

RECLAMATION

Managing Water in the West



Newsletter

Arkansas Valley Conduit Long-Term Excess Capacity Master Contract

Environmental Impact Statement
Fryingpan-Arkansas Project, Colorado

June 2013

In August 2013 the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) will release the Final *Arkansas Valley Conduit and Long-Term Excess Capacity Master Contract, Fryingpan-Arkansas Project Environmental Impact Statement* (Final AVC EIS) evaluating the Arkansas Valley Conduit (AVC). The AVC is a proposed water supply project that would serve the needs of communities in the lower Arkansas River valley. It would include a pipeline, called an "Interconnect" to convey water between the existing north and south outlet works at Pueblo Reservoir. The Final EIS also discloses the environmental impacts of a proposed long-term excess capacity master contract, which would allow participants to store water in Pueblo Reservoir. This newsletter updates readers on EIS activities and identifies Comanche North as the agency-preferred alternative in the Final EIS.

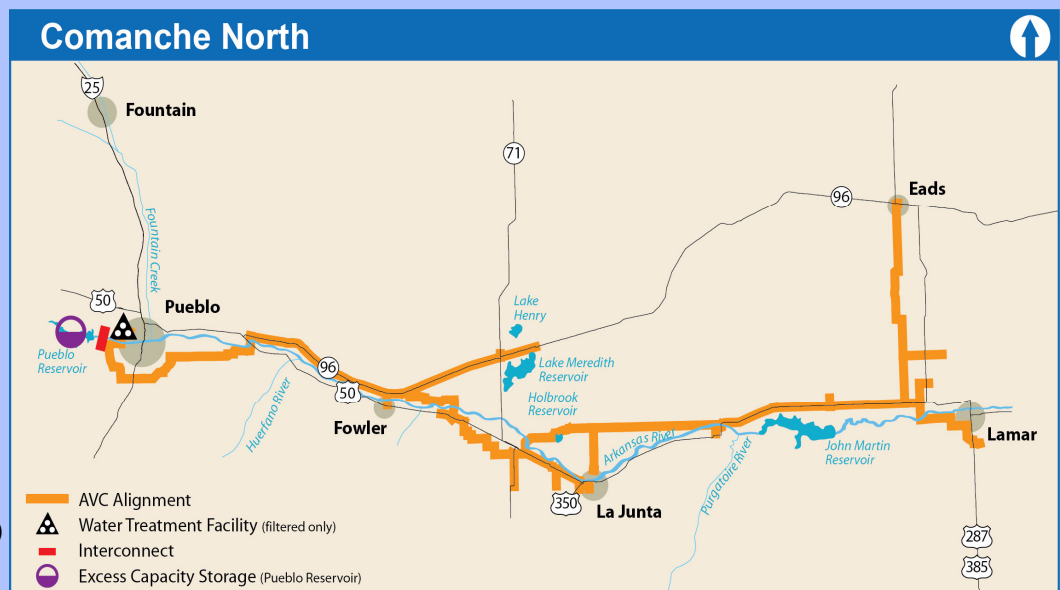
Preferred Alternative: Comanche North Alternative

The Comanche North Alternative minimizes cost and urban construction disturbance, avoids the U.S. Highway 50 expansion corridor, and maximizes source water quality and yield. It is a hybrid alternative developed in response to comments on the Draft AVC EIS by using components of alternatives analyzed in that document.

Comanche North Alternative:

- Includes the AVC, Interconnect and Master Contract.
- Diverts water from the existing Joint Use Pipeline (JUP) immediately upstream from Pueblo Boulevard, north of the Arkansas River, and constructs a new pipeline to the existing Whitlock Water Treatment Plant. The JUP is an existing pipeline that currently delivers water from Pueblo Reservoir to the Whitlock Water Treatment Plant. The Comanche North and JUP North alternatives would use excess capacity available in the JUP.
- From Whitlock Water Treatment Plant, a new pipeline south of Pueblo to St. Charles Mesa and Avondale crosses Interstate 25 southwest of the Comanche Power Plant. East of Avondale, the new pipeline would

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Development of the Comanche North Alternative

The Draft EIS was released for public view in August 2012. During the public review period, Reclamation held five public hearings in September 2012 to inform people about the proposed actions and to solicit comments. A total of 200 comments were received from reviewing state and federal agencies,

organizations, and interested and potentially affected members of the public.

In response to several public comments and recommendations, the alternatives were re-examined to see if mixing pipeline routes, water treatment options, and other engineering features would decrease

costs and minimize infrastructure effects in Pueblo. The JUP, Interconnect, Master Contract, and various routes of AVC pipeline segments were incorporated into a hybrid alternative called Comanche North. The Comanche North Alternative replaced Comanche South and is evaluated in the Final AVC EIS.

EIS Team Guided by Criteria-Based Alternative Ranking Process

Through a structured alternative development and screening process, seven alternatives were identified for evaluation in the Draft AVC EIS. The goal of this process was to identify a range of reasonable alternatives to meet the purpose and needs of the AVC, Interconnect, and Master Contract.

Each alternative was ranked from 1 to 7, with 1 for the alternative that best met the criteria and 7 for the alternative that least met criteria.

To help identify a preferred alternative for the Final AVC EIS, the EIS team developed alternative rankings to summarize performance, cost, engineering, and environmental data.

Purpose and Need

Purpose and need criteria were emphasized based on the *2012 Reclamation National Environmental Policy Act Handbook* guidelines on purpose and need:

- The preferred alternative should complete the action and best meet the purpose and need for the action as defined in the EIS.
- The preferred alternative should have the consensus of the affected community and be reasonable and practicable, meet the purpose and need for action, and be within Reclamation's statutory authority to implement.

The purpose and need for the federal proposed actions, as defined in the EIS, included four criteria: source water quality and source water quantity, redundancy, and reliability. Criteria and ranking were defined as follows:

- **Source Water Quality:** Refers to the quality of water to be used by the water treatment plant. Five alternatives use Pueblo Reservoir water and received the best ranking. Use of water from the Arkansas River above Fountain Creek resulted in a less favorable ranking and use of existing groundwater and surface water downstream from Fountain Creek resulted in the worst ranking.
- **Source Water Quantity:** Assesses the necessary annual water demand. All alternatives met the

Comanche North Alternative:

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run generally north of the Arkansas River, except between Manzanola and Rocky Ford. The pipeline and spurs would be about 227 miles long, with primary spur pipelines along State Highway 96 and north of Highway 50 to serve Eads. Pipeline sizes would range from 36 inches in diameter from the JUP to 4 inches at some AVC participant tie-in locations.

- Integrates new water treatment plant components into the existing Whitlock Water Treatment Plant.
- Delivers filtered water to the St. Charles Mesa Water District.
- Builds pumping stations at the Whitlock Water Treatment Plant and at the south end of the spur to Eads.
- Allows Master Contract participants to store up to 29,938 ac-ft of water (an acre foot is approximately the size of a football field filled with water 1 foot deep) in Pueblo Reservoir.
- Results in estimated cost of construction: \$400 million; estimated cost of annual operations, maintenance and replacement: \$3.5 million; estimated annual costs for the Master Contract: \$0.8 to \$1.1 million.

Table 1. Alternatives Ranking Used to Identify the Preferred Alternative

Alternative	Criteria Ranking					Overall Sum	Overall Rank
	Purpose and Need: Water Quality	Purpose and Need: Quantity, Redundancy, and Reliability	Financial	Engineering and Realty	Environmental Effects		
No Action	6	7	2	1	1	17	2
Comanche North	1	1	1	3	4	10	1
Pueblo Dam South	1	3	4	5	5	18	3
JUP North	1	5	3	6	7	22	6
Pueblo Dam North	1	1	7	4	5	18	3
River South	5	3	6	7	3	24	7
Master Contract Only	6	6	4	1	2	19	5

Note: Standard competitive ranking methodology was used to rank alternatives. An alternative was assigned its relative rank (for example, the sixth best alternative would be ranked 6, even if the first five alternatives tie and are each ranked 1).

Comanche North Alternative Receives Best Ranking Among Alternatives

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annual demand threshold, so all received the best ranking.

- **Redundancy:** Refers to a back-up system to prevent disrupting water delivery from Pueblo Reservoir. Three alternatives received the best ranking because they include the Interconnect that provides water delivery redundancy. Alternatives without the Interconnect received a lower ranking. Alternatives without the Interconnect and AVC received the worst ranking.
- **Source Water Reliability:** Refers to source water reliability and drought protection. Alternatives with AVC and Master Contract received the best ranking. Alternatives with the Master Contract but without AVC received a less favorable ranking, followed by a worse ranking for alternatives with just AVC. The No Action Alternative received the worst ranking because it did not

have the same level of reliability as the action alternatives.

Additional Criteria

Regarding financial values, alternatives were ranked on an estimated cost of construction and annual operation, maintenance, and contracting costs. The least expensive alternative was assigned the best ranking, the next least expensive a less favorable ranking, and so on.

The Engineering and Realty criterion evaluated the physical features and constructability of alternatives. The alternatives ranked best if they had lower pumping requirements (fewer operating and maintenance costs and greenhouse gas emissions); treated water according to preferred Colorado Department of Public Health and Environment methods; had less construction risk related to utilities, public safety, and business disruptions; had fewer effects on

industrial, commercial, and residential zones.

The environmental effects category rankings assessed a wide range of environmental effects and were based on direct and indirect effects outlined in the forthcoming Final AVC EIS.

Total Rankings

The rankings for each alternative and criteria are in Table 1. Based on the alternatives ranking process, the Comanche North Alternative received an overall ranking of 1, the best of 7 alternatives evaluated. As a result, Reclamation identified Comanche North as the preferred alternative.

Identifying the preferred alternative does not define Reclamation's final decision. Other considerations may result in a change in the preferred alternative and may even result in the final decision (recorded in the Record of Decision) not being the preferred alternative identified in the Final EIS.

Next Steps in the EIS Process

- **June 2013:** Solicit community consensus by presenting the preferred alternative to Southeastern Water Conservancy District's Board of Directors and the AVC and Master Contract participants prior to being released publicly.
- **June 2013:** Review of Final AVC EIS by cooperating agencies (federal, state and local governmental agencies).
- **August 2013:** Public release of Final AVC EIS, which can be accessed through the AVC/Master Contract website at www.usbr.gov/avceis.
- **No sooner than 30 days after publication of the Final EIS:** Public release of Record of Decision. This Record of Decision is a concise public record of Reclamation's selection of a preferred alternative.
- If an alternative with AVC and Master Contract is selected in the Record of Decision, then additional design, permitting, and contracting activities would take place before construction. AVC water deliveries could begin in about 10 years, although the Master Contract could be signed within a year.

For Questions...

For questions specific to the proposed actions or the EIS please contact:

J. Signe Snortland
Bureau of Reclamation
Dakotas Area Office
304 East Broadway Avenue
P.O. Box 1017
Bismarck, ND 58502
Phone: 701-221-1278 (office)
Facsimile: 701-250-4326
E-mail: JSnortland@usbr.gov

For Media Contact...

For news media inquiries please contact:

Kara Lamb
Bureau of Reclamation
Eastern Colorado Area Office
11056 W. County Rd 18E
Loveland, CO 80537
Phone: 970-962-4326 (office)
E-mail: KLamb@usbr.gov

**U.S. Department of the Interior
Bureau of Reclamation
Eastern Colorado Area Office
11056 W. County Rd 18E
Loveland, CO 80537-9711**