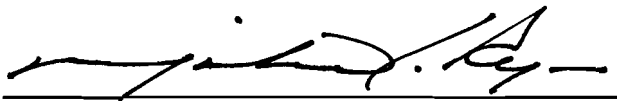


RECLAMATION

Managing Water in the West

Record of Decision For the Southern Delivery System Final Environmental Impact Statement

Record of Decision Reference No.: GP-2009-01

Approved: 

Date: MAR 20, 2009

Michael J. Ryan, Regional Director
Great Plains Region
Bureau of Reclamation



U.S. Department of the Interior
Bureau of Reclamation
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Introduction

The U.S. Department of the Interior, Bureau of Reclamation, (Reclamation), has published a Final Environmental Impact Statement (FEIS) for the Southern Delivery System. The Southern Delivery System (SDS) Project is a proposed regional water delivery project designed to serve most or all future water needs through 2046 of the City of Colorado Springs, City of Fountain, Security Water District, and Pueblo West Metropolitan District (the "Participants"). As proposed, the SDS Project would deliver Fryingpan-Arkansas (Fry-Ark) Project water and non-Fry-Ark Project water from Pueblo Reservoir to the Participants for storage, treatment, and distribution to customers.

Three major federal actions by Reclamation were analyzed in the FEIS: (1) entering into excess capacity contracts with the Participants for use of Fry-Ark facilities, (2) issuance of a special use permit to connect to Fry-Ark facilities, (3) and an "administrative swap" of Fountain Valley Authority (FVA) water associated with SDS Project deliveries. Reclamation is responsible for managing Fry-Ark facilities, and is the lead agency for the purposes of compliance with the National Environmental Policy Act of 1969 (NEPA). The U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, U.S. Bureau of Land Management, and the U.S. Fish and Wildlife Service are cooperating agencies.

The Fry-Ark Project is an existing water supply project in Colorado, owned by the United States, operated by Reclamation, and authorized in 1962 to serve both agricultural and municipal entities. The Fry-Ark Project

transfers, stores, and delivers water from both the Western and Eastern Slopes of the Rocky Mountains to water users in the Arkansas River Basin.

The primary federal action analyzed in the FEIS involves Reclamation entering into up-to-40-year contracts with the Project Participants for use of the Eastern Slope System of the Fry-Ark Project in Colorado. The contracts would be for use of existing storage capacity in Pueblo Reservoir when this space is not filled with Fry-Ark Project water or water stored under the Winter Water Storage

Program, conveyance of water through facilities associated with Pueblo Reservoir, and for exchange of water between Pueblo Reservoir and Reclamation reservoirs in the upper Arkansas River Basin including Twin Lakes and Turquoise Lake. The use of

Fry-Ark facilities by entities other than Reclamation for water storage or conveyance requires a contract with Reclamation.

Pueblo West would participate in the proposed SDS Project infrastructure only if Reclamation selects an alternative that includes diverting water from facilities associated with Pueblo Reservoir. Pueblo West would construct its new water intake and pump station at its approved location on the Arkansas River downstream of Pueblo Dam if Reclamation selects an alternative that does not divert water from facilities associated with Pueblo Reservoir. Pueblo West has also requested excess capacity storage in Pueblo Reservoir in all Action Alternatives (SDS Project alternatives that require one or more of the major federal actions analyzed in the FEIS).

The second federal action analyzed in the FEIS is issuance of a special use permit or other agreement from Reclamation to connect the

Major Federal Actions Approved in this ROD

1. Excess Capacity Contracts for Water Storage, Conveyance, and Exchange
2. Special Use Permit
3. Fountain Valley Authority Administrative "Swap"

SDS Project pipeline to Reclamation facilities. Pueblo West would continue to maintain its existing conveyance contract with Reclamation to use the joint use manifold from Pueblo Reservoir.

The third federal action analyzed in the FEIS is the approval of an administrative trade (“swap”) of an equal amount of capacity in the Fountain Valley Authority (FVA) pipeline for capacity in the SDS Project untreated water pipeline and water treatment plant. This trade would allow Fountain to use a portion of Colorado Springs’ FVA capacity in trade for Colorado Springs’ use of an equal amount of Fountain’s capacity in the proposed SDS Project.

In the FEIS, Reclamation identified the Participants’ Proposed Action as the Agency Preferred Alternative. This Record of Decision (ROD) describes the alternative selected for implementation and the rationale for that decision. It also describes the alternatives considered in reaching the decision, and identifies those measures that will be taken to minimize environmental harm from implementation of the selected alternative in accordance with 40 CFR § 1502.2.

The NEPA Process

The FEIS and this ROD have been prepared in accordance with the Council on Environmental Quality’s (CEQ) NEPA regulations (40 CFR 1500-1508) and Department of the Interior policies. The Draft Environmental Impact Statement (DEIS) analyzing the environmental

consequences of the alternatives was released for public review on February 29, 2008. Public comments were received until June 13, 2008. Nearly 400 public comments raised a variety of topics. Comments related to water quality, dam safety, and the Western Slope, as well as changes to the alternatives prompted Reclamation to release a Supplemental Information Report after publication of the DEIS. The Supplemental Information Report was released for public review from October 3, 2008 through November 24, 2008. A total of 40 public comments were received on the Supplemental Information Report. An

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.

SMAPD is the average annual increase in demand met for a project (such as SDS) at a specified annual demand level. For the purposes of this FEIS, SMAPD is always evaluated at a demand level equal to the 2046 demand from the Participants’ Planning Demand Forecast.

FEIS, which addressed public comment on both the DEIS and the SIR, was filed with the Environmental Protection Agency (EPA) (filing number FES 08-63) on December 12, 2008 and noticed by the EPA and Reclamation in the *Federal Register* on December 19, 2008. The decision documented in this ROD is based on the FEIS and public comment received on the FEIS.

In addition to NEPA, the Participants will need to obtain several permits or approvals from federal, state, and local agencies before implementing the SDS Project. Major permitting elements and consultation requirements for the alternatives may include but are not limited to:

- A Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers
- A Clean Water Act Section 401 certification and a Colorado Discharge permit from the Colorado Department of Public Health and Environment

- A National Historic Preservation Act Section 106 review from the Advisory Council on Historic Preservation
- A Section 7 consultation by the Fish and Wildlife Service
- A 1041 land use change permit from Pueblo or Chaffee county
- Land use approval from El Paso and/or Fremont county
- Special use permit or similar authorization from Fort Carson and/or Bureau of Land Management
- A Coordination Act Report pursuant to the Fish and Wildlife Coordination Act of 1958

Alternatives Considered in Detail

The alternatives considered in detail are briefly summarized as follows (see Table 1).

No Action Alternative (Alternative 1)

NEPA requires No Action to be considered in an EIS and represents the most likely future in the absence of a major federal action by Reclamation. It serves as a benchmark against which effects of the other alternatives are compared.

This alternative would not incorporate regional sharing of facilities. Each Project Participant would meet projected demands by independently developing other water supplies that would not require long-term contracts with Reclamation. Colorado Springs, Fountain, and

Security would expand ground water use. Colorado Springs would use Denver Basin ground water, Fountain would expand its Fountain Creek alluvial well field, and Security would acquire additional water rights in the Widefield Aquifer. No Action would not require a major federal action by Reclamation; therefore, the Participants would not use excess capacity storage contracts. Colorado Springs would construct a new untreated water intake from the Arkansas River at the Colorado 115 crossing near Florence. Due to requirements in existing water rights decrees, exchanges would be made from Fountain Creek to the upper Arkansas River Basin. Exchanges would be primarily diverted by the existing Ark-Otero untreated water intake near Buena Vista, which would be upgraded as part of the alternative. The Highway 115 untreated water intake would be supplied through releases from upper Arkansas River Basin storage reservoirs. An extension pipeline would be constructed from the existing FVA pipeline permitting both the SDS Project and

FVA water to be delivered to the proposed Jimmy Camp Creek Reservoir through the new untreated water pipeline. From the reservoir, water would be treated and distributed to customers. A portion of Colorado Springs' reusable return flows would be stored in the proposed Williams Creek Reservoir prior to

exchange down Fountain Creek. Pueblo West would meet projected future water demand by implementing the 18-mgd (million gallons per day) intake on the Arkansas River near Pueblo Reservoir, which was previously approved by Reclamation in 2003.

The seven alternatives are:

- No Action Alternative (Alternative 1)
- Participants' Proposed Action (Alternative 2)
- Wetland Alternative (Alternative 3)
- Arkansas River Alternative (Alternative 4)
- Fountain Creek Alternative (Alternative 5)
- Downstream Intake Alternative (Alternative 6)
- Highway 115 Alternative (Alternative 7)

Alternatives 2 through 7 are referred to as the "Action Alternatives"

Table 1. Summary of Alternatives Components.

Alternative		Regulating Storage	Untreated Water Intake	Untreated Water Alignment	Terminal Storage and Water Treatment Plant [†]	Return Flow Storage and Conveyance
Alternative 1: No Action	Colorado Springs	None	Arkansas River at Lester & Attebery Ditch, FVA supply, Denver Basin Ground Water, and Ark-Otero Improvements	Ground Water Collection System Colorado 115 Alignment FVA Extension Pipeline	Jimmy Camp Creek Reservoir, Conventional Water Treatment Plant	Williams Creek Reservoir, Chilcotte Ditch In and Williams Creek Return Flow Conveyance Pipeline Out
	Fountain	None	Fountain Creek Alluvial Well field Expansion	Ground water Collection System Expansion	No Storage, Expansion of Existing (planned) Water Treatment Plant	None
	Security	None	Widefield Aquifer Wells (agricultural to municipal transfer)	Existing	Existing (disinfection only)	None
	Pueblo West	None	Arkansas River Downstream of Pueblo Reservoir	Pipeline to Existing River Pump Station	Existing	None
Alternative 2: Participants' Proposed Action		Pueblo Reservoir	Joint Use Manifold and/or Pueblo Dam North Outlet Works	Western Alignment, Including Conveyance to Pueblo West	Upper Williams Creek Reservoir, Conventional Water Treatment Plant	Williams Creek Reservoir, Chilcotte Ditch In and Williams Creek Return Flow Conveyance Pipeline Out
Alternative 3: Wetland Alternative		Pueblo Reservoir	Joint Use Manifold and/or Pueblo Dam North Outlet Works	Western Alignment, Including Conveyance to Pueblo West	Upper Williams Creek Reservoir, Conventional Water Treatment Plant	No Reservoir, Return Flow Pipeline to Arkansas River Near Highway 115
Alternative 4: Arkansas River Alternative		Pueblo Reservoir	Arkansas River Upstream of Fountain Creek	Eastern Alignment, excluding Conveyance to Pueblo West	Jimmy Camp Creek Reservoir, Conventional Water Treatment Plant	No Reservoir, Return Flow Pipeline to Arkansas River Near Highway 115
Alternative 5: Fountain Creek Alternative		Pueblo Reservoir	Joint Use Manifold and/or Pueblo Dam North Outlet Works	Western Alignment, Including Conveyance to Pueblo West	Jimmy Camp Creek Reservoir, Conventional Water Treatment Plant	Williams Creek Reservoir, Chilcotte Ditch and Pipeline In and Return Flow Pipeline to the confluence of Fountain Creek and the Arkansas River Out
Alternative 6: Downstream Intake Alternative		Pueblo Reservoir	Arkansas River Downstream of Fountain Creek	Eastern Alignment, Excluding Conveyance to Pueblo West	Jimmy Camp Creek Reservoir, Conventional and Advanced [‡] Water Treatment Plant	Williams Creek Reservoir, Chilcotte Ditch In and Williams Creek Return Flow Conveyance Pipeline Out
Alternative 7: Highway 115 Alternative		Pueblo Reservoir	Arkansas River at Lester & Attebery Ditch , FVA Supply, and Ark-Otero Improvements	Colorado 115 Alignment, Excluding Conveyance to Pueblo West FVA Extension Pipeline	Jimmy Camp Creek Reservoir, Conventional Water Treatment Plant	Williams Creek Reservoir, Chilcotte Ditch In and Williams Creek Return Flow Conveyance Pipeline Out

[†] Treated water alignments are not included in this table and would be constructed as proposed by the Participants.

[‡] Advanced treatment in this alternative includes a reverse osmosis process.

Participants' Proposed Action (Alternative 2)

The Participants' Proposed Action is the Participants' proposal to construct and operate the SDS Project. Untreated water would be stored in Pueblo Reservoir and diverted from Pueblo Dam. This water would be conveyed through a new pipeline and pump stations to the proposed Upper Williams Creek Reservoir, treated, and distributed to the Participants' customers. A portion of Colorado Springs' reusable return flows would be stored in the proposed Williams Creek Reservoir prior to exchange down Fountain Creek. Regulating storage in Pueblo Reservoir would be through one or more long-term excess capacity storage contracts with Reclamation. These contracts would allow the Participants to store non Fry-Ark Project water in existing Fry-Ark storage space when excess space is available. Water stored in this excess space would be subject to spill from the reservoir according to existing spill priorities. All Action Alternatives include one or more long-term excess capacity contracts.

Wetland Alternative (Alternative 3)

The Wetland Alternative would address scoping issues about minimizing wetland impacts. The Wetland Alternative would disturb the least amount of wetlands by using the terminal storage reservoir site with the fewest wetlands and eliminating the need for the return flow reservoir by using a return flow pipeline. Untreated water would be stored in Pueblo Reservoir and diverted from Pueblo Dam. This water would be conveyed through a new pipeline and pump stations to the proposed Upper Williams Creek Reservoir, treated, and distributed to the Participants' customers. Colorado Springs' reusable return flows would be piped from its existing wastewater treatment plants to the Arkansas

River near Colorado 115. By conveying Colorado Springs' reusable return flows to a location upstream of Pueblo Reservoir, this alternative avoids the need for a new return flow reservoir such as the proposed Williams Creek Reservoir.

Arkansas River Alternative (Alternative 4)

The Arkansas River Alternative would address scoping issues about maximizing low flows in the Arkansas River through the City of Pueblo, minimizing water quality effects on the lower Arkansas River, and minimizing the total surface acres disturbed. Stream flow in the Arkansas River through Pueblo would be maximized by diverting water from the Arkansas River downstream of Pueblo, and returning treated return flows to the Arkansas River upstream of Pueblo. Untreated water would be stored in Pueblo Reservoir, released to the Arkansas River from the dam, and diverted from the Arkansas River upstream of Fountain Creek. This water would be conveyed through a new pipeline and pump stations to the proposed Jimmy Camp Creek Reservoir, treated, and distributed to the Participants' customers. Colorado Springs' reusable return flows would be piped from its existing wastewater treatment plants to the Arkansas River near Colorado 115. Pueblo West would not participate in SDS Project infrastructure if this alternative were chosen.

Fountain Creek Alternative (Alternative 5)

The Fountain Creek Alternative is designed to address significant issues concerning potential effects of return flows on Fountain Creek erosion, sedimentation, and water quality. Untreated water would be stored in Pueblo Reservoir and diverted from Pueblo Dam. This water would be conveyed to the proposed

Jimmy Camp Creek Reservoir, treated, and distributed to the Participants' customers. Colorado Springs' reusable return flows would be stored in the proposed Williams Creek Reservoir. Water delivered to the Arkansas River for exchanges would be conveyed in a new pipeline to the mouth of Fountain Creek, instead of in Fountain Creek.

Downstream Intake Alternative (Alternative 6)

The Downstream Intake Alternative addresses public interest in an alternative that uses an untreated water intake downstream of Fountain Creek. Untreated water would be stored in Pueblo Reservoir, released from the dam, and then diverted from the Arkansas River downstream of Fountain Creek. This water would be conveyed through a new pipeline and pump stations to the proposed Jimmy Camp Creek Reservoir, treated, and distributed to the Participants' customers. The water treatment plant would include advanced treatment and would require partial (50 percent) reverse osmosis to provide acceptable water quality to the Participants' customers. Colorado Springs' reusable return flows would be stored in the proposed Williams Creek Reservoir prior to exchange down Fountain Creek. Pueblo West would not participate in SDS Project infrastructure if this alternative were chosen.

Highway 115 Alternative (Alternative 7)

The Highway 115 Alternative would address public and Participant interest in an alternative that uses the Colorado 115 corridor for water conveyance and includes an excess capacity storage contract. As with the No Action Alternative, a new untreated water intake from the Arkansas River would be constructed at the Colorado 115 crossing near Florence. Colorado Springs' reusable return flows would be stored in the proposed Williams Creek

Reservoir prior to exchange releases down Fountain Creek. Exchanges would be made from Fountain Creek and Pueblo Reservoir to the upper Arkansas River Basin, and would be primarily diverted by the Ark-Otero untreated water intake. Excess exchanges would be stored in the upper Arkansas River Basin storage facilities or in Pueblo Reservoir regulating storage. The Highway 115 untreated water intake would be supplied by releases from upper Arkansas River Basin storage. An extension pipeline would be constructed from the existing Fountain Valley Authority pipeline, and would help increase system flexibility for Colorado Springs by permitting FVA water to be delivered to Jimmy Camp Creek Reservoir through the new untreated water pipeline. Pueblo West would not participate in SDS Project infrastructure if this alternative were chosen.

The Decision

Based on the analyses contained in the FEIS including the information summarized in Table 24 (Summary of direct and indirect effects) in the FEIS, public comments received on the DEIS and Supplemental Information Report, and consideration of comments received on the FEIS, the Great Plains Regional Director has decided to select the Participants' Proposed Action for implementation.

This decision allows the following Federal actions to be approved by Reclamation to implement construction and operation of the Participants' Proposed Action:

- Execution of up-to-40-year contracts between Reclamation and the Project Participants for use of the Eastern Slope System of the Fry-Ark Project in Colorado for storage, conveyance and exchange

- Issuance of a special use permit or other agreement from Reclamation to the Participants allowing connection of the SDS Project pipeline to Reclamation facilities
- Approval of an administrative trade (“swap”) between Colorado Springs and Fountain of an equal amount of capacity in the FVA pipeline for capacity in the SDS Project untreated water pipeline and water treatment plant

Approval of these Federal actions by Reclamation will allow the Project Participants to proceed with construction and operation of the selected alternative in a manner that is consistent with those actions as described and evaluated in the FEIS.

Basis for Selection of the Agency Preferred Alternative for Implementation

The FEIS describes the environmental effects of the alternatives analyzed in detail. This ROD selects the Agency Preferred Alternative for implementation. That decision is based on how well the alternatives addressed the significant issues identified during scoping, the environmental effects of the alternatives, and other technical factors, including economic and engineering considerations.

The environmental and technical evaluations performed as part of the FEIS indicate that all six of the Action Alternatives considered in detail are reasonable. Reclamation compared all of the alternatives in terms of how well they addressed the ten public scoping issues and other relevant environmental and non-environmental issues identified by Reclamation during the FEIS process, including energy use and estimated costs. Based upon these considerations, Reclamation

identified the Participants’ Proposed Action as the Agency Preferred Alternative in the FEIS.

All alternatives would have adverse environmental effects. The Participants’ Proposed Action would result in similar or fewer environmental effects when compared to the other alternatives. Additionally, this alternative would have the lowest total project cost and lowest energy use requirements, resulting in the lowest greenhouse gas emissions, of any Action Alternative. All of the Action Alternatives were developed to address specific environmental issues or meet public interest objectives. However, the other alternatives would have adverse environmental effects on other resources, would have a higher total cost, and would require at least as much or substantially more energy than the Participants’ Proposed Action. There would be no impacts to Indian trust assets (ITA) and no unresolved ITA issues.

Environmentally Preferred Alternative

The CEQ regulations require the ROD to identify one or more environmentally preferred alternative. The environmentally preferred alternative is the alternative(s) that causes the least damage to the biological and physical environment and best protects, preserves, and enhances historic, cultural, and natural resources. Because it will cause the least damage to the biological and physical environment, Reclamation has determined that the Participants’ Proposed Action is the environmentally preferred alternative.

Summary of Comments on the FEIS

Two letters containing comments on the FEIS were received during the 30-day waiting period. Comments were considered substantive if they:

- Question, with reasonable basis, the accuracy of the information in the document
- Question, with reasonable basis, the adequacy of the environmental analysis
- Present reasonable alternatives other than those presented in the EIS
- Cause changes or revisions in the alternatives
- Provide new or additional information relevant to the analysis

The first comment letter was from Mr. Dave Miller, President of the Natural Energy Resources Company. His comments are briefly summarized with Reclamation's responses as follows:

1. Mr. Miller was concerned that transmountain diversion alternatives that would convey water from the Gunnison River Basin and Aspinall Unit reservoirs to the Arkansas River or South Platte River basins, including the proposed Central Colorado Project, were not considered in the FEIS. He suggested two options for delivering the Gunnison River transmountain water to Colorado Springs and provided a citation to additional information on the internet. Both options included construction of an up-to-1.2 million acre-foot reservoir in the Gunnison River Basin and a 42-mile-long pipeline from the Gunnison River Basin to the South Platte River Basin. Pipelines to other river basins as well as power generation facilities were also included. The first option included construction of a new pipeline originating in the upper South Platte River Basin and traversing South Park, Colorado to Colorado Springs. The second option was construction of a new diversion upstream of Cheeseman Reservoir in the South Platte River Basin and a pipeline to the divide between the

South Platte and Arkansas River basins near Monument, Colorado. In the second option water would presumably be conveyed in the South Platte River toward Cheeseman Reservoir, diverted, and then delivered to Colorado Springs by conveying it in Monument Creek.

Reclamation did consider potential alternatives involving a transmountain diversion from the Gunnison River Basin, including the proposed Central Colorado Project, in its alternatives analysis and the FEIS (please refer to page 92 of the FEIS and comment responses 2300 and 3181 in Appendix B of the FEIS). These alternatives were dismissed from detailed evaluation due to substantial logistical, technical, or environmental deficiencies, less favorable environmental characteristics, and purpose and need criteria, with cost issues also identified (refer to page 87 of Reclamation's 2006 Alternatives Analysis for additional details).

2. Mr. Miller suggested that Reclamation did not consider and respond its prior comments, which included descriptions of benefits of the proposed Central Colorado Project.

Reclamation reviewed all comments on the DEIS and Supplemental Information Report, including those submitted by the commenter, and provided a response to each substantive comment (please refer to FEIS Appendix B and C). The commenter's previous comments contained eight substantive issues (refer to FEIS Appendix B, page B-241), all of which were addressed in the FEIS.

3. Mr. Miller requested investigations of alleged state and federal policy violations and oversights that lead to the seven

alternatives that were retained for detailed evaluation in the EIS.

Reclamation prepared the EIS and supporting documents in compliance with applicable laws, regulations, and policies (refer to comment responses 3020, 5000, and 5200 in FEIS Appendix B and 5000 in FEIS Appendix C).

4. Mr. Miller suggested that the process for determining the scope of the SDS Project (presumably meaning the range of alternatives) used by Colorado Springs prior to and during preparation of the EIS was fatally flawed and should have been challenged by Reclamation.

Reclamation was not directly involved in alternatives evaluations that Colorado Springs performed prior to Reclamation's preparation of the EIS. During preparation of the EIS, Reclamation used the purpose and need for the proposed SDS Project and an array of logistical, technical, and environmental screening criteria to define a full range of reasonable alternatives for detailed evaluation in the EIS (refer to Reclamation's 2006 Alternatives Analysis report, Section 2.3 of the FEIS, and responses to comments 31-1, 1002, 1010, 1011, 1012, 2001, and 2003 in FEIS Appendix B).

5. Mr. Miller suggested that the FEIS did not include a long-term analysis of carbon footprint and pumping costs for the life of the project.

Estimated carbon emissions at 2046 water demand (highest emission scenario) were provided in Section 3.24.5 of the FEIS. Operational costs associated with pumping requirements of each alternative were considered in Reclamation's alternatives screening process (refer to Chapter 2 of the FEIS and comment response 2001 in FEIS

Appendix B) and in the alternatives effects analyses (refer to Sections 3.15 and 3.16 of the FEIS and comment response 2011 in FEIS Appendix B). Operational costs, including pumping, for all seven alternatives were evaluated for the 40-year life of the contracts requested by the Project Participants.

6. Mr. Miller suggested that stabilization of Pueblo Dam and enlargement of Pueblo Reservoir should be included in the cost of the SDS Project alternatives.

Pueblo Dam (or Pueblo Reservoir) is identified as an existing facility in the FEIS and Action Alternatives for the SDS Project would use only existing storage space in the existing conservation pool of this facility. Moreover, Reclamation's facilities must be operated and maintained safely, in order to protect our nation's security, economy, and environment. Reclamation ensures safety through inspections for safety deficiencies, analyses that use current technologies and designs, and corrective actions if needed based on current engineering practices. Costs to fund Reclamation's Dam Safety Program are provided by appropriations from Congress, and are not directly passed onto Project Participants (refer to comment responses 2011 and 3326 in FEIS Appendix B).

None of the SDS Project alternatives include enlargement of Pueblo Reservoir as a project component. Enlargement of Pueblo Reservoir is not needed to fulfill the project's purpose or needs (refer to comment response 2004 in FEIS Appendix B).

7. Mr. Miller requested a stay of the SDS Record of Decision pending analysis of the

alternatives and completion of the policy investigations described above.

Reclamation considered this request and determined that the alternatives suggested by the commenter were given appropriate consideration in the FEIS and supporting documents and that the suggested investigations are not warranted. Consequently, a stay of the Record of Decision is not necessary.

The second comments letter was received from the Environmental Protection Agency (EPA)-Region 8 and is summarized as follows:

The EPA commented that in general the FEIS was largely responsive to the issues it raised in its comments on the DEIS and SIR. EPA believes SDS is more environmentally protective as a result and commends Reclamation for addressing EPA's comments and concerns. EPA commends Reclamation for conducting additional water quality analysis for the FEIS and working to resolve differences on a range of other issues. EPA is very pleased to see that the "Modified Proposed Action" is the Agency-Preferred Alternative. EPA believes the FEIS is largely responsive to the issues it raised in its comments on the DEIS and SIR.

EPA expressed two areas of continuing concern. First, it has some remaining concerns about the project's impact on water quality; however, EPA is pleased with the addition of Section 5.0 in the FEIS Environmental Commitments. EPA supports implementation of water quality monitoring when construction begins to allow three years of baseline data to be collected before SDS becomes operational. EPA believes the water quality monitoring program is appropriate and will help ensure that any potential problems that SDS causes would be addressed in an effective and timely manner.

Second, EPA remains concerned about indirect impacts from induced growth on increased flows to Fountain Creek resulting from SDS have not been sufficiently addressed in the FEIS. EPA believes there should be a commitment that stormwater Best Management Practices be implemented for future growth in Colorado Springs.

Reclamation's view is that growth is not a direct or indirect effect of the proposed SDS Project, and effects associated with growth are disclosed within the cumulative effects Section of the FEIS. As disclosed in the FEIS, there will be minor increases in peak flows and floodplains for Fountain Creek. Average simulated stream flows on Fountain Creek at Pueblo change from 249 cubic feet per second (cfs) for the No Action Alternative to 253 cfs with the Participants Proposed Action. That is an increase of 4 cfs, and represents an increase of 2%. As a result, no commitments are proposed in the ROD to mitigate the effects on peak flows or floodplains on Fountain Creek.

The City of Colorado Springs Stormwater Enterprise is described as a reasonably foreseeable action on page 125 of the DEIS. As part of their stormwater discharge permit, the City of Colorado Springs is responsible for constructing capital stormwater projects and regulating stormwater infrastructure on private property necessary for managing water quantity and quality. These activities will occur no matter what alternative is constructed for the SDS project, and are not considered as mitigation for SDS.

Public comments on the FEIS were considered but did not result in changes to the proposed action or in the selection of the Preferred Alternative.

Environmental Commitments

This section summarizes the environmental commitments that will be incorporated into the selected alternative. These commitments will be fully incorporated into all final design and project implementation activities. Reclamation will ensure that these measures are implemented through terms and conditions of any long-term contract between Reclamation and the Participants. Such contracts will, at a minimum, include a requirement for the Project Participants to submit to Reclamation an annual compliance report that certifies progress in successfully implementing these commitments in a timely manner as prescribed in this ROD and any contracts. All practicable means to avoid or minimize environmental harm from the selected alternative have been considered and adopted. The environmental commitments and mitigation measures in this section of the ROD are intended to avoid and/or minimize any environmental harm.

The Participants must obtain other significant Federal, State and local permits, approvals, and agreements for the SDS Project. These permits, approvals, and agreements may include, as examples, a Section 404 permit under the Clean Water Act, a 1041 permit from Pueblo County, and consultation with the Colorado Division of Wildlife (CDOW) and the Colorado Water Conservation Board. These permits, approvals, and agreements may trigger other environmental compliance requirements by Federal agencies which would also include significant environmental commitments (mitigation) to be undertaken by Participants as part of the SDS Project.

Comprehensive monitoring of the implementation of Participants' environmental commitments for the SDS Project will be coordinated between Reclamation, the Project Participants, and the authorities responsible for

these additional, separate permits, approvals, and agreements. This monitoring and coordination is intended to avoid redundant, inconsistent, or ineffective environmental commitments for the SDS Project. Reclamation will participate fully in this process of coordinating environmental commitments. A detailed and specific list of environmental commitments and plan for their implementation will emerge from this coordination process.

The timing of this process is important. Coordination of implementation of the environmental commitment plan will occur prior to executing any contracts for the SDS Project. Any long-term contract between Reclamation and the Participants will contain all specific environmental commitments and obligations by Participants that are determined by Reclamation to be required for the SDS Project. In the discussion below, significant environmental commitments by Participants and Reclamation are described in two forms. First, there are environmental commitments that Reclamation is responsible for implementing. Second, there are environmental commitments that will be required by Reclamation that the project Participants are responsible for implementing and that will be conducted during the broader coordination process with other permitting and approving authorities.

Reclamation's Commitments

The following mitigation measures will be implemented:

- If Reclamation receives credible information that operations under the contract are causing a violation of the Arkansas River Compact, Reclamation will immediately initiate discussions among the parties, including the party alleging the Compact violation, to

develop a solution and remedy the violation.

- Reclamation will complete its coordination with the U.S. Fish and Wildlife Service under the Fish and Wildlife Coordination Act (FWCA) prior to implementation of the selected alternative. The U.S. Fish and Wildlife Service was a cooperating agency with Reclamation during preparation of the Final EIS and was consulted throughout the NEPA process for the SDS Project. A draft FWCA Report is on-file with Reclamation. Fish and wildlife conservation measures recommended in the final FWCA Report will be considered by Reclamation and those found to be appropriate will be implemented by Reclamation and/or the Project Sponsors through construction requirements, contract provisions, and terms and conditions of any long-term water-related contract between Reclamation and the Participants.

Participants' Commitments

General Commitments

The following mitigation measures will be implemented:

- Comply with all applicable permits, regulations, and laws including but not limited to CDPHE, USCOE 404, and local land use permits obtained for the SDS project.
- Construct and operate the SDS Project in a manner that does not differ substantially from that evaluated in this FEIS, except under emergency conditions, and unless additional and appropriate environmental investigations are completed by

Reclamation and approval is then given to Participants to alter construction or operation of the SDS Project

- Develop and implement a head pressure monitoring program on the Joint Use Manifold to isolate effects attributable to the SDS Project and to mitigate those effects if they were to occur. This program will be developed over a 3-year period from the date that water is first delivered from the Joint Use Manifold for the SDS Project. Development of the monitoring program will include involvement of all other Joint Use Manifold users. This commitment will not be necessary if the intake for SDS is at the North River Outlet Works, and the Joint Use Manifold is not used for SDS.
- Develop an integrated adaptive management program for the project that will be coordinated with the Participants' existing monitoring programs and the Environmental Management System discussed in Appendix F of the FEIS. The integrated adaptive management program will be finalized prior to executing any contracts for the SDS Project.

Surface Water

The following mitigation measures will be implemented:

- Comply with the Upper Arkansas Voluntary Flow Management Program except during emergency conditions as defined in Section 2.b. of the Memorandum Of Understanding for Settlement of Case No. 04CW129, Water Division 2 (Chaffee County Recreational In-Channel Diversion)

- Comply with the Pueblo Flow Management Program pursuant to existing intergovernmental agreements. If Reclamation and the Participants receive credible information that project operations are impairing physical diversion of a senior water right, contrary to Colorado water law, the Participants will immediately initiate discussions among the parties, including the party alleging the impairment and Reclamation, to develop a solution and remedy the impairment in compliance with Colorado water law.
- Participants will consult with Reclamation each year on the average annual flow in Fountain Creek. If the average annual stream flow of Fountain Creek as measured at Pueblo (USGS gauge station number 071056500) exceeds the scope and range of the flow estimated and analyzed in the Final Environmental Impact Statement (see Table 33 of the FEIS), then Participants will coordinate with Reclamation, within their adaptive management plan, to evaluate the cause(s) for the change in flows and determine whether appropriate response actions, such as monitoring and/or mitigation measures, are warranted. Each year, Participants will report to Reclamation the average annual flow in Fountain Creek at Pueblo together with other relevant data.

Surface water mitigation measures will resolve adverse effects to physical diversions of senior water rights.

Water Quality

The following mitigation measures will be implemented:

- Include water quality monitoring and adaptive management within the integrated adaptive management program (see Participants' General Commitments)
- Begin implementing water quality monitoring when construction of the project begins. This will allow about three years of baseline data to be collected before project operations begin.
- Submit water quality monitoring data, including trend analyses, for the preceding calendar year to Reclamation by January 31st of the subsequent year
- If the Colorado Department of Public Health and Environment (CDPHE) determines that operation of the SDS Project is causing significant adverse water quality effects, the Participants will coordinate with Reclamation, CDPHE, and other interested parties to evaluate and select measures to mitigate adverse effects
- In the event that operation of the SDS Project causes, or threatens to cause, stream flows in the Arkansas River or other waterways to diminish to low levels that will contribute significantly to elevated concentrations/densities of dissolved selenium, *E. coli*, or sulfate, the Participants will coordinate with Reclamation, CDPHE, CDOW, and other interested parties to evaluate and select measures to mitigate adverse effects.

Development and implementation of a water quality monitoring and adaptive management plan will provide a means of detecting changes

in water quality, judging whether they are likely caused by operation of the SDS Project, and addressing actual effects in a systematic manner. Additionally, implementation of the geomorphology mitigation measures (below) will reduce suspended sediment and total recoverable iron concentrations in Fountain Creek and the lower Arkansas River.

Geomorphology

The following mitigation measures will be implemented:

- Prepare a geomorphic mitigation plan and secure Reclamation approval prior to executing any contracts for the SDS Project. This plan could include, but is not limited to:
 - Evaluate and consider strategies to remove sediments that reduce the effectiveness of Corps levees located near Fountain Creek at its confluence with the Arkansas River
 - Evaluate and consider strategies to increase the sinuosity of Fountain Creek at appropriate locations in order to reduce undesirable erosion and sedimentation
 - Evaluate and consider strategies at appropriate locations along Fountain Creek to reduce undesirable erosion and sedimentation
 - Select geomorphic mitigation measures for SDS Project effects that are, to the extent practicable, consistent with priority projects identified in the Corps of Engineers' Fountain Creek Watershed Study and the Fountain Creek Corridor Master Plan. Locations where geomorphic mitigation projects

could occur include, but are not limited to:

- Fountain Creek at the Clear Spring Ranch site, directly upstream and downstream of the confluence of Little Fountain Creek and Fountain Creek (approximately 4 miles)
- Fountain Creek from upstream of Fountain Boulevard to upstream of Colorado 85/87 at the Sand Creek confluence (approximately 3 miles)
- Complete pre-project geomorphic mitigation, including channel stabilization projects and non-structural options such as conservation easements, before the project is operational. Channel stabilization could include, but is not limited to, increasing stream sinuosity, flattening of steep side slopes, installation of grade control structures, and use of buried riprap, erosion blankets, and/or vegetative cover for channel stabilization in areas of high and/or erosive velocities.
- Design and construct an energy dissipation structure that will protect against erosion at the outlet of the pipeline from Williams Creek Reservoir to Fountain Creek
- Evaluate and implement appropriate future geomorphic stabilization projects, if such future projects are determined to be necessary after the project is operational.

When implemented, these recommendations will mitigate potential adverse effects on geomorphology by avoiding or minimizing effects of return flow discharges through an energy dissipation structure, compensating for anticipated effects, and responding to effects identified after project operations begin.

Aquatic Life

The following mitigation measures will be implemented:

- Submit a proposed wildlife mitigation plan to the Colorado Wildlife Commission (Wildlife Commission) pursuant to C.R.S. § 37-60-122.2. This proposal will include actions the Participants propose to mitigate impacts that the SDS Project may have on fish and wildlife. As required by that statute, the Wildlife Commission will evaluate the probable impact of the project on fish and wildlife and, if the Participants and Wildlife Commission cannot agree upon reasonable mitigation, the Wildlife Commission will make recommendations to the Colorado Water Conservation Board (CWCB) regarding what it believes to be reasonable mitigation actions. If the Participants and the Wildlife Commission agree on a mitigation plan, the Wildlife Commission will submit that agreement to the CWCB, which must adopt the agreement as the state's official position. If the Participants and the Wildlife Commission do not reach agreement on a mitigation plan, the CWCB will consider the plan submitted by the Participants and the recommendations of the Wildlife Commission and either affirm the recommendations of the Wildlife Commission, which then becomes the State's official position, or submit its own recommendations to the Governor, who will ultimately determine the state's official position on the proposed wildlife mitigation plan.
- In the event that operation of the SDS Project causes, or threatens to cause, stream flows in Fountain Creek or the Arkansas River to diminish to low levels that could contribute significantly to impairment of aquatic life, coordinate with Reclamation, CDPHE, CDOW and other interested parties to evaluate and select measures to mitigate adverse effects
- Evaluate and consider participation in CDOW fish hatchery programs
- Monitor the effects of the operation of the SDS Project upon aquatic life in Fountain Creek and the Arkansas River between Pueblo Dam and the Las Animas Gage. Aquatic sampling will be conducted once per year at up to 10 locations. Monitoring methods and locations will be identified in the proposed wildlife mitigation plan that will be submitted to the Colorado Wildlife Commission pursuant to C.R.S. § 37-60-122.2. Use the information from this monitoring in the adaptive management program for the SDS Project.

When implemented, these recommendations will mitigate potential adverse effects on aquatic life by avoiding or minimizing effects, compensating for anticipated effects, and detecting and responding to effects identified after project operations begin.

Wetlands, Waters, and Riparian Vegetation

The following mitigation measures will be implemented:

- Design final alignments and facilities to avoid and minimize wetland impacts
- Assess alternative construction methods for pipeline crossings (i.e., directional drilling v. open cut) to minimize wetland and stream impacts

- Mitigate impacts to jurisdictional and non-jurisdictional wetlands in areas of temporary, short-term effects such as pipeline crossings, on-site at the place of disturbance with similar wetlands and soils to replace existing wetland functions and values
- Mitigate all unavoidable, permanent impacts to jurisdictional and non-jurisdictional wetlands with compensatory wetlands that replace existing wetland functions and values. Compensatory wetland mitigation will likely occur at the Clear Spring Ranch site on Fountain Creek downstream of the city of Fountain.
- Control tamarisk that may establish around newly constructed reservoirs
- Evaluate and consider a strategy to increase the sinuosity of Fountain Creek at appropriate locations in order to create wetlands areas
- Evaluate and consider the construction and maintenance of new areas of wetlands along Fountain Creek in order to participate in wetlands banking programs. Evaluate and consider cooperation with Colorado agencies to expand such a wetlands creation process

Mitigation plans for jurisdictional and non-jurisdictional wetlands will be submitted for approval by the Corps of Engineers and Reclamation, respectively. All design and planning measures for wetlands, waters, and riparian vegetation will be completed before any contracts for the SDS Project.

By reviewing the location of wetlands during final design, effects on wetlands can be avoided and minimized. Specifically, the pipeline construction corridors through wetlands will be reduced to the minimum

width practicable. Similarly, construction methods that do not involve trenching through a wetland will avoid impacts. Wetlands mitigated in place and off-site will replace affected wetlands on a 1:1 ratio and will provide similar functions and values. The 404 permitting process is ongoing and the final off-site mitigation ration for jurisdictional wetlands for the 404 permit has not yet been determined.

Vegetation

The following mitigation measures will be implemented:

- Prior to final design, review locations of Needle and Threadgrass – Blue Grama Grasslands, high quality shrublands and woodlands, and other areas with desirable vegetation to determine design changes within the current study area that will avoid and minimize impacts
- Replace mature trees (diameter at breast height of 12 inches or greater) within construction areas at a 1:1 ratio with the same or similar native species with available nursery container stock or pole plantings as soon as practicable after construction activities have ended
- For 1 year after construction, monitor the construction areas to determine if appropriate native vegetation is establishing. If native vegetation is not establishing, the site will be reseeded with appropriate species
- In the appropriate season prior to construction, survey potential construction areas with known populations of dwarf milkweed and other plant species of concern, to locate areas where impacts can be avoided and minimized to the extent practicable

with design changes within the current study area. After identifying populations to avoid, mark populations within or nearby the construction easement as environmentally sensitive so that workers avoid inadvertent impacts.

- During construction, wash major construction equipment before it enters the site so that noxious weeds are not spread from other construction sites
- Use certified weed-free mulch after seeding construction areas
- Reseed construction areas with comparable native vegetation as soon as practicable after disturbance, using seed that does not contain any noxious weed seed
- Monitor construction areas for 3 years after construction to assess if noxious weeds have invaded the site. If noxious weeds are present, weed control plans will be formulated and completed.
- Because the project may indirectly increase the spread of tamarisk, the Participants will work with the Colorado Department of Agriculture's Colorado Noxious Weed Management Team on tamarisk issues in the Arkansas Valley including submitting a request for partnership evaluation.

Impacts to plant species and communities of concern and other sensitive vegetation areas can be avoided and minimized during final design and implementation. Because mitigation measures such as transplanting of individuals are often unsuccessful, avoidance and minimization will ensure survival, especially of plant species of concern. Seeding disturbed areas, replacing mature trees, and controlling noxious weeds will replace existing

vegetation types and structural diversity and will ensure that high quality habitat remained.

Wildlife

The following mitigation measures will be implemented:

- Submit a proposed wildlife mitigation plan to the Colorado Wildlife Commission pursuant to C.R.S. § 37-60-122.2 as described above.
- Promptly revegetate all disturbed areas with native species that provide species diversity and food and cover for large game and wildlife habitat
- Conduct clearance surveys in suitable habitat for state-listed species following standard protocols, as available, prior to construction (e.g., CDOW undated)
- Conduct raptor nest surveys prior to construction and impose seasonal restrictions to surface activity within recommended buffers (generally ¼ to ½ mile) around active raptor nest sites and heron rookeries during construction
- Consult with CDOW and U.S. Fish and Wildlife Services' Migratory Permit Bird Office to develop mitigation for unavoidable loss of raptor nests. Options may include constructing artificial nests in suitable habitat or enhancing prey habitat
- Develop construction schedules to avoid impacts to nesting migratory birds. If construction is scheduled to occur during the nesting season (April 1 through August 31) in areas where migratory birds may nest, a qualified biologist will conduct a nesting bird survey prior to the commencement of construction activities to determine the presence of migratory birds and their nests. If an active nest is detected, a

buffer zone between the nest and the limit of construction will be flagged and avoided during the nesting season, or construction will be scheduled outside of the nesting season.

- Conduct pre-construction surveys for swift fox den sites within appropriate habitat along the pipeline corridor and proposed reservoir sites. Avoid surface disturbance within ¼ mile of active den sites while young are den-dependent (March 15 - June 15)
- Restrict pesticides for rodent control within swift fox overall range
- Mitigate impacts to state-listed amphibian species by avoiding, minimizing, and mitigating wetland effects as described above
- Impose seasonal restrictions on construction to avoid sensitive large game winter habitat (from first large snowfall to summer green-up)
- Install wildlife crossovers (trench plugs) during pipeline construction with ramps on each side at a maximum of ¼ mile intervals and at well-defined game trails
- Create additional nesting habitat or nest boxes in nearby trees for the Lewis' woodpecker when nest trees are destroyed.

By replacing vegetation including structural diversity, the long-term effects on wildlife will be reduced by allowing wildlife to return to disturbed areas. Pre-construction surveys will identify wildlife use at the time of construction and allow for planning for avoidance and minimization. Imposing seasonal and/or daily restrictions on construction will enable wildlife to use important habitat, especially during breeding and other critical periods. Wildlife crossovers installed within the pipeline trench

will facilitate wildlife passage and provide escape routes for wildlife trapped within the trench, thereby reducing mortality.

Recreation

The following mitigation measures will be implemented:

- During short-term construction activities that require trail closures of developed recreational trails, designate a safe and reasonable detour around the project site. Post signs directing trail users.
- Work with the local municipality to establish alternate trails with consistent width, surfacing, and signage
- Within developed parks with temporary effects, commit to full reclamation of the impact area by replacing turf, irrigation systems, and other facilities that could be affected. Provide follow-up monitoring and maintenance for 1 year to ensure that reclamation efforts are successful.
- In developed park areas with permanent, above ground SDS Project facilities, reconfigure park facilities that will be directly affected and visually screen SDS Project facilities from other park uses with vegetation, berming, or attractive fencing
- Seek opportunities to enhance angling, boating, or other recreation opportunities at Lake Henry, Lake Meredith, and Holbrook Reservoir so that they are less vulnerable to water level fluctuations. Work with the CDOW to identify priority projects and include them in a proposed wildlife mitigation plan to the Colorado Wildlife Commission pursuant to C.R.S. § 37-60-122.2 as above.

The proposed mitigation measures will reduce the impact of project facility construction on trail users. They will also reduce the short- and long-term impacts of project facilities on park infrastructure, vegetation, aesthetics, and recreation experiences. Collaboration with the CDOW to enhance fishing and boating opportunities may result in such improvements to recreation at Lake Henry, Lake Meredith, and Holbrook Reservoir.

Socioeconomics and Land Use

The following mitigation measures will be implemented:

- Acquire properties and easements through voluntary, willing participant agreements to the maximum extent practicable
- Develop a construction management plan to outline best management practices to minimize impacts to surrounding properties and submit plan to Reclamation for approval prior to construction.

Adverse short-term effects on landowners with parcels that will contain SDS features will be offset through mutually agreed upon compensation. The land use mitigation measures will minimize disturbances to properties near the project during construction or minimize land use changes and conflicts.

Cultural Resources

The following mitigation measures will be implemented:

- Comply with the requirements of the Programmatic Agreement between Reclamation, the ACHP, Colorado Springs, and the Colorado SHPO (Appendix I of the FEIS)

Development of the project alternatives will result in impacts to non-renewable historic properties. As a result, it will be necessary to implement a mitigation plan in an effort to resolve any adverse effects. Mitigation may be accomplished through avoidance, implementation of protective measures, or data recovery. If avoidance and preservation are not possible, a data recovery plan may be used to collect and analyze significant information, thus preserving that information. Data collection as a mitigation measure should only be implemented when other means to protect or preserve historic properties have been exhausted or are not feasible. Within the data recovery plan, specific research problems concerning scientific, humanistic, and cultural concerns will be developed. Research also will focus on problems in prehistoric and historic archaeological methods and theory. Ultimately, the data collected likely will provide information regarding the cultures that have occupied the area in the past.

Indian Trust Assets

Continue consultation with Native American Tribes in accordance with the Programmatic Agreement. Under the Agreement, Reclamation and the Project Participants will coordinate with the tribes to identify and mitigate impacts to any traditional cultural properties or resources.

Noise and Vibration

The following mitigation measures will be implemented:

- Construction equipment used by contractors shall function as designed and shall conform to applicable noise emission standards
- Generally adhere to project work hour restrictions (7 a.m. to 7 p.m.) within

500 feet of residences, hospitals, schools, churches, and libraries. Work hours may need to be extended from time to time in order to expeditiously restore traffic flow or public access.

- Restrict access to construction areas so that the public could not be in close proximity to loud equipment or blasting
- House project operating equipment (e.g., pump stations) in structures designed to minimize radiated noise outside the structure, and will meet local noise ordinance requirements.

By following existing standards, restricting work hours and access to construction areas, and insulating new noise within structures, noise effects will be minimized by maintaining acceptable noise levels and limiting the number of people exposed to increased noise levels.

Visual Resources

The following mitigation measures will be implemented:

- Vegetate earthen dam faces with native herbaceous plants to match the adjacent undisturbed prairie plant communities
- Revegetate and/or landscape with plants, all disturbances associated with the construction of all facilities
- Restore as many existing grades as practicable following pipeline excavations
- Enclose pump stations and well equipment in structures matching the architectural characteristics of the surrounding structures
- Construct powerlines with non-specular (not shiny) wire, non-reflective and opaque insulators, and light-colored, non-reflective finished poles

- Reclaim construction access roads and staging areas by restoring existing grade and revegetating the area of disturbance
- Apply water with standard construction practices to control airborne fugitive dust within construction areas
- Install baffles on construction lighting fixtures to direct light onto the construction activity only in locations where safety is a concern, scenic quality will be affected, or near occupied homes and businesses.

Restoring existing grades, revegetating disturbed areas, using architectural styles consistent with the area, and designing powerlines to have low visibility will minimize the visual contrast between the surrounding areas and will reduce the visibility of disturbance or new structures from observation points. Reducing airborne fugitive dust and construction lighting will reduce the area affected during construction.

Traffic

The following mitigation measures will be implemented:

- Use trenchless construction to the extent practicable when construction features cross railroad lines, state highways, county roadways in densely populated areas, and major city roadways in densely populated areas.
- Prepare traffic control plans for approval by state and local traffic authorities and followed by contractors during construction
- Construct traffic signage, signals, acceleration, and deceleration lanes as directed by state and local traffic authorities for access to reservoir sites, treatment plants, and pump stations

- Construct improvements to existing access roads or construction of temporary alternate access roads to reservoir sites, treatment plants, and pump stations as directed by state and local traffic officials
- Modify or reconstruct bridges when the load limits are not adequate for construction of the SDS Project and other access routes are not reasonable.

When implemented, these recommendations will mitigate potential adverse effects on traffic by minimizing delays and promoting traffic safety.

Soils

The following mitigation measures will be implemented:

- Minimize the area of disturbance to defined construction limits and limit the time bare soil is exposed
- Contain soils within the construction area through temporary sediment control measures such as silt fences, sediment logs, trenches, and sediment traps
- Remove woody vegetation prior to topsoil salvage and, to the extent possible, salvage topsoil within tree stump roots
- Use topsoil salvage methods including windrowing topsoil at the limits of construction and pulling the soil back on slopes during reclamation
- Apply topsoil, soil amendments, fertilizers, and mulches as appropriate, and seed selectively during favorable plant establishment climate conditions to match site conditions and revegetation goals

- To the extent practicable, avoid irrigated lands during final design
- To the extent practicable, allow continued use of lands crossed by project facilities after construction
- Where the proposed pipeline crosses prime farmland soils, develop a soils handling plan that separates the top 6 inches and the soils between 6 and 36 inches for subsequent reclamation

Proposed mitigation measures will reduce short-term and long-term losses of soil and soil productivity. Redistribution of topsoil to soil-deficient areas will increase soil productivity in those areas. Topsoil, soil amendments, fertilizers, and mulches will increase productivity and help establish cultivated vegetation and crops. A soils handling plan for prime farmland soils will ensure high quality topsoil is preserved and distributed properly.

Air Quality

The following mitigation measures will be implemented:

- Develop and implement standard control practices, such as watering, to minimize particulate and dust emissions from construction work sites as specified in the fugitive dust control plan
- Ensure construction equipment (especially diesel equipment) meets opacity standards for operating emissions
- Promptly revegetate disturbed areas

The proposed mitigation measures will reduce both short-term and long-term effects on air quality by following standards on construction equipment and minimizing fugitive dust.

Hazardous Materials

The following mitigation measures will be implemented:

- Remove solid waste and properly dispose of at a permitted solid waste disposal facility prior to construction of project facilities at the site
- Inspect the ground surface beneath the solid waste for evidence of hazardous material or petroleum product spills such as soil staining and unusual odors or colors
- If evidence of a spill or spills is noted, delineate the extent of the spill by laboratory analysis and excavate any contaminated soils and properly dispose of at a permitted waste disposal facility
- If soil and/or ground water contamination is encountered during construction of project facilities, implement mitigation procedures to minimize the risk to construction workers and to the future operation of the project.

The proposed mitigation measures will identify areas of potential contamination from hazardous materials and will remediate the soil and ground water if any contamination was identified.

connect to Fry-Ark facilities, and; (3) approve an “administrative swap” of FVA water associated with SDS Project deliveries.

Implementation

The decision to implement the Federal actions needed by Reclamation for the selected alternative will be effective immediately upon approval of this Record of Decision. Reclamation staff will proceed with all activities needed to commence negotiations with the Project Participants to: (1) enter into excess capacity contracts for use of Fry-Ark facilities; (2) issue a special use permit to