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# Huntington North Dam Outlet Works Modification and Carriage of Non-Project Water through Emery County Project Facilities Final Environmental Assessment and Finding of No Significant Impact

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# RECLAMATION

*Managing Water in the West*

## **Huntington North Dam Outlet Works Modification and Carriage of Non-Project Water through Emery County Project Facilities Final Environmental Assessment and Finding of No Significant Impact**

**PRO-06-001**

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



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

January 2007



## **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.

# Huntington North Dam Outlet Works Modification and Carriage of Non-Project Water through Emery County Project Facilities Final Environmental Assessment and Finding of No Significant Impact

## PRO-06-001

Emery County Project, Emery County, Utah  
Upper Colorado Region  
Provo Area Office

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

January 2007



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# **Chapter 1 - Need for Proposed Action and Background**

## **1.1 Introduction**

This document is an Environmental Assessment (EA) for the conveyance of 14,074 acre-feet per year of non-project water through Huntington North Reservoir and the related outlet works modification and spillway construction. Huntington Cleveland Irrigation Company (HCIC) has requested Bureau of Reclamation (Reclamation) authorization for HCIC to convey non-project water through Emery County Project facilities.

## **1.2 Background**

Huntington North Reservoir is an off-stream reservoir located in Emery County approximately one mile north of the city of Huntington, Utah (Figure 1.1). It is part of the Emery County Project, which is located in the Green River Basin in east-central Utah. The Emery County Project provides a supplemental irrigation water supply to an estimated agricultural area of approximately 14,170 acres; a municipal water supply to several cities including Castle Dale, Huntington, and Orangeville; and an industrial water supply to Rocky Mountain Utah Power & Light Company (UP&L). Project water is delivered to water users through Emery County Project facilities and private distribution canals.

Huntington North Dam and Dikes are made of zoned earthfill construction and form Huntington North Reservoir (Figure 1.2). The reservoir receives water through a series of diversions and canals from Huntington Creek and Cottonwood Creek. The main dam is 74 feet high and 2,897 feet long. The East Dike is 31 feet high and 1,185 feet long, and the West Dike is 24 feet high and 1,919 feet long. Huntington North Reservoir has a total capacity of 5,420 acre-feet and a surface area of 242 acres when full. Storage water from this reservoir is released into Huntington North Service Canal and carried to numerous canals and ditches to be distributed for irrigation.

The Emery Water Conservancy District (EWCD), formed in 1962, assumed responsibility for operating and maintaining Emery County Project facilities on January 1, 1970. Recreation facilities and opportunities at Huntington North Reservoir are provided and managed by the Utah Division of Parks and Recreation.

The annual allotment of Emery County Project water available to the HCIC amounts to 14,474 acre-feet, with 3,150 acre-feet available as storage in the reservoir. In an average year, HCIC has approximately 51,124 acre-feet available as non-project water. Under the proposed action analyzed in this EA, the Huntington North Reservoir would only be used to convey a portion of this non-project water, the remainder of which would be regulated and delivered through separate facilities. There are about 7,800 acres of existing irrigated land that can be served by the proposed action by pressurizing the irrigation system from the Huntington North Reservoir. HCIC requests authority to convey up to 14,074 acre-feet of non-project water through the reservoir during the irrigation season.

### **1.3 Purpose and Need and Scope of Analysis**

The purpose of the proposed action is to allow Huntington Cleveland Irrigation Company to convey non-project water through Emery County Project facilities. The need for the proposed action is to provide a means of regulating non-project water associated with HCIC's salinity control program. Conveyance of non-project water through Huntington North Reservoir would require modifying the existing outlet works. This Environmental Assessment analyzes the impacts resulting from the conveyance of non-project water through the dam and the related outlet works modification and spillway construction.

The effect of salinity in the Colorado River Basin is a major concern in both the United States and Mexico. Salinity affects agricultural, municipal, and industrial water users. The Colorado River Basin Salinity Control Act (43 U.S.C. 1571; Pub. L. 93-320) envisioned large Federally-constructed projects to control salinity. In 1995, Pub. L. 104-20 amended Title II of the Colorado River Basin Salinity Control Act to create the Colorado River Basin-wide Salinity Control Program (Basin-wide Program). Under the Basin-wide Program, HCIC submitted a competitive bid for funding which was accepted for implementation. On September 30, 2004, Reclamation entered into Cooperative Agreement No. 04-FC-40-2242, as amended, with HCIC to partially fund a Salinity Control Project involving replacement of many open canals and laterals in the HCIC service area with pressure pipeline.

The original HCIC salinity control project anticipated the construction of a main regulating reservoir near the head of the delivery system. This reservoir would have regulated both project and non-project water. However, HCIC has determined that utilizing Huntington North Reservoir as the main regulating feature associated with their salinity control project and modifying the outlet works with a pressurized pipe would provide significant savings and would help offset unanticipated cost increases. This would entail conveying non-project water (in addition to project water) through Emery County Project facilities.

The scope of analysis in this EA is limited to consideration of whether or not to authorize HCIC to convey non-project water through Emery County Project

facilities. The potential impacts of HCIC's salinity control project were analyzed in the *Price – San Rafael Rivers Unit, Utah, Planning Report / Final Environmental Impact Statement, December 1993 (EIS)*.

## **1.4 Authorizing Actions, Permits, and Licenses**

Implementation of the proposed action could require a number of authorizations or permits from State and Federal agencies. These are summarized below.

- Reclamation authorization needed to convey non-project water through Emery County facilities.
- Permit from the Army Corps of Engineers in compliance with Section 404 of the Clean Water Act, as amended.
- Approval to negotiate and execute a contract for carriage of non-project water (among the United States, EWCD, and HCIC) has been obtained through an approval memorandum from the Commissioner of Reclamation, dated October 23, 2006.
- Easements needed for the spillway and the valve vault 1.5 miles south of the reservoir (Figure 1.3).

## **1.5 Relationship to Other Projects**

- The EWCD is replacing a guard gate and a control gate with 2 stainless steel gates on the Huntington North outlet works. Their work will require completely stopping the flow into the outlet works with a coffer dam. This work is maintenance of an aging facility and is independent of the proposed action. Work was initiated in December, 2006, and will be completed prior to implementing the proposed action (CE No. PRO-CE-07-021).



# Chapter 2 - Proposed Action and Alternatives

## 2.1 Proposed Action Alternative

The proposed action analyzed in this EA is to allow carriage of non-project water through Emery County Project facilities by a contract among the Bureau of Reclamation, HCIC and the EWCD. The contract would allow conveyance of 14,074 acre-feet per year of non-project water for irrigation during the irrigation season. The contract would also allow incidental conveyance of stock water for livestock to be conveyed year-round rather than limited to the irrigation season. This EA will be used to determine the potential effects to the human environment and will serve to guide Reclamation's decision, along with other pertinent information, whether to implement the proposed action.

If Reclamation decides to implement the proposed action to authorize HCIC to proceed with its proposed project, the outlet works of Huntington North Dam would be modified by connecting a pressurized irrigation pipeline into the existing outlet works. The proposed action would require deactivating the existing spillway and constructing a new spillway.

The majority of the outlet works modification for this project would occur within the existing outlet works concrete box culvert (Figure 2.1). A pipe would be installed throughout the entire 110 feet length of the box culvert, connecting at the upstream end of the box culvert near the existing control gate. The pipe would be buried and connected to the irrigation system. A vault valve would be installed in the existing pipeline 1.5 miles south of the dam which would allow Reclamation to release water in an emergency. The emergency release pipe would daylight and spill into Huntington Creek.

A second part of this project includes the construction of a new spillway (Figure 2.2). The existing spillway would be deactivated and blocked off. The new spillway would be the same flow capacity of 100 cubic feet per second. The new spillway would require a concrete inlet within the reservoir basin. The alignment for the new spillway would be located on original ground, off of either the dikes or the dam. The spillway would be of concrete construction and using 54-inch HDPE pipe and would allow the reservoir to spill into the existing canal 1,600 feet to the east. The new spillway would require approximately 100 feet by 1,100 feet of surface disturbance on previously disturbed land with 2 months construction time. The spillway work would require the water in the reservoir to be at 5820 feet elevation which is within the normal operation of the dam (Figure

1.3). The spillway pipeline would be buried from the spillway inlet to where it daylights at the stilling basin.

## **2.2 No Action Alternative**

Under the no action alternative the water conveyance contracts would not be initiated. HCIC would not be allowed to convey non-project water through the dam and changes to outlet works of the dam and construction of the spillway would not occur.

## **2.3 Preferred Action Alternative**

As a result of the analysis presented in this EA, Reclamation considers the proposed action alternative to be the preferred alternative.

# Chapter 3 – Environmental Consequences

## 3.1 Introduction

This chapter identifies the environment potentially affected by the action and no action alternative and the predicted impacts of the alternatives. Resource specialists reviewed the alternatives and considered impacts to the following resources: recreation; water rights; water resources; water quality; air quality; hazardous or solid wastes; dam operations; public safety, access, and transportation; visual resources; socioeconomics; cultural resources; paleontological resources; wetlands and vegetation; floodplains; farmlands; wild and scenic rivers; wildlife resources; and threatened and endangered species. The environmental effects are summarized in Table 3.1.

## 3.2 Proposed Action

The proposed action would require about 2 acres of ground-disturbing activities on an area previously disturbed during dam construction. Huntington North Reservoir is an off-stream reservoir that is filled and drained most years. The work would be completed from January through April. No change in the use of project water would occur under the proposed action. Conveyance of non-project water would not interfere with conveyance of project water through Huntington North Reservoir.

Implementing the proposed action would facilitate completion of HCIC's salinity control project. This EA is limited to analyzing the request to convey non-project water through Emery County Project facilities. All other impacts of HCIC's salinity control project (including the vault valve 1.5 miles south of the dam) were analyzed in the *Price – San Rafael Rivers Unit, Utah, Planning Report / Final Environmental Impact Statement, December 1993* (EIS). Under the preferred plan in the EIS, of which the HCIC salinity control project is a part, irrigation on approximately 36,000 acres would be improved, primarily with sprinkler systems, and agriculture water would be eliminated from open conveyance systems (5,800 acres would be improved by the proposed action of this EA). The EIS preferred plan is estimated to reduce 161,000 tons of salt annually from the Colorado River through a system of on-farm and off-farm irrigation improvements (19,770 tons of salt is expected to be reduced by implementing the proposed action of this EA). The environmental consequences of the preferred plan (Chapter V of the EIS) overall would be its contribution to maintaining acceptable salinity concentrations in the Colorado River.

Implementing the EIS would result in depletions to both the Price and San Rafael Rivers and ultimately the Green and Colorado Rivers, which serves as habitat to the four endangered native fish; Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), razorback sucker (*Xyrauchen texanus*), and bonytail (*Gila elegans*). The U.S. Fish and Wildlife Service determined in the February 4, 1992, *Biological Opinion for the Price-San Rafael River Unit of the Colorado River Water Quality Improvement Program*, that any water depletions in the Colorado River due to the salinity control program are not likely to jeopardize the continued existence of the four endangered fish.

### **3.3 No Action**

In the event that the water carriage contracts are not executed, and the HCIC is not allowed to convey its non-project water through the Emery County Project facilities, modifications to the outlet works and construction of a new spillway on Huntington North Reservoir would not occur.

### **3.4 Summary of Environmental Effects**

There are no anticipated significant impacts to any of the resources listed in section 3.1 as a result of the proposed action of this EA: A no effect determination was made on each of the environmental issues in Table 3.1. Additionally, no unacceptable cumulative impacts would result from implementing the proposed action.

**Table 3.1  
Summary of Environmental Effects**

<b>EVALUATION OF SIGNIFICANT CRITERIA</b>		No	Yes	Uncertain
1.	This action or group of actions would have a significant effect on the quality of the human environment.	X		
2.	This action or group of actions would involve unresolved conflicts concerning alternative uses of available resources.	X		
<b>EVALUATION OF ENVIRONMENTAL ISSUES</b>				
1.	This action would have significant adverse effects on public health or safety.	X		
2.	This action would have an adverse effect on unique geographical features such as: wetlands, Wild or Scenic Rivers, or Scenic Rivers, refuges, floodplains, rivers placed on the Nationwide River Inventory, or prime or unique farmlands.	X		
3.	This action will have highly controversial environmental effects.	X		
4.	This action will have highly uncertain environmental effects or involve unique or unknown environmental risk.	X		
5.	This action will establish a precedent for future actions.	X		
6.	This action is related to other actions with individually insignificant, but cumulatively significant effects.	X		
7.	This action will affect properties listed, or eligible for listing in the National Register of Historic Places.	X		
8.	This action will adversely affect a species listed, or proposed to be listed, as endangered or threatened.	X		
9.	This action threatens to violate federal, state, local or tribal law or requirements imposed for protection of the environment.	X		
10.	This action will affect Indian trust assets.	X		
11.	This action will not accommodate access to or allow ceremonial use of Indian sacred sites by Indian religious practitioners to the extent practicable. Neither will it avoid adversely affect, to any practicable extent, the physical integrity of such sacred sites (E.O. 13007).	X		
12.	This action will disproportionately affect minority or low-income populations (E.O. 12898).	X		



## Chapter 4 - Environmental Commitments

The following environmental commitments would be implemented as an integral part of the proposed action.

1. Standard Reclamation Management Practices--Standard Reclamation management practices would be applied during construction activities to minimize environmental effects and would be implemented by Reclamation construction forces or included in construction specifications. Such practices or specifications include sections in the present report on public safety, dust abatement, air pollution, noise abatement, water pollution abatement, waste material disposal, erosion control, archaeological and historical resources, vegetation, and wildlife.
2. Additional Analyses--If the proposed action were to change significantly from that described in the EA because of additional or new information, such as requiring other spoil, gravel pit, or work areas outside the proposed construction site, additional environmental analysis including cultural and paleontological analyses may be necessary.
3. The 404 Permit or State Stream Alteration Permit (or both) may be required--Before beginning construction activities, Reclamation would obtain from the U.S. Army Corps of Engineers a 404 Permit, Clean Water Act of 1977 (P.L. 217), or from the Department of Natural Resources a State Stream Alteration Permit. These permits would include discharges of dredged or fill material into the waters of the United States. Such activities associated with this project could include cofferdams, disposal sites for excavated material or construction material sources, and rebuilding dam embankments. The conditions and requirements of the 404 Permit would be strictly adhered to by Reclamation and HCIC. Reclamation would fully mitigate any loss of jurisdictional wetland with appropriate in-basin, in-kind mitigation as determined in consultation with the U.S. Army Corps of Engineers and the State of Utah, and as required for obtaining a Corps 404 Permit or a State Stream Alteration Permit.
4. A Utah Pollutant Discharge Elimination System Permit may be required--A Utah Pollutant Discharge Elimination System Permit would be required from the State of Utah before any discharges of

water, if such water is to be discharged as a point source. Appropriate measures would be taken to ensure that construction related sediments would not enter the canal either during or after construction.

5. A Water Quality Certification and a Storm Water Discharge Permit-- Under authority of the Clean Water Act, construction may require from the Utah Division of Water Quality, a Section 401 Water Quality Certification and a Section 402 Storm Water Discharge Permit.
6. Hazardous or Solid Wastes--Reclamation and HCIC will be responsible in making sure that any hazardous substance required or used for this project such as gasoline, diesel, paint and others would be properly labeled, stored and disposed according to the National Fire Protection Association [(NFPA) 704], the Hazardous Materials Identification System (HMIS) and the Resource Conservation and Recovery Act of 1976.
7. Water Quality Monitoring--If monitoring in the future documents significant water quality impacts from the proposed action, mitigation would be implemented by HCIC as necessary, to minimize those impacts.
8. Cultural Resources--Any person who knows or has reason to know that he/she has inadvertently discovered possible human remains on Federal land, must provide immediate telephone notification of the discovery to Reclamation's Provo Area Office archaeologist. Work would stop until the proper authorities were able to assess the situation onsite. This action would promptly be followed by written confirmation to the responsible Federal agency official with respect to Federal lands. The Utah State Historic Preservation Office and interested Native American tribal representatives would be consulted immediately. This requirement is prescribed under the Native American Graves Protection and Repatriation Act (43 CFR Part 10); and the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470).

The above process is listed on a "yellow card," to be placed in the cabs of heavy equipment used during construction of the proposed project. This card would be distributed to the equipment operators and verbal direction and description of possible inadvertent discovery scenarios would be given at a preconstruction meeting by the Provo Area Office archaeologist prior to any ground-disturbing activity.

9. Construction Activities Confined to Previously Disturbed Areas--All construction activities would be confined to previously disturbed areas, to the extent practicable, for such activities as work, staging, and storage; gravel pit; waste areas; and vehicle and equipment parking areas.
10. Public Access--Construction sites would be closed to public access. Temporary fencing, along with signs, would be installed to prevent public access. Reclamation and HCIC would coordinate with landowners or those holding special permits and other authorized parties regarding access to or through the project area.
11. Disturbed Areas--All disturbed areas resulting from the project would be smoothed, shaped, seeded, contoured, and rehabilitated to as near their pre-project construction condition as practicable. After completion of the construction and restoration activities, disturbed areas would be seeded at appropriate times with weed-free seed mixes. The composition of seed mixes would be coordinated with wildlife habitat specialists. Weed control on all disturbed areas would be required.
12. Environmental Commitment Plan (ECP) and Environmental Commitment Checklist (ECC)--An ECP and an ECC would be prepared and used by the Provo Area Office to ensure compliance with the environmental commitments and the environmental quality protection requirements. A post-construction environmental summary (PCES) would be completed within 1 year after completion of the project to assess the effectiveness of the mitigation measures.



# Chapter 5 - Consultation and Coordination

## 5.1 Introduction

This chapter details the consultation and coordination between Reclamation and other Federal, state, and local government agencies, Native American Tribes, and the public during the preparation of this EA. Compliance with NEPA is a Federal responsibility that involves the participation of all of these entities in the planning process. NEPA requires full disclosure about major actions taken by Federal agencies and accompanying alternatives, impacts, and potential mitigation of impacts.

## 5.2 Public Involvement

This EA was made available for a 30-day public comment period from December 8, 2006 to January 10, 2007. It was mailed to 25 municipalities, organizations, and agencies, and also made available on the internet at [www.usbr.gov/uc/envdocs/index.html](http://www.usbr.gov/uc/envdocs/index.html). Reclamation received two response letters on the draft EA. All comments received on the draft EA were reviewed and considered in preparing the final EA, with revisions made as appropriate in response to comments.

Interested parties may receive a copy of the final EA by written request to Mr. Peter Crookston, Bureau of Reclamation, Provo Area Office. The address is 302 East 1860 South, Provo, Utah 84606-7317, or e-mail, [pcrookston@uc.usbr.gov](mailto:pcrookston@uc.usbr.gov).

## 5.3 Native American Consultation

Reclamation has conducted Native American consultation throughout the public information process. In August 2006, letters describing the proposed project, including maps were sent by the Provo Area Office archaeologist to Ms. Betsy Chappoose, director of the Cultural Rights and Protection Department for the Uintah and Ouray Ute Tribe, Fort Duchesne, Utah; and Ms. Doreena Martineau, Cultural Director for the Paiute Indian Tribe of Utah, Cedar City, Utah. This consultation was conducted in compliance with 36 CFR 800.2(c)(2), on a government-to-government basis. Through this effort, the tribe is given a reasonable opportunity to (1) identify any concerns about historic properties; (2) advice on the identification of historic properties, including those of traditional religious and cultural importance; (3) to express their views on the undertaking's

effects on such properties; and (4) to participate in the resolution of adverse effects.

## **5.4 Coordination with Other Agencies**

A paleontological report for the entire vicinity of the proposed project was requested from the Utah State Geological Survey and received in June 2006. There is low potential of encountering paleontological resources in the project area.

Surveys were conducted to determine eligibility under National Register of Historic Places (NRHP). In July 2002 an intensive level cultural resource inventory of 100 percent of the Huntington North Reservoir area was completed (U-02-SJ-0131w). One site (42Em2812) a historic canal segment, was documented. It is not eligible for the National Register of Historic Places (NRHP). Two trash dumps and a modern ditch system were also noted, but are not eligible for the NRHP since they are not old enough to qualify as historic.

A second cultural resource inventory, the Huntington/Cleveland Irrigation Company Salinity Project, Phase 1, Elmo and Huntington Units, Emery County, Utah (U-06-BE-0103b,p,s,w) was completed in August 2006. This report covers approximately 47 miles of pipeline being proposed for the irrigation of approximately 16,894 acres of crops. A very small section of this project is within several hundred feet of Huntington North Reservoir and was inventoried for cultural resources. One small historic trash dump was located near the pipeline corridor. Site 42Em3771 is not eligible for the NRHP. No historic properties would be affected by the construction of this project.

## Chapter 6 - Preparers

The following contributors to the EA are part of the U.S. Department of the Interior, Bureau of Reclamation, Provo Area Office.

Name	Position Title	Contribution
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Barbara Boyer, MA	Archaeologist	Cultural Resources; Indian Trust Assets; Paleontology
Peter Crookston, MS	Environmental Protection Specialist	EA Coordinator; NEPA Compliance; Wild and Scenic Rivers; farmlands
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Kerry Schwartz, MPA	Resource Program Manager	Project Oversight
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## Chapter 7 - References

U.S. Department of the Interior, Bureau of Reclamation. 2004. *Huntington North Reservoir, Resource Management Plan, Final Environmental Assessment. Emery County Project, Utah*, December 2004.

U.S. Department of the Interior Bureau of Reclamation and U.S. Department of Agriculture Soil Conservation Service, 1993, *Price-San Rafael Rivers Unit, Utah, Planning Report /Final Environmental Impact Statement, Colorado River Water Quality Improvement Program/Colorado River Salinity Control Program*, December 1993.