

What the Proposed SDS Project Is and Is Not

The proposed project is:

- A regional water supply project
- A proposal by the Project Participants – Colorado Springs, Fountain, Security, and Pueblo West – in response to projected growth
- Funded entirely by the Project Participants through water rates and water development charges (or tap fees)
- A use of the Project Participants' existing water rights
- A use of excess capacity in existing Fry-Ark facilities on an as-available basis only

The proposed project is not:

- A federal proposal or undertaking, although it would require federal contracts and approvals
- Funded through federal, state, or local taxes
- A means of acquiring new water rights
- Competing with other water supply projects such as the proposed Arkansas Valley Conduit for storage or conveyance capacity

1.1.4 Project Participants' Needs

The Project Participants have three needs that would be fulfilled by the proposed SDS Project. The basis of these needs is described in greater detail in Section 1.5 below. The Participants have the following needs:

- The Participants have a need to use developed and undeveloped water supplies to meet most or all projected future demands through 2046
- The Participants have a need to develop additional water storage, delivery, and treatment capacity to provide system redundancy
- The Participants have a need to perfect and deliver their existing Arkansas River Basin water rights

Each Participant is individually requesting a long-term excess capacity storage and/or exchange contract from Reclamation. Colorado Springs has requested 28,000 acre-feet (ac-ft) of storage annually and 10,000 ac-ft of contract exchange annually. Security has requested 1,500 ac-ft of storage annually. Fountain has requested up to 2,500 ac-ft of storage annually, and Pueblo West has requested 10,000 ac-ft of storage annually.

1.1.2 Federal Agency's Purpose and Need

The Project Participants have made a request to Reclamation to issue long-term excess capacity, conveyance, and exchange contracts for use of the Fry-Ark Project facilities. Reclamation needs to decide if the requested contracts will be approved.

1.1.3 Basic Project Purpose

The basic project purpose is to provide a safe, reliable, and sustainable water supply for the Participants through the foreseeable future.

1.2 Lead and Cooperating Agencies

Reclamation is the lead agency for the federal action. It is responsible for environmental evaluation and preparation of this FEIS, and preparation of a Record of Decision (ROD).

Four cooperating agencies provided data, assisted in reviews, helped analyze effects, and contributed to this FEIS. Agencies were invited to be cooperating agencies if they had jurisdiction by law or special expertise with



where three of the SDS Project Participants are located, have paid approximately 73 percent of the tax revenues received by the SECWCD.

1.4.2 Participants' Proposed Action

The SDS Project is a proposed regional water delivery project designed to serve most or all Participants' future water needs through 2046. The Participants' Proposed Action would meet their purpose and need by providing additional yield and system redundancy, and by using the Participants' existing Arkansas River Basin water rights. As proposed, the SDS Project would deliver Fry-Ark Project water and non-Fry-Ark Project water from Pueblo Reservoir to the Participants' service areas. The Participants' Proposed Action would include construction and operation of the following components:

- Use of 42,000 ac-ft of existing excess storage capacity in Pueblo Reservoir if and when space is available
- Use of existing Reclamation pipeline and outlet structures below Pueblo Dam to connect to an untreated water pipeline
- Installation of 2,200 feet of 78-inch diameter pipeline capable of conveying 96 million gallons per day (mgd) and 1,100 feet of 72-inch diameter pipeline capable of conveying 78 mgd of untreated water
- Installation of a 160-foot long, 36-inch diameter pipeline capable of conveying 18 mgd of untreated water to the existing Pueblo West Pump Station
- Installation of a 53-mile long, 66- to 72-inch diameter pipeline and three pump stations capable of conveying 78 mgd of untreated water

Definitions

1 ac-ft equals 325,851 gallons.

Yield is water available from untreated water collection systems, expressed primarily in acre-feet per year (**ac-ft/yr**). Yield can vary depending on the demands in the service area and on the level of service assumed. Three project-related yield terms are discussed below.

Firm yield is the highest water demand that can be continuously fulfilled based on historical hydrologic conditions. The firm yield is the water demand fulfilled just prior to the level that produces system shortages.

Simulated Mean Annual Deliveries (SMAD) is the average annual amount of demand met by the untreated water collection, storage, and distribution system evaluated at a specific demand level. For the purposes of this FEIS, SMAD is always evaluated at a demand level equal to the 2046 demand from the Participants' Planning Demand Forecast.

Simulated Mean Annual Project Deliveries (SMAPD) is the average annual increase in the SMAD of the untreated water collection, storage, and distribution system due to the SDS Project. It is also always evaluated in this FEIS at a demand level equal to the 2046 demand from the Participants' Planning Demand Forecast.

Capacity is the amount of water that can be physically conveyed, treated, or stored. Capacity for conveyance and treatment systems is expressed primarily in million gallons per day (**mgd**).

Capacity for storage is expressed primarily in acre-feet (**ac-ft**).

A **water right** is a right to use a portion of the public's water resources. A right to surface water is generally expressed in cubic feet per second (**cfs**).

- Construction of a 30,500-ac-ft local terminal storage reservoir to store untreated water
- Relocation of an electric transmission line and a liquid petroleum pipeline at the local terminal storage reservoir site
- Construction of a water treatment plant, with capacity to treat up to 109 mgd of

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Purpose and Need

- water, to provide potable water for municipal and industrial use
- Installation of transmission pipelines to convey treated water from the water treatment plant to local water distribution systems
- Construction of a 28,500-ac-ft return flow storage reservoir and an associated conveyance system to store Colorado Springs' reusable return flows
- Installation of a 5-mile long, 84-inch diameter buried pipeline capable of conveying 194 mgd of return flows west from Williams Creek Reservoir to Fountain Creek

In Colorado, water imported from one basin, such as the Fryingpan River and other tributaries of the Roaring Fork River, to another basin, such as the Arkansas River Basin, can be reused and successively used to extinction. In this FEIS, water that can be used multiple times is called "reusable return flows." Most of the water that would be diverted by the Participants' Proposed Action under typical operating conditions would consist of reusable return flows.

The primary means of delivering water to the SDS Project would be through an exchange. Exchanges have operated in Colorado and been managed by the State Engineer's Office since the 1890s as a means to fully use water supplies within the state (CDWR 2004). The basic concept of an exchange is that a water user may divert water at one location (that they would otherwise not be entitled to) as long as a like amount of water is returned to the stream at another location. This operation can be performed as long as no senior (i.e., older) water rights are injured. Exchanges are typically employed when an entity owns the

right to use water that is physically downstream from the location where it wants to use the water. Additional information about exchanges and Colorado water law is presented in Appendix A.

1.5 Purpose and Need

1.5.1 Needs Associated with Projected Water Demands

1.5.1.1 Additional Yield

The SDS Project would provide the Participants with additional water, using existing water rights, to meet most or all of their projected future demand through 2046. The SDS Project would provide the Participants increased yield and simulated mean annual project deliveries (SMAPD). Total firm yield of the SDS Project would be 42,400 ac-ft, and total SMAPD would be 52,900 ac-ft (Table 1).

Firm yield and SMAPD for Colorado Springs is based on modeling using 1950 through 2003 historical hydrologic conditions and projected demands in 2046. Firm yield for other Participants is estimated based on each Participant's knowledge of its water rights. SMAPD is generally higher than firm yield because the amount of water available is higher during wet years.

Comment

Letter 43 Continued

Response

Ms. Kate Lamb
FOUR
June 11, 2008
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COMMENT 13. The DEIS relies upon many limiting assumptions which leave the effect of minimizing the impacts of the SDS alternatives. The Bureau should consider converting these implied conditions into explicit terms and conditions of any federal approval.

43-46

COMMENT 13.1. Project Yield Limits. The DEIS assumes that the proposed pipeline out of Pueblo Reservoir will not be operated at maximum capacity, but only at about 60% of capacity. This assumption reduces the impacts studied for mitigation and should be incorporated in maximum average annual rates of flow and volumes through the pipeline.

43-47

The farm yield of the proposed Pueblo Reservoir pipeline to El Paso County entities is 47,000 acre-feet and the SMAP is 52,000 acre-feet. The daily average of deliveries to the El Paso County entities is assumed to be 59 m.g.d. (DEIS, p. 12.) These annual volumes are much less than the 101-acre capacity of the Pueblo Reservoir pipeline which would be 87,000 acre-feet per year, and nearly less than the 78 m.g.d. flow rate of the pipeline. Consequently, absent modeling the impacts of withdrawals through the pipeline at these maximum rates of flow and volumes, any approval of the pipeline and/or other alternatives should be restricted to the lower yield (not more than 60% of capacity) without further environmental review and approval.

COMMENT 13.2. Use of Existing Water Rights. The DEIS is based upon the representation by the SDS participants that only existing water rights would be used for the project. Any approval should condition the use of the project on the use of only existing water rights, and not the acquisition of additional water rights without further environmental study and review.

43-48

The DEIS does not consider the impacts of converting additional agricultural water rights for municipal use through the SDS project, nor the resulting impacts of permanent drop-off to be included. This representation by the SDS participants that only existing water rights would be used in the SDS Project was proposed to avoid the environmental analysis and mitigation of the use of new water rights. The SDS participants should be held to those commitments of record.

COMMENT 13.3. No additional users. Particularly as it relates to the City of Colorado Springs, the DEIS does not consider the impacts associated with Colorado Springs supplying raw water or substantial amounts of treated water outside its city boundaries. Such water contracts could increase the amount of water projected to be delivered through the pipeline, and the rates and timing of such amounts is modeled. Also, locations of return flows could change as the scheduled uses of water could be accelerated through the pipeline. Additional taps to the pipeline could mean unplanned growth and impacts along the pipeline. A specific term and condition should be considered as necessary to avoid such uses which have not been evaluated for impacts in the DEIS nor mitigated.

43-49

Response to Comment 43-45: Please refer to comment response 2-1 for Reclamation's response to concerns about capacity allocation and head pressure (gravity flow) effects on the Joint Use Manifold and inclusion of a connection to the River Outlet Works (North Reservoir Outlet) in alternatives that include a physical connection to Pueblo Dam. The DEIS addressed the comment pertaining to requiring contemporaneous construction of connections to the Joint Use Manifold and to the River Outlet Works in chapter 2, pages 33, 34, 53, 58, and 59. Phased implementation of connections to Pueblo Dam is tied to ensuring future water demands by other Joint Use Manifold users.

Response to Comment 43-46: Refer to the comment responses 43-47 to 43-55, which are specific comments.

Response to Comment 43-47: Information presented in the DEIS was modified in the FEIS (see chapter 5) based on identification of the final Preferred Alternative and the development of environmental commitments for the Preferred Alternative. A commitment not to construct or operate the Preferred Alternative in a manner that differs substantively from that evaluated in the FEIS, except under emergency conditions, has been included. Because of this commitment only the water supplies analyzed in this FEIS could be delivered through SDS facilities without additional NEPA analysis.



Comment	Response
Letter 43 Continued	<p>If future operations of the SDS Project are substantially different than analyzed in the EIS, Reclamation would require additional NEPA review.</p> <p>In addition, information presented in the DEIS regarding SDS untreated water conveyance capacity was modified in the FEIS (see chapter 2). A paragraph has been added to section 2.1.2.1 clarifying that the SDS untreated water intake and conveyance capacity required by Colorado Springs to meet SMAPD yield requirements was determined in the Raw Water Yield Study (MWH 2005). Seasonal variations in flow through SDS were discussed in the last paragraph of section B.3, Appendix B of the DEIS, while detailed hydrologic model results showing flow through SDS are presented in Appendix A of the Surface Water Hydrology Effects Analysis (MWH 2007d). In general, flow through SDS is at maximum capacity (78 mgd) from approximately May through December, when it is used to meet peak water treatment plant demands or fill terminal reservoir storage. During the remaining portion of the year (January through April), flow through SDS is less because demands at the water treatment plant are less than pipeline capacity and the terminal reservoir storage is full.</p>

Comment

Letter 43 Continued

Response

Response to Comment 43-48: The content of the FEIS has been modified to reflect this input. Information has been added to clarify that additional NEPA analysis would be necessary before the Project Participants could construct or operate the Preferred Alternative in a manner that differs substantively from that evaluated in the FEIS.

Response to Comment 43-49: Refer to comment response 43-48.

values and percentage effects for the Western Slope analysis.

Comment 3164: Concern about indirect impacts on surface water flows, primarily stormwater.

Response 3164: A commenter was concerned that lack of adequate detention ponds in Colorado Springs will increase peak flows in Fountain Creek. Please see DEIS comment response 3164.

Comment 3172: Request for additional analysis on surface water flows

Response 3172: A commenter suggested that Engineering Report 2005CW095 "Arkansas River Exchange Right Application" (June 5, 2008) prepared for Colorado Springs Utilities by AMEC Earth and Environmental should be considered in the FEIS. This report describes surface water hydrology and yield for new exchange rights requested by Colorado Springs. These prospective new rights (cases 08-CW-095 and 05-CW-096) were not considered in the current NEPA analysis leading to this FEIS (refer to DEIS Table 4 for a listing of water rights that are considered in the analysis). Consequently, these rights, if secured by Colorado Springs, could not be conveyed through the SDS Project without further NEPA analysis. The report identified by the commenter is not germane to this FEIS. Section 3.5.3.1. of the FEIS was revised to clarify that unadjudicated water rights were not considered in the hydrologic model simulations.

Comment 3173: Concern about water levels in Pueblo Reservoir

Response 3173: A commenter was concerned about maintaining water levels in Pueblo

Reservoir at their current level. Potential effects on Pueblo Reservoir water levels were addressed on page 179 to 181 of the DEIS.

Comment 3175: Concern about Daily Model development

Response 3175: A commenter stated that the DEIS presents changes in stream flow in terms of average monthly flow, and that measuring changes to surface hydrology in terms of average annual or average monthly flow limits the value of the environmental analyses. Please see DEIS comment responses 4-4 and 3175 regarding use of average monthly and daily flow for effects analyses in the Arkansas River basin described in the DEIS. For analyses of the Western Slope, the Supplemental Information Report addressed this topic in chapter 5, pages 42 to 43. Because the Daily Model was not configured or calibrated to simulate daily streamflow on the Western Slope, all calculations were performed on an average monthly basis, and subsequently, all results are presented as average monthly streamflow. Resources that used average monthly results to perform effects analyses have described the limitations of this level of information within individual sections. All resources determined that the use of average monthly streamflow was adequate to determine relative differences in effects between alternatives.

A commenter believed that a strict operating schedule should be included in the EIS. Refer to DEIS comment responses 3150 and 3175.

Comment 3180: Water Rights

Response 3180: A commenter was concerned that operation of the SDS Project would harm the physical integrity of the Frost Livestock Co.'s headgate, interfere with its senior water

Table 4. Participants' Water Rights Proposed for Use in the SDS Project.

Name	Participant(s)	Type
Primary Sources of Supply		
Colorado Springs Arkansas River Exchange	Colorado Springs	Exchange of transmountain return flows, consumptive use water, or consumptive use return flows
Colorado Canal Companies (Colorado Canal, Lake Henry, Lake Meredith)	Colorado Springs, Fountain, and Pueblo West	Change and exchange of consumptive use water and consumptive use return flows
Fryingpan-Arkansas Project Decrees	Colorado Springs, Fountain, and Security	Transmountain imports from the Fryingpan River to the upper Arkansas River Basin and native Eastern Slope waters
City of Fountain - Plan for Augmentation including Exchange and Change of Water Rights	Fountain	Fountain Creek native waters and reusable Fry-Ark return flows
Independence Pass Transmountain Diversion System (Twin Lakes and Canal Company) Decrees	Pueblo West	Transmountain imports from the Roaring Fork River to the upper Arkansas River Basin
Pueblo West - Plan for Reuse and Exchange	Pueblo West	Exchange of transmountain or consumptive use water
Secondary Sources of Supply[†]		
Independence Pass Transmountain Diversion System (Twin Lakes and Canal Company) Decrees	Colorado Springs	Transmountain imports from the Roaring Fork River to the upper Arkansas River Basin
Homestake Project Decrees	Colorado Springs	Transmountain imports from the Eagle River to the upper Arkansas River Basin
CF&I Water Rights	Colorado Springs	Native Arkansas River water rights

[†] Secondary sources of supply would be delivered through the SDS Project if existing systems were not operating. These supplies are currently delivered through the existing Homestake Delivery System.

existing Arkansas River Basin water rights may result in the inability to perfect these water rights and would require additional reliance on limited local water resources (i.e., Denver Basin ground water) to meet future demands. Therefore, any alternative that would not use the Participants' existing Arkansas River Basin water rights would not meet the purpose and need of this project.

Colorado Springs has two primary water sources for use in the SDS Project: Colorado Canal Companies' water and reusable return flow water by exchange. Five existing water

right decrees provide Colorado Springs the legal right to use these supplies. Fountain's and Security's primary water sources for the SDS Project are their use of reusable return flows associated with their respective interests in the Fry-Ark Project and FVA. Additionally, Fountain purchased the Miller Ditch water right, which is expected to yield 300 ac-ft for use in the SDS Project and, like Colorado Springs, has shareholder interest in the Colorado Canal Companies. Pueblo West would use its existing water rights and reusable return flows in the SDS Project.

Comment Letter 51

Response



November 21, 2008

U.S. Bureau of Reclamation
 Eastern Colorado Area Office
 Attn: Kara Lamb
 11656 W. County Road 18E
 Loveland, CO 80537-9711

RE: Southern Delivery System Supplemental Information Report

Dear Ms. Lamb:

The Southern Delivery System (SDS) project is critically important to the future of the City of Colorado Springs. We are duty bound to ensure that our citizens have an adequate, safe and reliable water supply. The findings of the Supplemental Information Report (SIR) evaluation that with SDS, the Project Participants will be positioned to continue providing customers with water in an environmentally responsible manner, while keeping customers' rates reasonable.

We want to do what is best for our citizens, while appropriately balancing the important interests of our neighbors. The Participants' Proposed Action will allow our City to continue to provide for the needs of today's residents and future generations. It will allow us to use our existing water rights efficiently, with the advantage of drawing our supply directly from Pueblo Reservoir, at the lowest total project cost and least environmental impact.

Clean, dependable water is vital to the future economic vitality of our community and the entire region, as the health of our economy is intertwined with our neighbors. The City of Colorado Springs seeks mutually beneficial solutions for our region.

The City of Colorado Springs reaffirms its support of the Bureau of Reclamation's selection of the Participants' Proposed Action as the Agency Preferred Alternative which was revised based on the additional analysis conducted for the SIR. We believe the review process has worked as it is intended, and we support the changes to the Participants' Proposed Action (Alternative 2) as a means to further protect the environment, address stakeholder concerns and improve the project.

The City of Colorado Springs is committed to, and has invested heavily in, protecting regional waterways like Fountain Creek. An example of this commitment is our support for the additional water quality analysis and development of the SIR. We were pleased with and support the findings in the SIR, confirming that SDS has no major effect on water quality in Fountain Creek or the Arkansas River. This is important because two different scientific methods have drawn similar conclusions.

Thank you for your comment.

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Using information from the DEIS and the SIR, Reclamation performed further evaluation of the various project alternatives. Reclamation's new evaluation resulted in a significant change to the Proposed Action. The "Modified Proposed Action" would involve using Upper Williams Creek Reservoir for terminal storage, instead of building a reservoir at Jimmy Camp Creek. This change to the Proposed Action would avoid wetland impacts and eliminate impacts to cultural and paleontological sites at the Jimmy Camp Creek Reservoir site. In addition, the Modified Proposed Action would use a pipeline instead of Williams Creek to convey return flows from Williams Creek Reservoir to Fountain Creek. This change would provide additional wetlands protection and protection of habitat for the Arkansas darter, a Colorado threatened fish and federal endangered species Act candidate species. Together, these changes to the Proposed Action would result in avoiding impacts to 15.6 acres of jurisdictional wetlands.

While EPA believes that Reclamation's Modified Proposed Action represents a significant improvement to the Proposed Action, we remain concerned about the impacts the project will have on water quality. The SIR confirmed that, even with the changes incorporated into the Modified Proposed Action, SDS would exacerbate existing water quality impairments to waterbodies within the Arkansas River Basin. These impacts would affect numerous water bodies in the Arkansas River Basin that the Colorado Water Quality Control Commission has identified as impaired due to exceedances of the applicable State water quality standards for selenium, *E. coli*, and sulfate. Concentrations of all three of these pollutants would increase under the Modified Proposed Action. The SIR does not include mitigation for these impacts. EPA believes these increased loadings should be mitigated, and that mitigation commitments should be part of the Final EIS and the record of decision (ROD). Furthermore, in light of these projected water quality standard exceedances, EPA is concerned that the Modified Proposed Action has been identified as Reclamation's preferred alternative, since it is our understanding that the U.S. Army Corps of Engineers (Corps) would not issue a Clean Water Act Section 404 permit for a project that would result in violation of water quality standards.

EPA is also concerned about indirect impacts from induced growth resulting from SDS. EPA believes that the indirect impacts due to the increased flows from the reservoir and the additional developed flows from both an increase in impervious areas and landscape watering will cause greater water quality impacts than are currently identified in the DEIS. Fountain Creek has historically experienced major flooding and erosion problems. SDS would result in a 40 percent mean annual streamflow increase to Fountain Creek at Pueblo, adding to these longstanding impacts. The significant impacts of these increased flows have not been sufficiently addressed in the DEIS. The Final FIS should include commitments to ensure that stormwater Best Management Practices are implemented for future growth in Colorado Springs.

Based on the procedures EPA uses to evaluate the adequacy of the information and potential environmental impacts of the proposed action and alternatives in an EIS, EPA is rating this DEIS as EC-2 (Environmental Concerns-Insufficient Information). An "EC" signifies that EPA's review of the DEIS has identified environmental impacts that should be avoided in order to fully protect the environment. In this case, the impacts include increased loading of *E. coli*, selenium and sulfate into the Arkansas River Basin, where numerous water bodies are listed by the State of Colorado as impaired for these constituents. The Modified Proposed Action appears

Comment Response 47-1: Like all models, the water quality models used for the Supplemental Information Report have inherent uncertainty. The potential new or continued WQS exceedances in 2046 suggested by the water quality simulations should not be considered certain to occur.

Reclamation has included an adaptive management plan with water quality monitoring at key locations to detect and respond to potential water quality changes resulting from construction and operation of the SDS Project (refer to section 3.7 and Chapter 5 of the FEIS). Additionally, most of the simulated changes in *E. coli*, dissolved selenium, and sulfate densities/concentrations would result from changes in streamflow rather than increased load as suggested in the comment. Refer to DEIS comment response 13-1, 13-2, and 13-3 for the Clean Water Act Section 404 portion of this comment.

Comment Response 47-2: Refer to DEIS comment responses 43-40 and 3304 for the induced growth portion of this comment. The DEIS section 3.8 and the Water Resources Effects Analysis (MWH 2008d) indicated the absence of adverse effects of the proposed SDS Project on flood hydrology, thus, no mitigation is necessary. Reclamation has included mitigation measures for erosion and sedimentation effects resulting from construction and operation of the SDS Project (refer to section 3.9 and Chapter 5 of the FEIS).

Comment 1000: Purpose and Need

Response 1000: Commenters expressed concern about the range of Participants in the SDS. One commenter was concerned that the SDS would eventually extend to the Denver metropolitan area, while another commenter felt that northern El Paso County should participate in the project. One commenter felt that Pueblo West should not participate in SDS. The DEIS addressed these topics in chapter 1, pages 1 to 18. The current Participants, Colorado Springs, Fountain, Security, and Pueblo West, have determined that their needs can be met through the Proposed Action. Addition of any other Participants would be the Participants' decision. Substantive changes to any of the alternatives would require further NEPA review. Also see response to agency letter 17.

A commenter was concerned about the adequacy of firm storage in Pueblo Reservoir. The DEIS addressed this topic in chapter 1, pages 1 to 18. The commenter is correct in his observation that storage space in Pueblo Reservoir would be on an "if and when" basis, and space is expected to be available about 71 percent of the time. The availability of storage in Pueblo Reservoir was considered when evaluating the yield of each alternative. The firm yield and SMAPD of the Preferred Alternative are 38,000 ac-ft/yr and 47,800 ac-ft/yr, respectively, which takes into account that storage space may not always be available in Pueblo Reservoir. This additional yield is consistent with the purpose and need of the project.

Comment 1002: Does not agree with purpose and need

Response 1002: Commenters believed the purpose and need is too narrowly defined. A

commenter was also concerned that those alternatives that do not use existing Arkansas River Basin water rights were excluded from analysis (i.e., alternatives that use water conservation or land use strategies). Reclamation does not concur with this comment. According to Section 1502.13, the purpose and need statement "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." In this case the agency (Reclamation) is responding to requests by the City of Colorado Springs, City of Fountain, Security Water District, and Pueblo West Metropolitan District to enter into 40-year contracts. The contracts would allow the Participants to use excess storage capacity in Pueblo Reservoir, convey water through facilities associated with Pueblo Reservoir, and exchange water between Pueblo Reservoir and Fry-Ark Project reservoirs in the upper Arkansas River Basin. The NEPA requires an agency to evaluate a full range of reasonable alternatives (see section 2.1 to 2.3) to meet the purpose and need of a proposed federal action. We have complied with the purpose and intent of the NEPA. Water conservation was considered fully and is discussed in section 2.4.1 and in Appendix A. Conservation is common to all of the alternatives analyzed for the SDS Project. For each Participant, conservation is being implemented independently of the project and reduces current water demands. In addition, water conservation is one of four components to meet project future demands through 2046. However, land use planning is outside the scope of the proposed contracts and this EIS.

Responses 1010 through 1012 respond to comments regarding the Participants' three needs.

of the Alternatives Analysis (Reclamation 2006a) should be defined. The Alternatives Analysis addressed this issue in on Appendix B, page 3, which indicates that only geologic formations that were identified as partially or wholly underlying an alternative exchange or terminal reservoir site or located immediately downstream of these sites are germane to the analysis. The original source for the map data, including symbols for all geologic formations in Colorado, is identified on page 2 of the Alternatives Analysis.

Unit Costs for Alternatives

A commenter suggested that unit costs (i.e., dollars per acre-foot of yield) should be provided in the EIS because this type of information was used for screening in the Alternatives Analysis (Reclamation 2006a) and Alternatives Analysis Addendum (Reclamation 2007a). Information presented in the DEIS was modified in the FEIS (see section 2.1.4). Unit cost information has been added.

Comment 2004: Concern about Reclamation's Preferred Alternative

Response 2004: Some commenters expressed confusion about the selection of the Preferred Alternative, particularly the consideration of cost as part of the selection. The DEIS addressed this topic in chapter 2, page 45 and 102. Information presented in the DEIS has been modified in the FEIS (see section 2.7) pursuant to this specific comment, as well as other public comments. This update describes changes Reclamation has made to the Preferred Alternative and rationale for that decision. Also refer to comment response 13-2.

Commenters also suggested further consideration of the Wetland Alternative because of its use of Upper Williams Creek Reservoir rather than Jimmy Camp Creek

Reservoir for terminal storage. Information presented in the DEIS has been modified in the FEIS (see section 2.7) pursuant to this specific comment, as well as other public comments. This update describes changes Reclamation has made to the Preferred Alternative, including use of Upper Williams Creek Reservoir for terminal storage.

A commenter suggested that the raising of Pueblo Dam must be part of the preferred alternative. The DEIS addressed this issue in chapter 2 page 52. All of the alternatives are described in section 2.2 of the DEIS with the Proposed Action described on page 52. None of these alternatives include raising Pueblo Dam as a project component. Raising of Pueblo Dam is not needed to fulfill the project's purpose or needs.

Comment 2005: Comment about Highway 115 diversion water rights operations

Response 2005: Commenters were concerned that the proposed diversion at the Lester & Attebery site competes with a FERC permitted (P12714-00) hydroelectric facility (proposed Phantom Canyon Pumped-Storage Hydroelectric Project) and is in violation of the Federal Power Act. See comment response 2400).

A commenter was concerned that Portland Cement Plant water supply and quality could be impacted during dry periods. Information on potential water quality effects in the Arkansas River at Portland was provided in chapter 3, page 222 to 236 and in the Water Quality Effects Analysis (MWH 2008b). Information on potential effects on stream stage under wet, dry, and average years was provided in the Surface Water Hydrology Effects Analysis (MWH 2007d) and summarized in the DEIS. Information on

application of the PFMP to certain alternatives.] The DEIS addressed this issue in chapter 2, pages 49, 58, 67, 73, 74, 78, 81, and 133 to 135. The PFMP is not an independent alternative that warrants separate cost accounting and the Project Participants have indicated their intended use of contract storage in Holbrook Reservoir for ROY purposes under any SDS Project alternative.

A commenter suggested that the cost estimates for the Participants' Proposed Action should include costs for enlargement of Pueblo Reservoir. The DEIS addressed this issue in chapter 3, page 130. Enlargement of Pueblo Reservoir is not considered to be a reasonably foreseeable action. Chapter 2 of the DEIS provided information on estimated yield for each of the SDS Project alternatives and all would meet most or all of the Project Participants' projected future demands through 2046 without enlargement of Pueblo Reservoir. The approach taken in the DEIS was followed in chapter 2 of the FEIS. [Also refer to comment response 2004.]

A commenter suggested that cost estimating methods should be explained in the DEIS and independently verified by Reclamation. The DEIS addressed this issue in chapter 2, pages 31, 52, 59, 67, 73, 74, 78, and 81. The sources of the cost estimates (CH2M HILL 2007a, 2007i) are incorporated by reference. These and all other sources incorporated into SDS NEPA documents by reference are readily available to the public and could have been obtained within the time allowed for comment on the DEIS. This information was reviewed by Reclamation prior to its use in the DEIS and determined to be reasonable. Detailed descriptions of cost estimating methods would unnecessarily add to the complexity and size of the EIS.

Commenters expressed concern that energy costs may not be reflected in the cost estimates for the SDS Project alternatives. The DEIS addressed this issue in chapter 2, pages 52, 59, 67, 73, 74, 78, and 81. Energy costs are reflected in the operations and maintenance costs provided for each alternative.

A commenter expressed concern that energy use estimates may be incorrect and cost estimates too low, resulting in inaccurate operations and maintenance cost estimates. CH2M Hill (2007a and 2007i), which was cited in the DEIS, and CH2M Hill (2008a), which was cited in the Supplemental Information Report, detail the estimates of operations and maintenance costs (O&M costs) for each alternative for each year from 2012 to 2046. The assumed annual average SDS water delivery in 2046 is 49.05 mgd. This is lower than the SDS peak capacity of 78.0 mgd, because 49.05 mgd is an average annual number, while 78 mgd is a peak delivery that would only be achieved on occasions when there is a large volume of water available in Pueblo Reservoir, and storage available in the terminal storage reservoir. At the average annual delivery rate, in 2046 electrical costs for both untreated and treated water pumping were estimated to make up about 50% of the total O&M costs for the SDS. Electricity was assumed to cost \$0.05 per kilowatt hour (KW·h) throughout the period modeled. While recently power costs have fluctuated (both upward and downward) the \$0.05 per KW·h was a reasonable assumption at the time of the evaluation, and was consistently applied across all alternatives.

A commenter expressed concern about differences in the length of time (50 years) used for operations and maintenance cost estimates in Table 12 of the Alternatives Analysis Addendum (Reclamation 2007a) and

Comment Letter 17

State Representative
ANITA STEPHENS
P.O. Box 207
Montrose, CO 81322
E-Postal: 303.866.3973
Fax: 303.866.2718
E-mail: anita.stephens@house.state.co.us

Member:
Business Affairs & Labor
Committee
Judiciary Committee

HOUSE OF REPRESENTATIVES
COLORADO
STATE CAPITOL
DENVER
80203

OFFICIAL FILE
RECLAMATION
JUN 12 2008
Date: [Signature]
Title: [Signature]
Case No. [Signature]

U.S. Bureau of Reclamation
Eastern Colorado Area Office
11056 W. County Road 18E
Loveland, CO 80537-9711
Attn: Kara Lamb

Re: Southern Delivery System Environmental Impact Statement

Dear Ms. Lamb:

I support the current efforts of Colorado Springs Utilities to develop the SDS project as El Paso County, CO needs a safe and reliable water delivery system. It is my hope that the SDS system will at some point serve Northern El Paso County - the Monument/Tri Lakes region.

It is my continued goal to help Colorado Springs Utilities in any way possible to achieve implementation of the SDS project and they have done an outstanding job of educating and informing the Colorado Springs community of their efforts.

I remain supportive of SDS and all other efforts to bring a safe and stable delivery of water to Northern El Paso County.

Sincerely,
Amy Stephens
State Representative Amy Stephens
Northern El Paso County House District 29

CC: Jerry Lorie, C.O. CSE
Wayne Vandeschuer, CSE
Andy Calosimo, CSE

Official File Code
Date Filed

Response

Response to comment Letter: Response to Letter:
Expanding this proposed SDS Project to incorporate the Monument/Tri Lakes region is outside of the scope of this EIS. The EIS evaluates the effects of Reclamation entering into long-term contracts requested by the City of Colorado Springs, City of Fountain, Security Water District, and Pueblo West Metropolitan District for development of a regional water supply. Reclamation has no basis for changing the Participants in a project for which a Reclamation contract is requested.

Comment 1000: Purpose and Need

Response 1000: Commenters expressed concern about the range of Participants in the SDS. One commenter was concerned that the SDS would eventually extend to the Denver metropolitan area, while another commenter felt that northern El Paso County should participate in the project. One commenter felt that Pueblo West should not participate in SDS. The DEIS addressed these topics in chapter 1, pages 1 to 18. The current Participants, Colorado Springs, Fountain, Security, and Pueblo West, have determined that their needs can be met through the Proposed Action. Addition of any other Participants would be the Participants' decision. Substantive changes to any of the alternatives would require further NEPA review. Also see response to agency letter 17.

A commenter was concerned about the adequacy of firm storage in Pueblo Reservoir. The DEIS addressed this topic in chapter 1, pages 1 to 18. The commenter is correct in his observation that storage space in Pueblo Reservoir would be on an "if and when" basis, and space is expected to be available about 71 percent of the time. The availability of storage in Pueblo Reservoir was considered when evaluating the yield of each alternative. The firm yield and SMAPD of the Preferred Alternative are 38,000 ac-ft/yr and 47,800 ac-ft/yr, respectively, which takes into account that storage space may not always be available in Pueblo Reservoir. This additional yield is consistent with the purpose and need of the project.

Comment 1002: Does not agree with purpose and need

Response 1002: Commenters believed the purpose and need is too narrowly defined. A

commenter was also concerned that those alternatives that do not use existing Arkansas River Basin water rights were excluded from analysis (i.e., alternatives that use water conservation or land use strategies). Reclamation does not concur with this comment. According to Section 1502.13, the purpose and need statement "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." In this case the agency (Reclamation) is responding to requests by the City of Colorado Springs, City of Fountain, Security Water District, and Pueblo West Metropolitan District to enter into 40-year contracts. The contracts would allow the Participants to use excess storage capacity in Pueblo Reservoir, convey water through facilities associated with Pueblo Reservoir, and exchange water between Pueblo Reservoir and Fry-Ark Project reservoirs in the upper Arkansas River Basin. The NEPA requires an agency to evaluate a full range of reasonable alternatives (see section 2.1 to 2.3) to meet the purpose and need of a proposed federal action. We have complied with the purpose and intent of the NEPA. Water conservation was considered fully and is discussed in section 2.4.1 and in Appendix A. Conservation is common to all of the alternatives analyzed for the SDS Project. For each Participant, conservation is being implemented independently of the project and reduces current water demands. In addition, water conservation is one of four components to meet project future demands through 2046. However, land use planning is outside the scope of the proposed contracts and this EIS.

Responses 1010 through 1012 respond to comments regarding the Participants' three needs.



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

August 20, 2008

Mr. Kim B. Headley
Director of Pueblo County
Planning and Development
229 West 12th Street
Pueblo, CO 81003

Subject: Letter of Request for a House Bill 1041 Permit to Construct, Operate and Maintain
Southern Delivery System Project Components within Pueblo County

Dear Mr. Headley:

Colorado Springs Utilities is proposing to construct, operate, and maintain the Southern Delivery System (SDS), a water delivery project that will bring water from Pueblo Reservoir to the communities of Colorado Springs and our project partners, Pueblo West Metropolitan District, City of Fountain, and Security Water District.

We are seeking approval to construct, operate, and maintain those SDS project facilities to be located in Pueblo County and are submitting this letter of request and accompanying House Bill 1041 Permit Application (Application) for your review in accordance with Title 17, Division II of the Pueblo County Land Use Code addressing "Areas and Activities of State and Local Interest".

The Application is formatted to be specifically responsive to Title 17, Chapter 17.172 "Regulations for Efficient Utilization of Municipal and Industrial Water Projects" and includes information responsive to relevant requirements of Title 17, 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".

SDS project facilities include a new electric substation and an extension of local electric transmission infrastructure, the general siting and effects of which are described in this Application. Conceptual design has been initiated with Black Hills Corporation (formerly Aquila) to further refine siting and proposed construction details, anticipating that Black Hills Corporation will be required to formalize approval to construct these facilities by submitting a separate application responsive to Title 17, Chapter 17.168, "Site Selection and Construction of Major Facilities of Public Utilities" should this Application be approved.

SDS project facilities extend beyond the boundaries of Pueblo County. The information contained in this Application predominately addresses construction impacts within Pueblo County and, per your request received during pre-application meetings, addresses potential effects of the project that are not directly related to construction activity.

1. **Date of Application:** August 18, 2008
2. **Owner and Owner's Representation:**

The SDS project includes four Project Participants: the City of Colorado Springs, Pueblo West Metropolitan District, City of Fountain, and Security Water District. On behalf of the Participants and in accordance with mutual agreements between Participants, Colorado Springs Utilities is the named "Applicant", representing the other "Project Participants" in all matters regarding this Pueblo County 1041 Permit Application.

The Applicant, on behalf of the SDS Project Participants, is proposing to construct, operate, and maintain the Project, a water delivery system that will bring water from Pueblo Reservoir to the Participant's communities.

CH2M HILL, Inc., a contractor of Colorado Springs Utilities, is the engineer for the SDS project, providing design services, permitting support, and technical assistance. CH2M HILL has aided in the preparation of the Application.

Colorado Springs Utilities (Applicant; acting on behalf of all Project Participants)

Point of Contact: John Fredell
Plaza of the Rockies, Third Floor
121 S Tejon, MC930
Colorado Springs CO 80947-0930
Phone: (719) 668-8037
Fax: (719) 668-8734
E-mail: jfredell@csu.org

Pueblo West Metropolitan District (Participant)

Donald Saling, District Manager
109 E. Industrial Blvd.
Pueblo West, CO 80017
Phone: (719) 547-2000
Fax: (719) 547-2833
Email: dsaling@pmwd-co.us

City of Fountain (Participant)

Larry Patterson, Director of Utilities
116 S. Main Street
Fountain, CO 80817
Phone: (719) 322-2076
Fax: (719) 391-0463
Email: lpatterson@fountaincolorado.org

Security Water District (Participant)

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

3. Site location, dimensions and size of property (in feet and acres), and present zoning:

The location of the SDS project within Pueblo County is displayed in Appendix B, Location Map. The anticipated area of permanent easement required for the SDS Project is approximately 238 acres (10,400,000 ft²). An additional 92 acres (4,010,000 ft²) is estimated to be temporarily required for construction.

A portion of the Project is located on federal land. Zoning information for land affected by the Project is included on the map (Figure I-1) located in Appendix I. Land zones crossed by the project include: S-1 Public Use, A-1 Agricultural 1, A-3 Agricultural 3, and B-4 Community Business.

Pursuant to the National Environmental Policy Act (NEPA), the U.S. Bureau of Reclamation (Reclamation) is conducting an environmental review of the entire SDS project, including aspects of the SDS project outside the boundaries of Pueblo County. A Draft Environmental Impact Statement (DEIS) was released by Reclamation for public comment on February 29, 2008. The public comment period closed on June 13, 2008. The DEIS is supported by a number of technical documents. Both electronic (CD) and printed copies (separately bound) of the DEIS, and supporting technical reports, are included with this Application. The DEIS and supporting documents are also available at the following URL: <http://www.sdseis.com/DEIS.html>.

The DEIS and supporting documents discuss the entire SDS project, not just the portions of the SDS project within, or affecting, Pueblo County. This Application package contains information derived from the DEIS, but presents it in the context of specific effects to Pueblo County.

4. Action Requested and the reason/purpose for the request (Incorporate answers to the appropriate factors considered by the Commissioners):

Colorado Springs Utilities is requesting a permit and approval to construct SDS project facilities within Pueblo County. The purpose of this letter, and Application, is to provide information in accordance with Pueblo County Land Use Code, Title 17, Chapter 17.172, "Regulations for Efficient Utilization of Municipal and Industrial Water Projects" and 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".

The purpose and objectives of the SDS project are to:

- Provide a safe, reliable, and economical water supply to the Participant's customers.
- Provide redundancy to Participant's existing water delivery systems.
- Satisfy demands for growth and quality water delivery using existing water rights.
- Design and construct the SDS project in a manner that is safe, environmentally aware, and sensitive to community, citizen, and stakeholder concerns.
- Minimize impacts to the area, while installing and maintaining an efficient water delivery asset.

5. Existing and proposed facilities, structures, roads, etc.:

The SDS project is a multi-jurisdictional water supply project that achieves three primary goals for the Project Participants. These include:

- Establishing redundant system infrastructure and water supply to improve reliability of the overall network area water supply.
- Accessing currently held Arkansas River water rights acquired years ago in anticipation of demand.
- Supporting the planning and development objectives of the Participant communities.

The SDS project is very broad in its reach, complexity, and benefits, and requires the involvement of a multitude of stakeholders. As part of the overall permitting process, the Applicant seeks a 1041 permit from Pueblo County for the equipment and physical facilities of the SDS project that are to be located within Pueblo County.

Existing and proposed facilities are shown on documents provided in Appendix B of the Application. The SDS project components within Pueblo County include:

- Approximately 2,200 feet of buried, 78-inch diameter welded steel pipe capable of conveying 96 million gallons per day (mgd) and approximately 1,100 feet of buried, 72-inch diameter welded steel pipe capable of conveying 78 mgd of raw water
- Two proposed turnouts along the 78-inch-diameter reach of pipe: 1) 78-inch by 72-inch tee for future North Outlet Works Connection, and 2) 78-inch by 36-inch tee for Pueblo West Turnout
- Approximately 160 feet of buried, 36-inch, welded steel pipe capable of conveying 18 mgd of raw water to the existing Pueblo West Pump Station
- Approximately 18.4 miles of buried, 66-inch diameter welded steel pipe capable of conveying 78 mgd of raw water

17.172.120.B Information Describing the Project

(1) Plans and specifications of the Project in sufficient detail to evaluate the application against the Permit Application

The Applicant has provided preliminary plans and drawings for the Project, predominately in Appendix B, to provide reviewers with sufficient detail to evaluate the Project against Pueblo County evaluation and approval criteria. In general, the SDS project is a water delivery system that will convey raw water from Pueblo Reservoir to the communities of Colorado Springs, Pueblo West, Fountain, and Security. The SDS project will provide the Participants with water from their existing water rights. The SDS project consists of multiple system components working together to provide a safe, reliable, and economical water supply. Project components in Pueblo County include:

- Approximately 2,200 feet of buried, 78-inch diameter welded steel pipe capable of conveying 96 mgd of raw water connecting to approximately 1,100 feet of buried, 72-inch diameter welded steel pipe capable of conveying 78 mgd of raw water. This pipeline will deliver water from the Joint Use Manifold (JUM) near Pueblo Reservoir to the Juniper Pump Station (JPS). The pipeline will not have significant changes in the amount of impervious areas.
- Approximately 160 feet of buried, 36-inch diameter, welded steel pipe capable of conveying 18 mgd of raw water to the existing Pueblo West Pump Station.
- Approximately 18.4 miles of buried, 66-inch diameter welded steel pipe (raw water pipeline) capable of conveying 78 mgd of raw water from JPS.
- Various buried raw water pipeline appurtenances and structures, including access manways, blow off manholes, combination air release valve vaults, and isolation vaults. Examples of these appurtenances and structures are shown in **Figure B-1** through **B-3**:
- A 78 mgd pump station, JPS, that is planned to be equipped with seven 3,000-horsepower (hp) vertical turbine pumping units (six duty with one standby). JPS will be located near Pueblo Dam in proximity to the existing Pueblo West and the FVA pump stations.
- Approximately 21.4 miles of fiber optic cable that will generally parallel the raw water pipeline to provide the Applicant communication to operate the Project.
- 115 kilovolts (kV) substation and overhead electric transmission facilities to connect existing Black Hills Corporation infrastructure from south of the Arkansas River to the JPS.

The Project will not have significant changes in the amount of impervious areas.

The majority (approximately 14.3 miles) of the raw water pipeline alignment will parallel existing utilities corridors. The existing utilities consist of underground water pipelines, underground gas pipelines, and overhead electric transmission lines. The Project will not result in excess capacity in existing water or wastewater treatment services or create duplicate services. A copy of the preliminary raw water pipeline plans is included in Appendix B.