjacent native communities during the second growing season.

For the first growing season, vegetation studies should focus on evaluating seed germination and seedling establishment. While it is not always possible to predict in the first growing season how well vegetation on reclaimed areas will develop, an assessment of seedling establishment can provide some useful insight. If many robust seedlings are present in the drill rows, there is a good possibility that the performance standards will be met within 2-3 years. However, if only a few scattered seedlings occur, the likelihood of success is reduced. Assessment of seedling density can be assessed qualitatively by field reconnaissance or it can be determined using quantitative approaches.

Based on the information in the RFP, it appears that some litigation concerns exist relative to meeting the vegetation performance standards. In this regard, it is extremely important that the field research design needs to be carefully considered. Sampling methods should be recognized as being acceptable approaches for evaluating vegetation cover, and all sampling locations should be randomly located. Also, document preparation and management are important components for projects that may result in litigation. At the outset of the project, thought should be given as to how the monitoring results would be presented in depositions or courtroom settings.

Preparation of Reports. Reports documenting the results of field observations will be supplied to the Permit Administrator within two weeks of the completion of field work. In some cases, the response time for brief reports could be less than two weeks, especially if some sort of immediate action is needed (e.g. severe erosion problems or immediate need for weed control). Reports will be submitted in the format requested in the RFP.

#### QUALIFICATIONS OF KEAMMERER ECOLOGICAL CONSULTANTS, INC.

Keammerer Ecological Consultants, Inc. (KEC) is a small consulting firm specializing in studies related to vegetation, reclamation, vegetation monitoring and evaluation of revegetation success. The company is headed by Dr. Warren R. Keammerer who has been involved with vegetation studies for 45 years, first as an undergraduate student, then as a graduate student and for the last 40 years as a consultant. Dr. W. Keammerer has conducted studies throughout the Rocky Mountain Region and has also participated in several international studies. He has conducted revegetation evaluation studies in Colorado, Wyoming, Montana, New Mexico and Arizona. In addition to revegetation monitoring studies he has also conducted other long-term monitoring studies related to a gold mining project in Nevada and test plot studies in western Colorado. Projects have related to revegetated sites on coal mines, aggregate extraction mines, oil shale development sites and super fund sites. Currently, one of the KEC monitoring projects involves the evaluation of revegetation success on approximately 10,000 acres of remediated lands in the vicinity of the decommissioned copper smelter near Anaconda, Montana. Over the past 40 years, KEC has conducted several hundred vegetation/reclamation/monitoring studies. For the SDS Project evaluations in Pueblo County, Dr. W. Keammerer will be the overall project director and will also be involved in field evaluations and sampling. The role of Project Investigator will be filled by Dr. Holly B. Keammerer. Dr. H. Keammerer completed her Ph.D. in biology/plant ecology in 2011 and is currently a research ecologist with KEC. Prior to completion of her degree she worked as a member and director of summer field work for several KEC projects. Over the past two summers she has participated in the Anaconda field monitoring studies and preparation of annual monitoring reports for that project. Resumes for the project personnel are included as an attachment to this proposal.

#### Consultant's general knowledge, experience and ability to analyze site restoration, reclamation and revegetation.

As noted in the introductory paragraph above, we have been involved in the evaluation of revegetation of disturbed lands since the 1980's. Evaluation work has been conducted using both qualitative and quantitative approaches. Our knowledge regarding revegetation success is based on evaluations conducted in a variety of climatic regimes, soil conditions and different types of disturbances. Also, some of the projects have spanned more than 20 years which has provided insight into how vegetation develops over longer time periods.



Knowledge of vegetation, botany, biology and soils specific to Pueblo County.

While we have not specifically conducted any vegetation studies in Pueblo County, we have worked in many similar grassland and shrubland environments in Colorado, Arizona and Wyoming. We are familiar the species that occur in the Pueblo region and have an understanding of the ecological driving variables in grassland systems.

Ability to work collaboratively with Pueblo County staff and Plan stakeholders in the required evaluation and reporting process.

Over the past 40 years we have had the opportunity to work with many governmental and non-governmental entities. For this project, it will be important to understand the concerns of the various stakeholders so that data collection programs will address all of the project needs.

Relevant experience of crew members performing the work. As noted above, the work for this project will be conducted by Dr. Warren R. Keammerer and Dr. Holly B. Keammerer. Our degrees are in plant ecology and we both have extensive experience in the evaluation of revegetation success on disturbed lands. Our skills in plant identification and in quantitative vegetation sampling make it possible for us to develop objective, defensible study designs that will address the needs of the project.

Qualifications of personnel of persons providing supervision or are in responsible charge of the work.

As noted above, all of the work for this project will be conducted by either Dr. W. Keammerer or Dr. H. Keammerer.

Experience as an Expert Witness. Dr. Warren Keammerer has served as an expert witness in plant ecology in several lawsuits. In most of these cases, the lawsuits were settled prior to trial. The following is a partial list of expert testimony experience:

- Montana v. Atlantic Richfield Company. This case consisted of a Natural Resource Damage Assessment lawsuit brought by the State of Montana against the Atlantic Richfield Company. Dr. Keammerer served as an expert witness for Atlantic Richfield regarding vegetation establishment and other vegetation issues in the areas surrounding the decommissioned copper smelter near Anaconda, Montana.
- Expert witness in a case involving natural resource injuries from the breach of an irrigation supply ditch in Rocky Mountain National Park. Dr. Keammerer served as an expert witness for the irrigation company.
- Expert witness in a case involving water rights issues between the State of Wyoming and the State of Nebraska regarding water in the North Platte/Platte River System. Dr. Keammerer was an expert witness for the State of Wyoming.

Consultant's hourly fee schedule. The following table lists our hourly fees for the various project tasks.

Hourly Rate Schedule

DESCRIPTION	HOURLY RATE
Principal (Warren R. Keammerer, Ph.D.)	\$130
Project Investigator (Holly B. Keammerer, Ph. D.)	\$110
Clerical (No Clerical Billing Rate)	NA
Research/Review of Existing Material (W. Keammerer/H. Keammerer)	\$130/\$110
Report Preparation (W. Keammerer/H. Keammerer)	\$130/\$110
Meetings (W. Keammerer/H. Keammerer)	\$130/\$110
Site Visits (Field Work) (W. Keammerer/H. Keammerer)	\$130/\$110
Travel Mileage Charges*	\$0.65/mile
Acting as an Expert Witness (W. Keammerer)	\$260

\*As a point of reference, our offices are approximately 145 miles from the project site.

Consultant's anticipated work load and anticipated lead time.

We are currently committed to work on several projects for the 2013 growing season. We have on-going monitoring work for the remediation evaluation project near Anaconda, Montana. We also have a one-week field trip for a project in western Colorado. Because of the earlier onset of growth in the Pueblo region, we would propose to conduct initial field observations in May. At this time, seed germination and initial seedling establishment should have occurred. We will also have weekly time intervals available during the summer. Windows for spot observations are available toward the end of June, in early and late July, and in mid-August. Most of our other field work will be completed by the end of August so that it will be possible to conduct additional field observations related to seeding survival in September.

Information regarding prior work, compensation and contracts performed for any of the SDS Participants.

To my knowledge, we have not worked for any of the specific SDS Participants. In the past, we have done some work as sub-contractors for work along Monument Creek in Colorado Springs. This work was related to wetland delineation and revegetation work associated with grade control structures.

References.

Dr. Terry Moore. BP, 1701 Summit, Plano, TX, 75074. (214) 505-3992 (cell). Dr. Moore is familiar with our expertise relative to design of research projects and our abilities to analyze and interpret data.

Kevin Bethke. TREC, Inc., 1800 Koch, Suite 6, Bozeman, MT. (406) 586-8364 (office); (406) 539-8008 (cell). Mr. Bethke is familiar with our work regarding qualitative and quantitative monitoring studies.

William Duffy. Davis Graham & Stubbs, 1550 Seventeenth Street, Suite 500, Denver, CO 80202 (303) 892-7372 (direct). Mr. Duffy is familiar with Dr. W. Keammerer's work as an expert witness.

FINAL COMMENTS

We appreciate the opportunity to submit this proposal. The defined scope of work in the RFP is exactly the kind of work that we have been doing for many years. If you have any specific questions regarding our project experience, expertise or approach to the study, please contact us for clarification.

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Warren R. Keammerer, President  
Keammerer Ecological Consultants, Inc.  
5858 Woodbourne Hollow Road  
Boulder, Colorado 80301

Incorporated in the State of Colorado

## ATTACHMENTS

### RESUMES FOR PROJECT PERSONNEL

## RESUME

### WARREN R. KEAMMERER, PH.D.

**Education:** Capital University, Columbus, Ohio, 1964-1968  
Bachelor of Science in Biology, Cum Laude (1968)

North Dakota State University, Fargo, North Dakota, 1968-1972  
Doctor of Philosophy in Botany and Plant Ecology (1972)

#### **Professional Experience:**

Since 1973, Dr. Keammerer has been working as an independent consultant in plant ecology and vegetation studies. Since that time, he has worked on over 300 different plant ecological, wetland and rare plant studies in Colorado, New Mexico, Wyoming, Utah, Arizona, California, Nevada, Montana, North Dakota, South Dakota, Nebraska and Oklahoma. Studies have related to mining, ski area, industrial and park development; including development and reclamation of coal, oil shale, uranium, gold, molybdenum and gravel mines. Dr. Keammerer has provided expert testimony in plant ecology, including the uptake of trace elements by plants and vegetation recovery on sites impacted by smelting of sulfide ores. Since 1986 he has conducted a number of studies involving hazardous waste site evaluation, design of remedial approaches for revegetation of contaminated sites and field evaluation of remedial techniques for vegetation establishment.

From June, 1972 to September 1973 he had a post-doctoral fellowship with the Institute of Arctic and Alpine Research at the University of Colorado, Boulder, Colorado.

During the academic year 1971-1972 Dr. Keammerer taught introductory biology and ecology at Capital University, Columbus, Ohio.

From 1968 to 1972 Dr. Keammerer was a graduate student at North Dakota State University. Graduate studies were funded by a three-year National Defense Education Act Fellowship. Dissertation research focused on the forest ecology of the bottomland floodplain forests of the Missouri River in North Dakota.

During the summers of 1967-1968 Dr. Keammerer began conducting plant ecological studies while working as a student participant in the National Science Foundation Program at the American Museum of Natural History. The research studies were conducted at the Kalbfleisch Field Research Station, Huntington, Long Island, New York.

#### **International Experience**

In addition to projects conducted in the American West, Dr. Keammerer has also worked on a mine reclamation project in Mongolia and a baseline vegetation and endangered species projects in the Republic of Congo, Colombia, Kazakhstan and eastern Russia.

**Professional Affiliations:** Ecological Society of America  
British Ecological Society  
Society of Sigma Xi  
High Altitude Revegetation Committee  
Listed in American Men and Women of Science

**Publications:**

- Keammerer, W. R. and W. C. Johnson. 1970. The vegetation of the Missouri River floodplain forests. Proc. of the N. D. Acad. Sci. 24(1), abstracts.
- Keammerer, W. R. 1972. The understory vegetation of the bottomland forests of the Missouri River in North Dakota. Ph.D. thesis, North Dakota State University, Fargo. 234p.
- Keammerer, W. R. 1974. *Sullivantia purpusii* and *Astragalus lutosus* in Garfield County, Colorado. Proc. of the Colo-Wyo Acad. of Sci., Abstracts.
- Keammerer, W. R., W. C. Johnson and R. L. Burgess. 1974. Floristic analysis of the Missouri River bottomland forests in North Dakota. Can. Field Nat. 89(1): 5-19.
- Burgess, R. L., W. C. Johnson and W. R. Keammerer. 1973. Vegetation of the Missouri River floodplain in North Dakota. Research Project Technical Completion Report No. WI-221-018-73. North Dakota Water Resources Res. Inst., Fargo. 162p.
- Johnson, W. C., R. L. Burgess and W. R. Keammerer. 1976. Forest overstory vegetation and environment on the Missouri River floodplain in North Dakota. Ecol. Monogr. 46(1):59-84.
- Keammerer, W. R. 1978. Revegetation monitoring studies on a reclaimed gravel mine. In: Lowland river and stream habitat in Colorado: A symposium. Held at University of Northern Colorado, Greeley.
- Keammerer, W. R. 1983. Measures of sample adequacy. In: Symposium on western coal mining regulatory issues: land use, revegetation and management. Colorado State Univ. Range Sci. Dept. Sci. Ser. No. 35: 72-74.
- Keammerer, W. R. and B. L. Gibbs. 1985. Tracking mined land revegetation with a microcomputer. In: Proc. of 2nd Conf. on the use of computers in coal mining. Univ. of Alabama, Tuscaloosa.
- Keammerer, W. R., D. M. Barker and B. Northcutt. 1986. Revegetation success at Exxon's Colony Shale Oil Project. In: Schuster, M. A. and R. H. Zuck (eds). Proc. High Altitude Revegetation Workshop No. 7. Colorado State University Water Resources Research Institute Information Series No. 58, Ft. Collins. pp. 66-74.
- Keammerer, W. R. 1986. Monitoring schemes for evaluating reclamation success. In: Schuster, M. A. and R. H. Zuck (eds). Proc. High Altitude Revegetation Workshop No. 7. Colorado State University Water Resources Research Institute Information Series No. 58, Ft. Collins. pp. 153-157.

- Keammerer, W. R. and L. F. Brown (eds). 1988. Proceedings: High Altitude Revegetation Workshop No. 8. Colorado State University Water Resources Research Institute Information Series No. 59. 319 p.
- Keammerer, W. R. 1988. Species colonization studies: Climax Mine tailing sites. In: Keammerer, W. R. and L. F. Brown (eds). Proc. High Altitude Revegetation Workshop No. 8 Colorado State University Water Resources Research Institute Information Series No. 59. pp. 69-78.
- Keammerer, W. R. 1989. Monitoring restoration results. In proceedings of the First Annual Meeting of the Society for Ecological Restoration and Management held January 16-20, 1989. Oakland California.
- Keammerer, W. R. and J. Todd (eds). 1990. Proceedings: High Altitude Revegetation Workshop No. 9. Colorado State University Water Resources Research Institute Information Series No. 63. 257 p.
- Hassel, W. G., S. K. Nordstrom, W. R. Keammerer and J. Todd. 1992. Proceedings: High Altitude Revegetation Workshop No. 10. Colorado State University Water Resources Research Institute Information Series No. 71. 316 p.
- Keammerer, W. R. and W. G. Hassel. 1995. Proceedings: High Altitude Revegetation Workshop No. 11. Colorado State University Water Resources Research Institute Information Series No. 80. 276 p.
- Keammerer, W. R. and R. L. Moore, Jr. 1995. High plains reclamation and restoration at the Black Thunder Mine, Campbell County, Wyoming. In: Keammerer W. R. and W. G. Hassel (eds), Proceedings: High Altitude Revegetation Workshop No. 11. Colorado State University Water Resources Research Institute Information Series No. 80, pp 70-78.
- Keammerer, W. R. (ed). 1996. Proceedings: High Altitude Revegetation Workshop No. 12. Colorado State University Water Resources Research Institute Information Series. 341 p.
- Keammerer, W. R. 1999. Revegetation success on treated tailings along Silver Bow Creek near Rocker, Montana. In: Keammerer, W. R. and E. F. Redente (eds), Proceedings: High Altitude Revegetation Workshop No. 13. Colorado State University Water Resources Research Institute Information Series No. 89, pp.61-92.
- Keammerer, W. R. and E. F. Redente (eds). 1999. Proceedings: High Altitude Revegetation Workshop No. 13. Colorado State University Water Resources Research Institute Information Series No. 89, 256 pp.
- Redente, E. F. and W. R. Keammerer. 1999. Use of native plants for mined land reclamation. 6<sup>th</sup> International Rangeland Congress Proc., Townsville, Queensland, Australia. July 19-23. pp. 957-961.

- Keammerer, W. R. (ed). 2000. Proceedings: High Altitude Revegetation Workshop No. 14. Colorado State University Water Resources Research Institute Information Series No. 91, 293 pp.
- Keammerer, W. R. (ed). 2002. Proceedings: High Altitude Revegetation Workshop No. 15. Colorado State University Water Resources Research Institute Information Series No. 95, 239 pp.
- Keammerer, W. R. and J. Todd (eds.). 2004. Proceedings: High Altitude Revegetation Workshop No. 16. Colorado State University Water Resources Institute Information Series No. 99, 247 pp.
- Keammerer, W. R. 2004. Vegetation establishment on copper smelter altered soils near Anaconda, MT. In: Keammerer, W. R. and J. Todd (eds), Proceedings: High Altitude Revegetation Workshop No. 16. Colorado State University Water Resources Research Institute Information Series No. 99, pp. 80-109.
- Keammerer, W. R. (ed.). 2006. Proceedings: High Altitude Revegetation Workshop No. 17. Colorado State University Water Resources Institute Information Series No. 101, 277 pp.

In addition to the above publications, Dr. Keammerer has authored more than 300 consulting reports related to vegetation studies over the last 40 years. A list of project experience is available on request.



# RESUME

## HOLLY B. KEAMMERER, PH.D.

**Education:** Pomona College, Claremont, California, 2002-2006  
Bachelor of Arts in Biology, (2006)  
James Cook University, Townsville, Australia, Spring 2005  
  
University of Oregon – Oregon Institute of Marine Biology, 2006-2011  
Doctor of Philosophy in Biology with specialization in Plant Ecology (2011)

### Professional Experience:

Since 2011, Dr. Keammerer has been working as an independent consultant in plant ecology and vegetation studies. Since that time, she has worked on vegetation studies related to the evaluation of revegetation success on remediated sites near a decommissioned smelter site near Anaconda, Montana. She has also been working on a field test plot study designed to evaluate various approaches for revegetating spent oil shale substrates in western Colorado.

From August 2005 to March 2011, Dr. Keammerer was a graduate student at the University of Oregon – Oregon Institute of Marine Biology. Dissertation research focused on the Community Structure, Plant Interactions, Seedling Performance and Seed Bank Composition of Salt Marshes along an Estuarine Gradient in Coos Bay, Oregon.

As an undergraduate, Dr. Keammerer worked on a senior research thesis focused on determining the validity of the pervasive idea that calcium from the old cuticle of the freshwater crustacean (*Procambarus clarkia*) was sequestered in the gastrolith and remobilized to calcify the new cuticle.

During the summers of 2001-2010, Dr. Keammerer worked as a field assistant and crew leader for a revegetation test plot study located at a proposed Oil Shale processing facility in western Colorado. Specific tasks included plant identification and biomass sampling. Laboratory tasks included processing of biomass samples, as well as drying and weighing all collected material.

### Other participation in research projects:

Oceanographic Research Trip (Spring 2008). R/V Seward Johnson I with JSL-II submersible, Harbor Branch Oceanographic Institute (1 cruise: Bahamas).

### Professional Societies:

Western Society of Naturalists; 2006-present

### Publications:

Keammerer, H. B. 2011. Community structure, plant interactions, seedling performance and seed bank composition of salt marshes along an estuarine gradient in Coos Bay, Oregon. Ph.D. thesis, University of Oregon, Eugene. 160p.

Keammerer, H. B. and S. Hacker. 2012. Negative and neutral marsh plant interactions dominate in early life stages and across physical gradients in an Oregon estuary. Submitted to Plant Ecology.

BOARD OF COUNTY COMMISSIONERS  
PUEBLO COUNTY, COLORADO

NOTICE TO PROCEED

TO: Keammerer Ecological Consultants Inc.  
Warren R. Keammerer  
5858 Woodbourne Hollow Road  
Boulder, CO 80301  
(303) 530-1783  
wrkeam@comcast.net

DATE: April 2, 2013

PROJECT DESCRIPTION: Southern Delivery System, S-3 Revegetation Compliance

PROJECT NO.:

YOU ARE HEREBY NOTIFIED TO COMMENCE WORK IN ACCORDANCE WITH THE REQUEST FOR PROPOSAL DOCUMENTS AND THE AGREEMENT DATED MARCH 27, 2013 ON OR BEFORE APRIL 2, 2013 AND YOU ARE TO COMPLETE THE WORK BY DECEMBER 31, 2014. A PUEBLO COUNTY PURCHASE ORDER MUST BE OBTAINED BY CONTRACTOR BEFORE CONTRACTOR COMMENCES WORK ON THIS PROJECT.

BY: Joan Armstrong  
DIRECTOR, PLANNING and DEVELOPMENT

ACCEPTANCE OF NOTICE

RECEIPT OF THE ABOVE NOTICE TO PROCEED IS HEREBY ACKNOWLEDGED BY:

Keammerer Ecological Consultants Inc.

THIS THE 2<sup>nd</sup> DAY OF April, 2013.

BY: Warren R Keammerer  
TITLE: President