

RECLAMATION

Managing Water in the West

Environmental Assessment And Findings of No Significant Impact Central Utah Project Completion Action Section 207 And Contributed Funds Act Funding For Provo Reservoir Canal Enclosure and Increased Capacity

PRO-EA-09-001

**Provo River Project, Utah County, Utah
Upper Colorado Region
Provo Area Office**



**U.S. Department of the Interior
Bureau of Reclamation
Provo Area Office
Provo, Utah**

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Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Introduction and Statement of Proposed Action

This document is an Environmental Assessment (EA) analyzing proposed Federal actions related to the Provo Reservoir Canal (PRC), a feature of the Provo River Project located in Utah County, UT. The Federal actions are for the Department of the Interior, Central Utah Project Completion Act Office (Interior) and the Bureau of Reclamation (Reclamation) to provide funding pursuant to Section 207 of the Central Utah Project Completion Act (Titles II-VI of P.L. 102-575) and the Contributed Funds Act (43 U.S.C. 395), respectively, to enlarge and enclose the PRC. The proposed increase in capacity of the PRC would be from 550 cfs to 630 cfs, beginning at approximately 800 North in Orem, Utah, and from 550 cfs to 585 cfs at the northern terminus of the canal, in order to provide reliable future delivery of water from the Central Utah Project, Utah Lake Drainage Basin Water Delivery System (ULS) to Salt Lake County via the PRC. With such a capacity increase, the enclosed canal would continue to have a capacity of 550 cfs at the Murdock Diversion, increasing to 630 cfs at approximately 800 North to accommodate water from the ULS pipeline, and from that point, tapering down to 585 cfs at the northern terminus.

This environmental assessment (EA) has been prepared as required by the National Environmental Policy Act (NEPA) and the Council on Environmental Quality and U.S. Department of the Interior regulations implementing NEPA. This EA will analyze the potential impacts of the proposed action. As required by the NEPA implementing regulations, if potentially significant impacts to the human environment are identified, an environmental impact statement will be prepared. If no significant impacts are identified, Findings of No Significant Impact (FONSI) will be issued by Reclamation and Interior.

Purpose and Need

The need for the proposed action is to supply municipal and industrial water (M&I) to the Wasatch Front. The purposes of the proposed action are: to enlarge a portion of the canal to reliably accommodate delivery of Utah Lake Drainage Basin Water Delivery System (ULS) water; and allow for funding pursuant to Section 207 of CUPCA.

Background

The PRC extends from the Murdock Diversion in Provo Canyon to the ‘Point of the Mountain’ near the Utah County/Salt Lake County boundary, a distance of approximately 22 miles. The PRC was originally built in the early 1900s by the

Provo Reservoir Company to a capacity of 180 cfs. Operation and maintenance of the Canal was later taken over by the Provo Reservoir Water Users Company (PRWUC). In the 1940s, the Canal was enlarged to its current capacity of 550 cubic feet per second (cfs) at the Murdock Diversion, tapering to 350 cfs at the northern terminus, as part of the Provo River Project, in order to deliver water developed in the Project from Deer Creek Reservoir to irrigation and M&I water users in Utah and Salt Lake Counties. The PRC is on land owned in fee title or easement by Reclamation. The Provo River Water Users Association (PRWUA) operates and maintains the PRC under an agreement with Reclamation.

Until the latter half of the 20th century, the PRC traversed farmland and open areas for most of its length. Historically, much of the water delivered in the Canal was irrigation water. As development has occurred in the last 50 years, much of the PRC now traverses subdivisions and commercial properties through Orem, Lindon, Pleasant Grove, Cedar Hills, Lehi, American Fork, Highland, and other communities in northern Utah County. As Salt Lake and Utah Counties have continued to grow, more water is delivered through the PRC for M&I purposes. Both the Jordan Valley Water Conservancy District (JVWCD) and the Metropolitan Water District of Salt Lake & Sandy (MWDSL) have treatment facilities that take water from the end of the PRC near the Point of the Mountain. Presently, the State of Utah allows JVWCD and MWDSL to utilize the open Canal to convey water to their treatment facilities for municipal and industrial purposes.

Annual diversions into the Canal from 1950 through 2000 averaged 76,600 acre-feet. Diversions have varied from as little as 18,500 acre-feet in 1992 (at the end of the driest period of record) to over 124,000 acre-feet in 1954. The PRC is generally used to deliver water between April 15 and October 15 of each year. Water delivered through the PRC includes direct flow and storage rights of the PRWUC, Provo River Project (PRP), and the Central Utah Project (CUP) including:

- direct flow and stored water of the Provo River;
- direct flow and stored water of the Weber River conveyed through the Weber-Provo Canal and;
- direct flow of the Duchesne River conveyed through the Duchesne Tunnel.

Section 207 Funding

Section 207 of the Central Utah Project Completion Act (CUPCA), authorizes a comprehensive program to study and improve water management within the Central Utah Water Conservancy District (CUWCD). Section 207(e)(2) provides federal funds from Interior to finance up to 65 percent of the cost of implementing water conservation measures within CUWCD coupled with a required matching local cost share of 35 percent of non-federal funds. The CUWCD has developed

the Water Conservation Credit Program to meet the requirements of Section 207(e). It identifies, evaluates, and implements water conservation.

In addition, Section 207(b)(4) of CUPCA allows for water that is saved from projects funded under the Water Conservation Credit Program to be made available to the Department of the Interior for instream flows. In exchange for the water, the Department of the Interior provides a credit to CUWCD for the annual contractual repayment obligation in proportion to the water provided for instream flows. The CUWCD in turn provides a credit to the petitioner for the water.

In accordance with Section 207 of CUPCA, Interior would provide \$39,000,000 of federal funds to CUWCD toward the cost of enclosure of the Provo Reservoir Canal. As provided in Section 207(b)(4) of CUPCA, Jordan Valley Water Conservancy District (JVWCD) and Metropolitan Water District of Salt Lake and Sandy (MWDSL) together will dedicate to CUWCD a total of 8,000 acre-feet of their allocation of CUP water annually and in perpetuity. CUWCD would then provide 8,000 acre-feet of water to the Department of the Interior for instream flows, specifically to assist in the recovery of the endangered June sucker. Interior would reduce CUWCD's annual contractual repayment obligation and CUWCD would in turn provide a credit to JVWCD and MWDSL for the water provided.

Section 207 funding, if approved, would comprise part of the total enclosure project funding along with other Federal funds pursuant to the Contributed Funds Act and non-Federal funds.

Contributed Funds Act Funding

The Contributed Funds Act of 1921, 43 U.S.C. § 395, authorizes Reclamation to accept and use funds from non-Federal sources:

All moneys hereafter [after Mar. 4, 1921] received, from any State, municipality, corporation, association, firm, district, or individual for investigations, surveys, construction work, or any other development work incident thereto, involving operations similar to those provided for the reclamation law shall be covered into the reclamation fund and shall be available for expenditure for the purposes for which contributed in like manner as if said sums had been specifically appropriated for said purposes.

Thus, Reclamation approval would provide for use of funds received pursuant to the Contributed Funds Act (along with Section 207 funding, if approved, and other non-Federal funds) to enclose the Provo Reservoir Canal at the slightly larger capacity discussed in this EA.

Participating Agencies and Decisions to be Made

Reclamation is the lead agency in preparing this EA. Interior and CUWCD are cooperating agencies.

If the proposed action is selected, an increase in capacity through a portion of the PRC would be authorized and the PRC Enclosure Project would be eligible for funding pursuant to Section 207 of CUPCA and the Contributed Funds Act of 1921.

Related Projects and Analysis Pursuant to the National Environmental Policy Act (NEPA)

1. **Provo Reservoir Canal Enclosure Project:** The PRWUA asked Reclamation to authorize enclosure of the PRC in order to improve water quality, increase public safety and reduce liability, reduce interference to PRC operations resulting from adjacent development, reduce maintenance costs, conserve water, and provide added security for water delivery facilities. In April 2003, Reclamation completed an EA analyzing the effects of enclosing the PRC. On May 1, 2003, Reclamation issued the final EA (PRO-EA-03-006) and a FONSI (PRO-FONSI-03-006) authorizing enclosure of the PRC but specifying that the PRC's capacity and operations should remain unchanged.

The PRC Enclosure Project EA, PRO-EA-03-006, is incorporated by reference into this EA as discussed further below.

2. **Title Transfer of Provo Reservoir Canal, Salt Lake Aqueduct and Pleasant Grove Property, Provo River Project:** Following Reclamation's 2003 authorization to enclose the PRC, Reclamation was asked to consider transferring three of its Provo River Project facilities, including the PRC, to non-Federal ownership. An EA was prepared to analyze the potential environmental effects of this request, with Reclamation serving as lead agency and Interior, the United States Department of Agriculture Forest Service (Uinta and Wasatch-Cache National Forests), and the National Park Service participating as cooperating agencies. In October 2004, Reclamation and the cooperating agencies issued a final EA (PRO-EA-04-001) and FONSI (PRO-FONSI-04-006) supporting title transfer for all three facilities. These documents are available on the Internet at <http://www.usbr.gov/uc/envdocs/ea/provoResTT/index.html>. Congressional authorization is required for all title transfers, and this was provided through enactment in October 2004 of the Provo River Project Transfer Act, P.L. 108-382.

Ownership of the Salt Lake Aqueduct has been transferred pursuant to P.L. 108-382, but title transfer for the PRC and the Pleasant Grove Property has not yet occurred and so these facilities remain in federal ownership.

3. **Utah Lake Drainage Basin Water Delivery System (ULS):** Implementation of the ULS, the last component of the Bonneville Unit of the Central Utah Project, was analyzed in an EIS prepared by Interior, CUWCD, and the Utah Reclamation Mitigation and Conservation Commission (URMCC) as joint lead agencies, with eight other agencies including Reclamation serving as cooperating agencies. The draft EIS (INT DEIS 04-16) was published in March 2004, and following a public comment period and review and incorporation of comments received, a final EIS (INT FEIS 04-41) was published in September 2004. A Record of Decision (ROD) authorizing implementation of the Spanish Fork Canyon – Provo Reservoir Canal Alternative including the conveyance of ULS water in the PRC was issued on December 22, 2004. These documents are available on the Internet at <http://www.cuwcd.com/cupca/projects/uls/environmentalimpact.htm>.

The ULS EIS discussed on p. 1-50 the plan to hook up the pipeline coming from Spanish Fork Canyon to the Provo Reservoir Canal (PRC) at approximately 800 North in Orem, Utah. However, although this new pipeline would deliver between 90 and 120 cfs into the PRC, the EIS did not discuss or analyze any changes in PRC capacity of 550 cfs. The EIS did specify that 30,000 acre-feet per year of M&I water would be delivered to water treatment plants in Salt Lake County via existing water delivery infrastructure.

4. **Provo Reservoir Canal Trails EA:** In September 2008, the Federal Highway Administration (FHWA), Utah Department of Transportation (UDOT) and Reclamation as joint lead agencies published a draft EA to analyze the effects of using funds appropriated to the FHWA by Congress for the purpose of constructing non-motorized trails in the PRC right-of-way after it is enclosed. Because transfer of the PRC from federal ownership has not yet occurred, Reclamation must authorize use of the PRC right-of-way for trails. If Reclamation authorizes trail construction, it would be subject to certain conditions, including 1) enclosure of the PRC must be completed, and 2) use of the trails would be secondary to the continued priority of the right-of-way for water delivery systems. The final EA for this project was published in November 2008, along with FONSI by both FHWA and Reclamation.

5. **SR-92: Lehi to Highland EA:** In September 2008, FHWA, UDOT and Reclamation published a draft EA to analyze the effects of improvements to State Road 92 in Utah County, Utah, between Interstate 15 and the mouth of American Fork Canyon. Depending on project design, Reclamation may need to authorize work within federal lands or easements associated with the PRC as well as the Jordan Aqueduct. The final EA for this project and FHWA's FONSI were published in November 2008; Reclamation's FONSI was signed on December 1, 2008.

Scope of Analysis and Assumptions for this EA

As noted above, enclosure of the PRC has already been analyzed and authorized by Reclamation and conveyance of ULS water in the PRC was authorized by the Assistant Secretary – Water and Science. The environmental effects of the construction activity required to enclose the PRC were found to be minimal and temporary, except for an adverse effect under the National Historic Preservation Act of modifying the PRC which is an eligible historic structure. Mitigation for this adverse effect was agreed upon among Reclamation, the PRWUA, and the Utah State Historic Preservation Office. A Memorandum of Agreement to complete the mitigation was executed, and mitigation has been completed even though the enclosure project has not yet been initiated.

The scope of analysis for this EA is therefore limited to whether there would be any additional effects, when compared to the originally authorized PRC Enclosure Project, as a result of allowing an increase in capacity from 550 cfs to 630 cfs at the point of tie-in of the ULS pipeline at approximately 800 North in Orem. From its highest capacity of 630 cfs at the point of ULS pipeline tie-in, its capacity would decrease in stages to a capacity of 585 cfs at the PRC's northern terminus.

In particular, the following assumptions apply to this EA:

- Conveyance of CUP water in a PRP facility is acceptable and would not interfere with PRP operations.
- No change in PRP operations, including diversions from Provo River, and therefore no effect on Threatened & Endangered Species, in particular the endangered June sucker.
- This EA only covers Section 207 and Contributed Funds Act funding for enlargement and enclosure of the PRC. Any other, as yet unknown and unforeseen conveyance of water would be subject to additional NEPA compliance as appropriate.

The project area is PRC from ULS pipeline at approximately 800 North, to the canal's northern terminus. From Murdock Diversion to ULS pipeline; capacity remains 550 cfs as authorized in 2003.

No Action Alternative

Under the No Action alternative, funding pursuant to Section 207 and the Contributed Funds Act would not be provided. The canal would remain open and capacity would remain at 550 cfs tapering to 350 cfs at the northern terminus so long as it remains in Federal ownership. As a result, when the ULS pipeline is constructed and connected to the PRC, this would cause the ULS water to be delivered through the PRC and Jordan Aqueduct on a space available basis.

If Federal funds are not provided for enclosure and enlargement of the PRC, this might mean that the enclosure of the canal may not occur in the foreseeable future. Thus, continued operation of the present canal could create a situation where there is sometimes insufficient capacity to transport ULS water. In addition, without Section 207 funding, 8,000 acre feet of water would not be provided by JVVCD and MWDSLS for instream flows, specifically to assist in the recovery of the endangered June sucker.

Proposed Action Alternative

Under the Proposed Action alternative, Federal funds for the enclosure and increase in the capacity of the PRC from approximately 800 North in Orem to the canal's northern terminus would occur.

The PRC Enclosure Project specifications would be as described in Section 2.3 of the 2003 final EA, except that the size of the box culvert used would be approximately 12 feet x 10 feet rather than 12 feet x 8 feet. If pipe is used instead of box culvert, the diameter of the pipe would be approximately 12 feet rather than 10 feet. These sizes may be subject to further change during final design, but the construction footprint and procedures would be the same as described and analyzed in the 2003 final EA. The construction schedule as described in Table 2-2 of the 2003 EA is outdated; the construction period will still be up to three years but the first season of construction would be 2009 at the earliest, and construction may occur during the irrigation season as well as during winter months.

Analysis of Potential Environmental Effects

The ULS EIS analyzed the effects of completing the Bonneville Unit of the Central Utah Project by delivering 101,900 acre-feet on an average annual basis from Strawberry Reservoir for M&I use on the Wasatch Front. The effects of the use of the water to be conveyed in the PRC have therefore already been analyzed and disclosed, as have the effects of constructing the pipeline from Spanish Fork to the point of connection with the PRC. Additionally, as previously stated, the potential effects of enclosing the PRC were analyzed in the 2003 EA. Thus, the potential effects of the proposed Federal actions analyzed in this EA are limited to

any differences associated with enlargement of the enclosed PRC. As noted above, though the diameter of the enclosed PRC would be larger by approximately 2 feet, this would not change the construction footprint within the PRC right-of-way.

**Table 1:
Potential Effects Compared With Previously Approved
PRC Enclosure Project**

RESOURCE	ANALYZED IN 2003 EA	ADDITIONAL EFFECTS	COMMENTS
Surface water resources and water quality	Yes	No	
Groundwater resources	Yes	No	
Terrestrial habitat, Wetlands, Wildlife Resources	Yes	No	
Visual Resources	Yes	No	
Health, Safety, Air Quality, Noise	Yes	No	
Transportation and Utilities	Yes	No	
Recreation	Yes	No	
Cultural Resources	Yes	No	Canal Enclosure Adverse Effect Already Mitigated
Land Use	Yes	No	
Environmental Justice	Yes	No	
Indian Trust Assets	Yes	No	
Threatened and Endangered Species	Yes	No	No change in Provo River diversions; No change in ULS effects (consultation completed by September 8, 2004 letter from FWS). Under no action, 8,000 acre-feet per year of saved water from enclosure of canal would not be available to benefit June sucker.
Socioeconomics	No	No	No concerns identified
Geologic Hazards	No	No	No concerns identified
Cumulative Effects	Yes	No	

Other Considerations

No other environmental, cultural or social issues have been identified that would be affected by the proposed actions. The proposed actions would not affect the existing water delivery infrastructure in Utah and Salt Lake Counties. Under the no action alternative, delivery of ULS water would occur on a space available basis and delivery of existing water supplies would continue as at present and as currently planned.

Public Involvement

On February 27, 2009, this EA was distributed in draft form for a public review and comment period which ended on March 27, 2009. Two comment letters were received and these were considered as appropriate in preparing the final EA.

Conclusions

In comparison with the previously authorized Provo Reservoir Canal enclosure project, and the previously authorized ULS now under construction, the proposed PRC capacity increase to convey ULS water is an environmentally benign action. For water supply needs along the Wasatch Front, the proposed action has benefits related to reliability of supply and water conservation.