

# RECLAMATION

*Managing Water in the West*

## **Ouray Park Canal Salinity Control Project Environmental Assessment PRO-EA-11-004**

Utah County, Utah  
Upper Colorado Region  
Provo Area Office



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

December 2011

## **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.

# **Ouray Park Canal Salinity Control Environmental Assessment PRO-EA-11-004**

**Utah 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**

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# Chapter 1 – Need for Proposed Action and Background

This document is an Environmental Assessment (EA) analyzing the potential effects of the Ouray Park Canal Salinity Control Project (Project), located in Uintah County, Utah. The Federal action (Proposed Action) is whether the Bureau of Reclamation should authorize the use of Federal funds to implement the Project, which includes the abandonment of the 13-mile-long Ouray Valley Canal, and the replacement of 5 miles of the existing open Ouray Park Canal with pipe.

This EA has been prepared as required by the National Environmental Policy Act (NEPA), the Council on Environmental Quality (CEQ) and the U.S. Department of the Interior (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 environment are identified, an Environmental Impact Statement (EIS) would be prepared. If no significant impacts are identified, a Finding of No Significant Impact (FONSI) would be issued by Reclamation.

## 1.1 Background

### 1.1.1 Colorado River Basin Salinity Control Program

The purpose of the Colorado River Basin Salinity Control Program is to “protect the quality of water available in the Colorado River” ([www.usbr.gov/uc/progact/salinity](http://www.usbr.gov/uc/progact/salinity)). The Colorado River provides water for more than 23 million people and irrigation for more than 4 million acres of land in the United States, as well as water for about 2.3 million people and 500,000 irrigated acres in the Republic of Mexico. Controlling the salinity of the Colorado River remains one of the most important challenges facing Reclamation. High salinity levels make it difficult to grow winter vegetables and popular fruits. In water systems, it plugs and destroys municipal and household pipes and fixtures. Recent salinities in the lower portion of the Colorado River are typically about 700 mg/L, but in the future may range between 600 and 1,200 mg/L, depending upon the amount of water in the river system. Salinity damages in the United States portion of the Colorado River Basin range between \$500 million to \$750 million per year and could exceed \$1.5 billion per year if future increases in salinity are not controlled.

### 1.1.2 Ouray Park Canal Salinity Project

Ouray Park Canal is approximately 20.5 miles in length, extending from Cottonwood Reservoir on the north to Pelican Lake on the south. The canal has

historically delivered irrigation water to serve about 3,256 acres of farmland in the Cottonwood Service area and storage water to fill Pelican Lake. Capacity of the canal is about 95 cubic feet per second (cfs).

The upper and the lower sections of the Ouray Park Canal were piped with salinity-funded projects constructed between the years 2000 and 2006 - 10.8 miles of the upper canal under the West Side Combined Canals Salinity Project (WSCCSP), and 4.5 miles on the lower end under the Ouray Park Pipeline Salinity Project. The remaining approximately 5.2 miles of canal in the middle section remains unlined. The Proposed Action would replace this remaining section of open and unlined canal with pipe as shown on Figure 1.

The Proposed Action also includes abandonment of the 13-mile long Ouray Valley Canal, as shown on Figure 1. The Ouray Valley Canal was abandoned for 11 months of the year as part of the Brough Pipeline Project, constructed with salinity funds in 2008. Piping the remaining 5 mile section of the Ouray Park Canal allows for full abandonment of the Ouray Valley Canal.

## **1.2 Purpose of and Need for the Proposed Action**

The purpose of the Proposed Action is to replace the existing, approximately five mile-long section of unlined earthen Ouray Park Canal, with a pipeline and abandon the Ouray Valley Canal to reduce salt load to the Colorado River. This two-part project would reduce seepage which dissolves salts in the soils and eventually carries the salts to the Upper Colorado River Basin. The need for the Proposed Action is to reduce the salinity contributions from the Upper Colorado River Basin, that result from the existing Ouray Park and Ouray Valley canals, consistent with the purposes of the Colorado River Basin Salinity Control Program.

## **1.3 Decisions to be Made**

Reclamation must decide whether to authorize use of Federal Salinity Control Program funds by the Ouray Park Irrigation Company (OPIC) for the replacement of the Ouray Park Canal with pipeline and abandonment of the Ouray Valley Canal.

## **1.4 Permits and Authorizations**

Implementation of the Proposed Action could require a number of authorizations or permits from state and Federal agencies. The OPIC and/or Reclamation would be responsible for obtaining all permits, licenses, and authorizations required for the Proposed Action. Potential authorizations or permits may include those listed in Table 1 and others not listed.



Insert Figure 1

**Table 1**  
**Permits and Authorizations Required**

Agency/Department	Purpose
Utah Division of Water Quality	Utah Pollution Discharge Elimination System (UPDES) permit required for dewatering.
	Storm Water Permit under Section 402 of the Clean Water Act if water is to be discharged as a point source.
State of Utah Department of Natural Resources. Division of Water Rights	Stream Alteration Permit required under Section 404 of the Clean Water Act and Utah statutory criteria of stream alteration described in the Utah Code.
U.S. Army Corps of Engineers	Permit under Section 404 of the Clean Water Act for construction activities in waters of the United States, and/or construction activities affecting wetlands.
Utah State Historic Preservation Office	Consultation pursuant to Section 106 of the National Historic Preservation Act, 16 USC 470.
State of Utah, Bureau of Land Management and two Private property owners	Easements with Landowners.
Uintah County	Construction Permit.

## 1.5 Scope of Analysis and Content of this EA

The purpose of this EA is to determine whether or not Reclamation should implement the Proposed Action. That determination includes consideration of whether there would be significant impacts to the human environment. In order to implement the Proposed Action as described in Chapter 2, this EA must be completed and a FONSI issued.

This EA consists of the following chapters:

- 1) Need for Proposed Action and Background
- 2) Proposed Action and No Action Alternative
- 3) Affected Environment and Environmental Effects
- 4) Environmental Commitments
- 5) Consultation and Coordination
- 6) Preparers
- 7) References

## **1.6 Related Projects and Documents**

### **1.6.1 Green River Pumping Project (GRPP)**

GRPP is currently under construction with completion anticipated this year, 2011. GRPP consists of a water intake and pump station on the Green River, a 30 acre-foot regulating pond and approximately 3 miles of pipeline to connect the pump station to the pond and the pond to the existing Ouray Park pipeline as shown in Figure 2. The pump station will pump up to 10,000 acre-feet of water per year for irrigation of lands in western Uintah County as shown in Figure 3. The pond will provide the pressure needed for irrigation and the storage capacity needed to maximize the efficiency of the pumps on the Green River. An EA and FONSI were issued for the project in June 2010. Water from GRPP will be delivered to the irrigators either directly through the Ouray Park Canal or by exchange with water from the Uinta and Whiterocks Rivers. The Proposed Action would improve the operational efficiency of the GRPP facilities.

### **1.6.2 West Side Combined Canals Salinity Control Project**

WSCCSP was constructed with Reclamation salinity funds from 2005 to 2008. The project combined 7 canals into a single gravity-fed pressurized pipeline and combined the existing diversions for these canals into a single location on the Uinta River. This project replaced almost 50 miles of open unlined earthen canals with pipe. The Cottonwood Pipeline segment of WSCCSP replaced the upper 13 miles of the Ouray Park Canal. Water to the Ouray Park Canal is now delivered through the Cottonwood Pipeline, as indicated by the legend “Existing Pipeline” on the map in Figure 1. When completed, the Proposed Action facilities would be operated and maintained by the Uintah Water Conservancy District (UWCD) as an additional component of WSCCSP. The Proposed Action would improve the operational flexibility and efficiency of WSCCSP facilities.

### **1.6.3 Brough Pipeline**

The Brough Pipeline was constructed in 2008 as the primary feature of the Ouray Valley Canal/Brough Pipeline Salinity Project. This project also included the abandonment of the Ouray Valley Canal for 11 months of the year. Since 2008, water to fill Brough Reservoir has been delivered through WSCCSP pipelines and the Brough Pipeline, except for the up to 30-day period of spring runoff when water is brought down the Ouray Valley Canal. The Brough Pipeline is operated and maintained by UWCD. The Proposed Action would allow approximately 900 acres of land currently irrigated from Brough Reservoir to be served through WSCCSP facilities. This would improve the operational flexibility and efficiency of all OPIC facilities, including GRPP.

Insert Figure 2

Insert Figure 3

#### **1.6.4 Ouray Park Pipeline Salinity Project**

The Ouray Park Pipeline Salinity Project (lower section of the Ouray Park Canal) was constructed in 2004. This project piped the lower approximately 4.5 miles of open Ouray Park Canal, immediately below the Proposed Project section, with PVC pipeline. Upon completion of the Proposed Action, water would flow to this lower section of the Ouray Park Canal through the Proposed Action Pipeline. Water would also enter the pipeline from the GRPP pipeline, as shown in Figure 2.

#### **1.6.5 UWCD SCADA System Upgrade Project**

The UWCD SCADA System Upgrade Project (District SCADA Project) is currently under construction, with completion anticipated in the summer of 2012. The primary focus of the District SCADA Project, partially funded through Reclamation's WaterSmart program, is water conservation. The project consists of installing automation and monitoring sites throughout the District service area, upgrading existing SCADA system equipment and sites, and creating water banks and water markets. Upon completion of the Proposed Action, water measurement data through the Ouray Park Canal would be incorporated into the District SCADA Project.

#### **1.6.6 Salinity Program Environmental Documents**

NEPA Documents directly pertinent to the Proposed Action include:

- Colorado River Water Quality Improvement Program, Final Environmental Statement, U.S. Department of Interior, Bureau of Reclamation, May 1977.
- Uinta Basin Unit Planning Report/Final Environmental Impact Statement, Colorado River Water Quality Improvement Program, United States Department of Interior, Bureau of Reclamation, 1986.

Other related Uintah Basin NEPA documents include:

- Burns Bench Pipeline/Stewart Lake Water, Site Specific Environmental Evaluation Checklist and Decision Record, 2000.
- Class C Laterals, Site Specific Environmental Evaluation Checklist and Decision Record, Duchesne County Salinity Control Project Phase 2, 2003.
- Hicken Lateral Canal, Site Specific Environmental Evaluation Checklist and Decision Record, 2003.
- Lower Duchesne Feeder Canal, Site Specific Environmental Evaluation Checklist and Decision Record, 2000.
- Panama Canal/Ouray Park Canal Rehabilitation Project, Site Specific Environmental Evaluation Checklist and Decision Record, 2000.
- Sunshine Canal, Site Specific Environmental Evaluation Checklist and Decision Record, 1999.
- Upper Duchesne Feeder Canal, Site Specific Environmental Evaluation Checklist and Decision Record, 2000.

- West Side Combined Canal Salinity Project, Site Specific Environmental Evaluation Checklist and Decision Record, 2000.





# **Chapter 2 – Proposed Action and No Action Alternatives**

## **2.1 Introduction**

The Proposed Action analyzed in this EA is Reclamation’s authorization for use of Federal funds for the construction of the Proposed Project, including the execution of easements for required land acquisition as described in Section 2.3. This EA will be used to determine the potential effects on the human and natural environment from the Proposed Action and the No Action Alternatives. This EA will serve to guide Reclamation’s decision, along with other pertinent information, about whether or not to implement the Proposed Action.

If Reclamation decides to implement the Proposed Action, the OPIC would be authorized to proceed with piping the Ouray Park Canal and abandoning the Ouray Valley Canal in order to reduce the salinity of the Upper Colorado River Basin. If authorized to proceed, OPIC would construct, operate, and maintain this new pipeline and abandon use of the Ouray Valley Canal. All facilities would continue to be owned by OPIC.

## **2.2 No Action Alternative**

Under the No Action Alternative, Reclamation would not authorize use of Federal funds for the abandonment of the Ouray Valley Canal and the piping of the Ouray Park Canal. The existing open and unlined canals would continue to be used for delivering irrigation water with no proposed improvements for reducing or eliminating seepage. Currently, an estimated 20 to 30 percent of the irrigation water traveling through these canals is lost to seepage. The seepage leads to the dissolving of salts in the sandy soils, which ultimately leads to an increase in salinity of the Colorado River. Under the No Action Alternative, 1,662 tons of salt would continue to reach the Colorado River every year (Jacobson, 2010). In addition, the loss of water due to seepage requires far greater than necessary water appropriation for agricultural use, due to the inefficiency of the existing unlined canal systems.

## **2.3 Proposed Action Alternative**

Under the Proposed Action Alternative, Reclamation would authorize the use of Federal funds to abandon the Ouray Valley Canal and replace a section of the existing open Ouray Park Canal with pipe. This action would reduce the salinity

loading of the Colorado River by a total of 1,662 tons annually (see Table 2 - Estimated Salt Reduction). Implementing the project would also reduce the amount of water lost through seepage, making more water available for irrigation. Additionally, piping these canals would reduce the amount of ongoing system maintenance. Ongoing maintenance includes removing the debris from the channels, clearing overgrown vegetation, and replacing outdated valves and gates.

**Table 2  
Estimated Salt Reduction**

Component	Action	Tons/year
Whiterocks Canal	Reduced Flow	60
Ouray Valley Canal	Abandon	700
Ouray Park Canal	Pipe	902
Total		1,662

Source: Kib Jacobson - Bureau of Reclamation. Mail Correspondence. December 14, 2010

### **2.3.1 Project Design**

The Proposed Action includes piping the remaining 5-mile section of the Ouray Park Canal and abandoning the Ouray Valley Canal, as described below.

#### **Ouray Park Canal Piping**

The Proposed Action would replace the approximate 5-mile section of open, unlined canal with 42-inch HDPE pipe. The upper approximate 2-mile section would be installed adjacent to the Brough Pipeline (see Figure 1) and the lower approximate 3-mile section would be installed adjacent to the Ouray Park Canal. The project also includes construction of approximately 7 turnouts, a Pressure Sustaining Valve structure, connecting to the existing upstream and downstream Ouray Park Pipeline, and a discharge energy dissipation structure in the Ouray Park Canal. Under the proposed Project, water would continue to be delivered through the open Ouray Park Canal for habitat replacement values.

The project would install new turnout structures along the canal as needed to make water deliveries. A flow measurement instrument would be installed at each turnout to provide data needed for distribution and allocation of the delivered water. Data from the flow meters would be incorporated into the District's SCADA system.

The Proposed Action would require a temporary 100-foot wide construction easement for the full length of the project, temporary staging area easements, and a permanent 50-foot wide easement for operation and maintenance. Easement requirements are summarized in Table 3 below and as shown on Figure 4. These easements would be acquired by OPIC.

**Table 3**  
**Easement Requirements**  
**(Units: feet)**

Type of Easement	BLM	State of Utah	Private	Total
Temporary (100-foot wide)	8,617	4,535	11,548	24,700
Permanent (50-foot wide)	8,617	4,535	11,548	24,700
<b>Total</b>	<b>8,617</b>	<b>4,535</b>	<b>11,548</b>	<b>24,700</b>

Insert Figure 4

### **Ouray Valley Canal Abandonment**

As mentioned in Section 1.1.2, the Ouray Valley Canal currently delivers water during 1 month per year (high runoff month) to help fill Brough Reservoir. Under the Proposed Action, water would no longer be delivered through the canal. This abandonment of the Ouray Valley Canal would consist of simply not delivering water through the canal. The canal prism would not be affected by the project, i.e., diversion and turnout structures would not be altered and the canal would not be filled in or otherwise modified. Surface runoff water may accumulate in the canal from time to time but no water would be released into the canal. Other than occasional rain and runoff, the canal prism would be dry.

### **2.3.2 Project Construction**

Construction of the Proposed Action consists of installing approximately 17,500 feet of 42-inch diameter HDPE pipeline, and constructing turnouts, pressure reducing valves, meters, and other appurtenant facilities as explained in Section 2.3.1.

#### **Trench Excavation**

The proposed pipeline would be installed using conventional excavation and hauling equipment. All construction activities would be confined to the construction and staging easements described in Section 2.3.1 and shown in Figure 4. Due to the lack of staging areas along the major section of the corridor, it is anticipated that the contractor would excavate, place the pipe, and backfill in a relatively continuous manner to make the best use of the limited space.

Trenches approximately 8 feet wide at the bottom and 20 feet wide at the top would be excavated for pipe installation. The trenches would be approximately 8 feet deep. Excavation would be performed with the use of appropriately sized construction equipment to minimize disturbance to the surrounding area. All excavated material would be stockpiled to the side of the trenches, and be used as backfill after pipe installation. Wherever top soil exists along the proposed pipeline, it would be separated from other material in order to preserve it for placement as the last layer over the pipe.

#### **Pipe and Appurtenance Installation**

The pipes would be transported by a tractor trailer from the manufacturer to the staging areas. From the staging areas, pipe would either be transported by a loader to the work site or fused into longer sections and drug to the work site. Existing access roads would be used to transport pipe to the worksite. Each section of pipe would be fused together with a pipe fuser and then placed in the prepared trench.

After installing the pipe, backfill would be placed around the pipe. Topsoil would be separated from common fill for reuse at the surface in the trench area. This would minimize impacts and facilitate recovery of natural vegetation. Backfill would be mechanically compacted in accordance with the design specifications. Soil in work areas would be spread evenly, to blend with the natural topography

and maintain local drainage patterns. Stockpiled topsoil would then be spread evenly over previously vegetated areas and reseeded with native vegetation. Agricultural fields crossed by the proposed pipeline could be reseeded in agricultural species. Additional bedding material, if needed, would be hauled in from approved offsite sources. All waste material, if any, would be hauled to approved offsite locations. All disturbed areas would be contoured and reseeded to restore them to as near pre-construction condition as reasonably possible. The growth of weed species would be controlled on all disturbed areas.

### **Quality Control Procedures**

After backfilling and completion of construction activities, the contractor would provide quality control of construction through visual inspection and hydrostatic testing. Each segment or reach of pipe would be filled with water and pressurized for hydro testing through contractor-supplied pumps, to ensure that the system operates to design specifications. If the pipe leaks or breaks, it would be repaired and re-tested until it meets specifications. After testing a segment, the water would be pumped into the next segment for testing.

### **Construction Staging Areas**

Construction staging areas have been identified as shown on Figure 4. The staging areas would be used to stockpile the pipe, equipment, and construction vehicles. Staging areas have been assessed to determine potential project impacts during construction. This is discussed further in Section 3 of this document.

### **2.3.3 Project Operation**

As stated in Section 1.6.3, partial abandonment of the Ouray Valley Canal (11 of 12 months) has occurred since 2008 as part of the Brough Pipeline salinity project. Piping this last remaining section of the Ouray Park Canal would allow abandonment by improving the efficiency of the entire WSCCSP and Ouray Park Canal delivery systems. Abandonment is made possible because of two factors. First, piping the canal would conserve a significant amount of water. Currently, there is considerable waste due to seepage, evaporation, and system spillage. While spillage (water ordered but not used) can be captured in Pelican Lake, it is lost to Cottonwood Reservoir where it could be more efficiently used. A fully piped system would allow water to be taken when needed with excess water kept in Cottonwood Reservoir. Second, a fully piped system would allow approximately 900 acres of land now served from Brough Reservoir to be served through WSCCSP facilities, thus reducing the demand on Brough Reservoir. The combination of more water being available in Cottonwood Reservoir and a reduced demand on Brough Reservoir makes abandonment of the Ouray Valley Canal feasible.

Abandonment of the Ouray Valley Canal would also reduce flows in the Whiterocks Canal. The flows would be reduced by the amount of water historically taken by the Ouray Valley Canal, as shown in Table 4. No structural changes would be made to the Whiterocks Canal.

In summary, the Proposed Action would modify historic operations by delivering storage water to Brough Reservoir through the enclosed WSCCSP and Brough Pipelines instead of through the Whiterocks and Ouray Valley Canal systems. The Proposed Action would also serve water through WSCCSP facilities and the new pipeline to approximately 900 acres of land currently served from Brough Reservoir. The effects of delivery changes on the three canal systems are summarized in Table 4 below.

**Table 4  
Irrigation Delivery Data**

Item	Units	Whiterocks Canal		Ouray Valley Canal		Ouray Park Canal
		Before	After	Before	After	
<u>Irrigation Season</u>						
Average Daily	cfs	51.5	47.2	26.7	0	12.8
Average Seasonal	ac-ft	18,929	17,329	1,600	0	4,700
Average # Days	days	185	185	30	0	185
<u>Non-Irrigation Season</u>						
Average Daily	cfs	6.8	6.8	0	0	6.7
Average Seasonal	ac-ft	2,430	2,430	0	0	5,100
Average # Days	days	180	180	0	0	180

### 2.3.4 Transportation Requirements

Transportation to the project during construction and operation would follow existing access roads to minimize disturbance to the existing vegetation. These roads are currently used for service access to the canal and are already disturbed. The temporary 100-foot construction easement would also be used as an access road. This area in the temporary easement will be re-contoured and re-vegetated with native plant species, following completion of construction.

### 2.3.5 Standard Operating Procedures

Standard Operating Procedures (SOPs) would be followed (except for unforeseen conditions) during construction, operation, and maintenance of the Proposed Project to avoid or minimize adverse impacts on people and natural resources. The SOPs and features of the Proposed Action have been formulated to avoid or minimize adverse impacts. A pre-construction meeting with Reclamation, the contractor, and OPIC’s representative would be held prior to commencing construction. During construction, weekly meetings would be held to assess the progress of the work. Specifics of restoration would be outlined in the SOPs and/or right-of-way easements.





# Chapter 3 – Affected Environment and Environmental Effects

## 3.1 Introduction

This chapter describes the existing environment of the project area, and any potential impacts from the No Action and Action Alternatives to that environment. The following resources are examined in detail in this chapter: water resources, water rights, water quality, wetlands and vegetation, fish and wildlife, threatened, endangered, and sensitive species, cultural resources, paleontological resources, public safety, access, and transportation, lands, and socioeconomics. The present condition and characteristics of each resource are discussed, followed by an analysis of the predicted impacts that would likely occur under the No Action and Proposed Action Alternatives.

## 3.2 Resources Eliminated from Analysis

Resources that do not exist within the project area and/or would not be impacted by the No Action or Action Alternatives were eliminated from further analysis, and are described in Table 5 below.

**Table 5**  
**Resources Eliminated from Further Analysis**

Resource	Rationale for Elimination from Further Analysis
Air Quality	There would be no long-term negative effects to air quality. Some minor localized short-term effects would be present during construction but none after construction
Public Health	There would be no negative impacts on public health from the Proposed Action. Furthermore, this project would reduce a safety hazard by enclosing the open ditch water conveyance system, thereby eliminating the potential of someone drowning.
Recreation resources	There would be no negative effects on recreation resources found within the project area.
Scenic Rivers	There are no designated wilderness areas or wild and scenic Rivers within the project area; therefore there would be no impact to these resources.

Noise	There would be no long-term impacts due to increased noise levels. Noise levels are expected to be elevated during construction, but no new noise would be generated from the Proposed Action after construction.
Prime and Unique Farmland	There is no prime and unique farmland within the project area, and therefore, there would be no impacts to this resource.
Energy Requirements and Conservation Potential	There would be no impacts to energy requirements and conservation potential within the project area.
Urban Quality and Design of the Built Environment	The Proposed Action is located in a rural setting on public and agricultural lands; therefore, there would be no impacts to urban quality and design of the built environment.
Visual	There would be no impacts to visual resources within the project area.
Geological	There would be no impacts to geological resources within the project area.

### 3.3 Affected Environment

#### 3.3.1 Water Resources

Water to serve OPIC lands comes from the Whiterocks and Uinta Rivers as explained in more detail in Section 2.3.3. In addition to the limited direct flow rights from these rivers, OPIC also has storage rights as follows: Brough Reservoir (2,000 af), Cottonwood Reservoir (6,000 af), Pelican Lake (14,000 af), and reservoirs at the head of the Whiterocks River (2,200 af). Even though lands served by OPIC have decreed water rights of 3.0 acre-feet per acre (af/acre), actual deliveries from both direct flow and storage rights has typically averaged about 2.0 to 2.2 af/acre. Deliveries by the two canals associated with the Proposed Action are described below.

##### **Ouray Park Canal**

The Ouray Park Canal delivers about 4,700 af/yr of water during the irrigation season from Cottonwood Reservoir to the Cottonwood service area. The canal also carries approximately 6,150 af/year of water during the winter to Pelican Lake. Therefore, total water deliveries through the Ouray Park Canal are about 10,850 acre-feet.

##### **Ouray Valley Canal**

The Ouray Valley Canal delivers water during spring runoff only (up to 30-days). There is no water in the canal for the remaining 11 months or more. Total average annual flow through the canal is estimated at 1,600 af, or about 27 cfs for the 30 day period. Flows vary from about 1,000 af/yr, to as high as 3,000 af/yr (17 cfs to 50 cfs). The maximum flow through the canal has been about 50 cfs.

### **3.3.2 Water Rights**

The section of the Ouray Park Canal that is proposed to be piped and the Ouray Valley Canal that will be abandoned, carry water rights held by the OPIC that allow diversions from the Uintah River and its tributaries. All these water rights are regulated by the local River Commissioner, and are allowed to divert water according to the respective priority dates. Due to a prior salinity project, the Ouray Valley Canal currently only carries water during a single month in the peak runoff season.

### **3.3.3 Water Quality**

#### **Ouray Park & Ouray Valley Canals**

The Ouray Park and Ouray Valley Canals are classified for beneficial uses according to the Standards of Quality for Waters of the State, Environmental Quality (R317-2), Utah Administrative Code (UAC). These beneficial uses are:

- Class 2B Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water.
- Class 3E Severely habitat-limited waters. Narrative standards will be applied to protect these waters for aquatic wildlife.
- Class 4 Protected for agricultural uses including irrigation of crops and stock watering.

Annual salt loading caused by seepage along the sections of canal described in Section 2.3 is estimated to be 1,662 tons and is transported to the Green and Colorado Rivers.

#### **Pelican Lake**

The Ouray Park Canal is partially used to fill Pelican Lake. Pelican Lake is classified for the following beneficial uses:

- Class 2B Secondary water contact recreation.
- Class 3B Protected for warm water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.
- Class 4 Agricultural uses.

Pelican Lake is also listed in the 2010 Utah Integrated Report: 303(d) List of Impaired Waters as impaired for pH (Utah DEQ, 2010). Livestock is listed as a potential source of the impairment but the list acknowledges that other sources are unknown.

## **Brough Reservoir**

The Ouray Valley Canal is used to fill Brough Reservoir during spring runoff. The reservoir is classified for the following beneficial uses:

- Class 2B Secondary water contact recreation.
- Class 3A Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.
- Class 4 Agricultural uses.

A TMDL was approved for Brough Reservoir on August 22, 2008, for dissolved oxygen impairment (Utah DEQ, 2008). The dissolved oxygen impairment is caused by excessive phosphorus loading to the reservoir. One source of phosphorus loading identified in the TMDL was erosion in the Ouray Valley Canal. The reservoir was also listed in the 2010 303(d) list for impairment due to water temperature (Utah DEQ, 2010). No sources for this impairment were identified.

### **3.3.4 Wetlands and Vegetation**

Potentially affected wetland and vegetation areas are those within the proposed 100-foot wide construction corridor, the staging areas, access roads, and the areas adjacent to the canals that are fed by canal seepage water.

The upper section of the proposed pipeline follows the existing Brough Pipeline. Vegetation in this area consists of big sagebrush (*Artemisia tridentata*), rabbit brush (*Chrysothamnus viscidiflorus*), Russian thistle (*Salsola tragus*), Indian ricegrass (*Oryzopsis hymenoides*), needle and thread grass (*Stipa comata*), and cheat grass (*Bromus tectorum*). The lower section of the proposed pipeline would be constructed generally along the Ouray Park Canal. Vegetation in this area consists of cottonwood (*Populus Angustifolia*), Russian olive (*Elaeagnus angustifolia*), tamarisk (*Tamarix ramosissima*), and agricultural fields. Several small wetlands exist adjacent to the Ouray Park Canal.

### **3.3.5 Fish and Wildlife Resources**

Wildlife resources within the general area of the Proposed Project include fish, big game, smaller mammals, raptors, water birds, and upland game birds, with a variety of other birds, reptiles, and amphibians. These are discussed below.

#### **Fish**

Water conveyance facilities associated with the OPIC do not support fish species. Water from these facilities does eventually enter the Green River and its tributaries.

Twelve native fish species have been reported from reaches of the mainstream of the Green River, between Flaming Gorge Dam and the Colorado River confluence, and from lower portions of the river's tributaries. This assemblage of fishes includes warm-water species that prefer or require large-river habitats like

the razorback sucker and Colorado pikeminnow (These are endangered species discussed in section 3.2.12 below), species that prefer cool- or cold-water streams or smaller river channels (e.g., Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*), mountain whitefish (*Prosopium williamsoni*), and mottled sculpin (*Cottus bairdii*)), and species with more generalized habitat requirements (e.g., roundtail chub (*Gila robusta*), speckled dace (*Rhinichthys osculus*), and bluehead sucker (*Catostomus discobolus*)).

Nonnative fishes dominate fish communities of the Colorado River Basin. Twenty-five nonnative fish species are found from the Green River, between Flaming Gorge Dam and the Colorado River confluence. The red shiner (*Cyprinella lutrensis*), common carp (*Cyprinus carpio*), sand shiner (*Notropis stramineus*), fathead minnow (*Pimephales promelas*), channel catfish (*Ictalurus punctatus*), and smallmouth bass (*Micropterus dolomieu*) are widespread and common. Northern pike (*Esox lucius*) and green sunfish (*Lepomis cyanellus*) are present as well. Salmonids are abundant in the tailwaters of Flaming Gorge Dam.

### **Big Game**

This area provides big game habitat for both summer and winter use areas for mule deer (*Odocoileus hemionus*) and elk (*Cervus elaphus nelsoni*). Deer and elk are seen wintering in the general area. Moose (*Alces alces*) are occasionally observed along the river and stream drainages. Mountain lion (*Felis concolor*) and black bear (*Ursus americanus*) are rare in the area.

### **Smaller Mammals**

Other mammals common within the area include yellow-bellied marmot (*Marmota flaviventris*), badger (*Taxidea taxus*), least chipmunk (*Eutamias minimus*), golden-mantled ground squirrel (*Spermophilus lateralis*), meadow vole (*Microtus montanus*), northern pocket gopher (*Thomomys talpoides*), deer mouse (*Peromyscus maniculatus*), porcupine (*Erethizon dorsatum*), coyote (*Canis latrans*), raccoons (*Procyon lotor*), and striped skunk (*Mephitis mephitis*). Furbearers such as beaver (*Castor canadensis*), mink (*Mustela vison*), and muskrat (*Ondatra zibethicus*) use the wetland and riparian habitats and embankments of water courses.

### **Raptors**

Birds of prey, or raptors, have been observed within or adjacent to the project area. Cottonwood trees along water courses provide nesting habitat for raptors such as the golden eagle (*Aquila chrysaetos*), and red-tailed hawk (*Buteo jamaicensis*) and roosting sites for the great horned owl (*Bubo virginianus*). Golden eagles likely roost in the vicinity of the Proposed Project. Winter months are the best time to view bald eagles in the area. Other raptors observed in the area are the American kestrel (*Falco sparverius*), sharp-shinned hawk (*Accipiter striatus*), northern harrier (*Circus cyaneus*), and turkey vulture (*Cathartes aura*).

## **Water Birds**

Numerous water birds occur in the project area such as waterfowl, shore birds, and other wading birds typically associated with wetlands and open water. The area provides important forage and cover sites for waterfowl and wading birds.

Waterfowl species common to the project area include Canada goose (*Branta Canadensis*), mallard (*Anas platyrhynchos*), common merganser (*Mergus merganser*), gadwall (*Anus strepera*), green-winged teal (*Anus crecca*), and redhead (*Anthya Americana*). In addition to these species, American widgeon (*Anus Americana*), common goldeneye (*Bucephala clangula*), and American coot (*Fulica americana*) are common during migration or winter. Great blue heron (*Ardea herodias*), spotted sandpiper (*Actitis macularia*), and killdeer (*Charadrius vociferous*) forage along shorelines and riparian habitats during the breeding season.

Other birds using this area include the pied-billed grebe (*Podilymbus podiceps*), eared grebe (*Podiceps nigricollis*), western grebe (*Aechmophorus occidentalis*), Clark's grebes (*Aechmophorus clarkia*), double-crested cormorant (*Phalacrocorax auritus*), snowy egret (*Egretta thula*), black-crowned night-heron (*Nycticorax nycticorax*), white-faced ibis (*Plegadis chihi*), American bittern (*Botaurus lentiginosus*), northern pintail (*Anus acuta*), ruddy duck (*Oxyura jamaicensis*), Virginia rail (*Rallus limicola*), black-necked stilt (*Himantopus mexicanus*), American avocet (*Recurvirostra Americana*), Wilson's phalarope (*Phalaropus tricolor*), Forster's tern (*Sterna forsteri*), black tern (*Chlidonias niger*), greater yellowlegs (*Tringa melanoleuca*), lesser yellowlegs (*Tringa flavipes*), cinnamon teal (*Anus cyanoptera*), and willet (*Catoptrophorus semipalmatus*). During migration, these species of birds and many others visit the Ouray National Wildlife Refuge and other wetlands, along with occasional flocks of sandhill cranes (*Grus canadensis*).

## **Upland Game Birds**

Upland game birds occurring in the project area include the ring-necked pheasant (*Phasianus colchicus*), and mourning dove (*Zenaida macroura*). California quail (*Lophortyx californicus*) may also use the area.

## **Other Birds**

The most common birds are songbirds and similar species associated with terrestrial habitats. These species include sparrows, warblers, thrushes, vireos, swallows, blackbirds, woodpeckers, and hummingbirds. Another group of birds frequently observed are the corvids, including jays (*Cyanocitta spp.*), black-billed magpie (*Pica pica*), and the common raven (*Corvus corax*).

## **Reptiles and Amphibians**

A number of reptiles occur in the general area including the wandering garter snake (*Thamnophis elegans*), Great Basin gopher snake (*Pituophis catenifer*), and Great Basin rattlesnake (*Crotalus viridis*). The tiger salamander (*Ambystoma tigrinum*), boreal chorus frog (*Pseudacris triseriata*), and leopard frog (*Rana pipiens*), may also occur in the area.

### 3.3.6 Threatened, Endangered, and Sensitive Species

Federal agencies are required to ensure that any action federally authorized, funded, or carried out would not adversely affect a Federally listed threatened or endangered species. The four Colorado River endangered fish species listed below occur in the area of influence of the Proposed Action. Threatened, Endangered, and Candidate species in Uintah County are shown in Table 6.

**Table 6**  
**Threatened (T), Endangered (E), and Candidate Species**

Status	Common Name	Biological Name
<u>Fish</u>		
E	bonytail	<i>Gila elegans</i>
E	Colorado pikeminnow	<i>Ptychocheilus lucius</i>
E	humpback chub	<i>Gila cypha</i>
E	razorback sucker	<i>Xyrauchen texanus</i>
<u>Animal</u>		
E <sup>1</sup>	black-footed Ferret	<i>Mustela nigripes</i>
T	Canada lynx	<i>Lynx canadensis</i>
T	Mexican spotted owl	<i>Strix occidentalis</i>
C	yellow billed cuckoo	<i>Coccyzus americanus</i>
<u>Plant</u>		
T	clay reed-mustard	<i>Schoenocrambe argillacea</i>
E	shrubby reed-mustard	<i>Schoenocrambe suffrutescens</i>
T	Uinta Basin hookless cactus	<i>Sclerocactus glaucuc</i>
T	Pariette cactus	<i>Scler cactus brivispinus</i>
T	Ute ladies'-tresses	<i>Spiranthes diluvialis</i>
C	White River penstemon	<i>Penstemon scariosus var albifuvis</i>

River reaches that have been designated as critical habitat for the bonytail in the Green River extend from the confluence with the Yampa River downstream to the boundary of Dinosaur National Monument and Desolation and Gray Canyons. In addition, critical habitat has been designated in the Yampa River from the upstream boundary of Dinosaur National Monument to its confluence with the Green River.

Critical habitat designated for Colorado pikeminnow in the Green River system includes the Yampa River from Craig, Colorado, downstream to the Green River; the Green River downstream of the Yampa River to the confluence with the Colorado River; and the White River from Rio Blanco Reservoir downstream to the Green River.

Critical habitat for humpback chub in the Green River system includes the Yampa River within Dinosaur National Monument, Green River from its confluence with the Yampa River downstream to the southern boundary of Dinosaur National Monument, and the Green River within Desolation and Gray Canyons.

River reaches of critical habitat for razorback sucker in the Green River system include the lower Yampa River from the mouth of Cross Mountain Canyon to the confluence with the Green River, the Green River between the confluences of the Yampa and Colorado Rivers, the lower 18 miles of the White River, and the lower 2.5 miles of the Duchesne River.

The black-footed ferret, Canada lynx and Mexican spotted owl exist within Uintah County but are not known to occur in the project area.

The Western Yellow-billed Cuckoo is known to occur along the riparian corridor of the Green River.

None of the plant species listed above are known to occur in the project area.

The bald eagle is protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. It is a winter resident of the area. This species roosts primarily in forested canyons or tall cottonwoods along streams and reservoirs. There are no known nesting pairs at or near the project area.

Species of special concern, as defined by the State of Utah that may occur within the area of influence of the Proposed Project and are managed under Conservation Agreements, are shown in Table 7.

**Table 7  
Species of Special Concern**

Common Name	Biological Name
Colorado River Cutthroat Trout	<i>Oncorhynchus clarkii pleuriticus</i>
Bluehead sucker	<i>Catostomus discobolus</i>
Flannelmouth sucker	<i>Catostomus latipinnis</i>
Roundtail chub	<i>Gila robusta</i>
Northern goshawk	<i>Accipiter gentilis</i>

Leopard frog (*Rana pipiens*) has been petitioned for listing under the Environmental Species Act and may occur in the project area.

### **3.3.7 Cultural Resources**

Cultural resources are defined as physical or other expressions of human activity or occupation. Such resources include culturally significant landscapes, prehistoric and historic archaeological sites as well as isolated artifacts or



features, traditional cultural properties, Native American and other sacred places, and artifacts and documents of cultural and historic significance.

Section 106 of the National Historic Preservation Act of 1966 (NHPA), mandates that Reclamation take into account the potential effects of a proposed Federal undertaking on historic properties. Historic properties are defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for, inclusion in the National Register of Historic Places (NRHP). Potential effects of the described alternatives on historic properties are the primary focus of this analysis.

The affected environment for cultural resources is identified as the APE (area of potential effects), in compliance with the regulations to Section 106 of the NHPA (36 CFR 800.16). The APE is defined as the geographic area within which federal actions may directly or indirectly cause alterations in the character or use of historic properties. The APE for this Proposed Action includes the proposed pipeline corridor, the portions of the Ouray Park and Ouray Valley Canals to be abandoned, access roads, and staging areas.

### **Cultural Resources Status**

A Class I literature review and a Class III cultural resource inventory were completed for the APE, defined in the action alternative and analyzed for the proposed action, by Bighorn Archaeological Consultants, LLC, in July 2011. A total of 491 acres were inventoried during the Class III inventory to determine if the Proposed Action would affect cultural resources. Two previously recorded sites and one isolate were identified during the inventory.

In accordance with 36 CFR 800.4, the sites were evaluated for significance in terms of NRHP eligibility. The significance criteria applied to evaluate cultural resources are defined in 36 CFR 60.4 as follows:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

1. are associated with events that have made a significant contribution to the broad patterns of our history; or
2. are associated with the lives of persons significant in our past; or
3. embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
4. have yielded, or may be likely to yield, information important in prehistory or history.

Both sites identified during the Class III cultural resource inventory, the Ouray Park Canal and the Ouray Valley Canal, are recommended eligible for the NRHP (Jordan and Baxter 2011). The Proposed Action, however, would have no physical impacts on either canal. Both canals would be abandoned as a result of the proposed pipeline. No alterations to the characteristics of either canal which make them eligible for the NRHP would occur and, therefore, the Proposed Action would have no effect on the either historic property according to 36 CFR 800.16(i).

Pursuant to 36 CFR 800.5, the criteria of adverse effect were applied to both the Ouray Park Canal and Ouray Valley Canal. An adverse effect is defined as an effect that could diminish the integrity of a historic property's location, design, setting, materials, workmanship, feeling, or association. The Proposed Action would not diminish the integrity of either the Ouray Park or Ouray Valley Canal and would have no adverse effect to either historic property.

In compliance with 36 CFR 800.2(c), 36 CFR 800.4(d)(1), and 36 CFR 800.11(d), a copy of the cultural resource inventory report and a determination of no historic properties affected have been submitted to the Utah State Historic Preservation Office (SHPO), the Bureau of Land Management-Vernal Field Office, the State of Utah School and Institutional Trust Lands Administration, and tribes which may attach religious or cultural significance to historic properties possibly affected by the proposed action for consultation.

### **3.3.8 Paleontological Resources**

Paleontological resources are defined as any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth. Any materials associated with an archaeological resource (as defined in section 3(1) of the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470bb(1) and any cultural item (as defined in section 2 of the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001) are not considered paleontological resources.

Section 6302 of the Paleontological Resources Preservation Act of 2009 (Sections 6301-6312 of the Omnibus Land Management Act of 2009 [Public Law 111-11 123 Stat. 991-1456]) requires the Secretary of the Interior to manage and protect paleontological resources on Federal land using scientific principles and expertise.

The affected environment for paleontological resources is represented by the same APE that corresponds to cultural resources as described in Section 3.3.7.

#### **Paleontological Resources Status**

A paleontological file search was conducted by Martha Hayden, Paleontological Assistant for the Utah Geological Survey (UGS), for the APE. No paleontological localities recorded in the UGS files, however, are located in the APE. According to the UGS, Quaternary and Recent alluvial deposits that are

exposed in the APE have a low potential for yielding significant fossil localities. There are, however, significant vertebrate localities in nearby exposures of the Eocene Uinta and Duchesne River Formations. The portions of the APE that lie in these exposures do not involve any ground disturbance. The UGS concluded, unless fossils are discovered as a result of construction activities, the Proposed Action should have no impact on paleontological resources.

A paleontological field survey of the APE was completed by Brooks B. Britt, Ph.D. and Rodney D. Scheetz, Ph.D. of Paleo Mentors on November 29, 2011. As a result of the field survey, no significant fossils were identified within the APE. Paleo Mentors recommended no additional monitoring or paleontological field survey unless fossils are exposed during construction (Britt and Scheetz 2011.)

### **3.3.9 Public Safety, Access, and Transportation**

The nearest major town to the project site is Vernal City, located about 30 miles to the north-east of the Proposed Project area. Roosevelt City is about 25 miles to the north-west, and the town of Randlett is about 2 miles to the west of the project area. Primary access to the site is on U.S. Hwy 40 either from Roosevelt or Vernal to the intersection of U.S. Hwy 40 and Utah Hwy 88, then approximately 8 miles south on Hwy 88 and 3 miles west on the Ouray-Randlett Road (5500 South) to the site.

It is estimated that during construction, approximately three to five vehicles per day would travel to the site. The majority of these vehicle trips would be for transporting contractor employees to the site. Some construction and equipment transport vehicles would also travel to the site to deliver construction equipment and materials. Upon completion of construction, vehicle trips are expected to be reduced to no more than two per day for operation and maintenance purposes.

### **3.3.10 Lands**

The Ouray Park Canal is owned and operated by a private canal company. New rights-of-ways or easements necessary for the proposed pipeline project will be acquired in the name of the canal company. Current identified landowners are the State of Utah, the Bureau of Land Management, and two private property owners. Landowners should grant easements to the canal company using the name or title as shown on their last vesting deed by legal authorized agents.

### **3.3.11 Socioeconomics**

The area is located in the vicinity of the townships of Leota, Randlett, Ouray, Gusher, and Fort Duchesne. The population of the area is estimated at approximately 500 people. Agriculture and farming are the major resources with the most common crops being alfalfa and pasture hay.

## **3.4 Environmental Effects**

The environmental effects section discusses potential impacts to the project area resources from the No Action and Action Alternatives.

### **3.4.1 Water Resources**

#### **No Action Alternative**

Under the No Action Alternative, water from the canals would continue to seep into the soil and ultimately contribute to concentrated salt loads in the Colorado River Basin. This seepage would result in the loss of approximately 20 to 30 percent of the irrigation water that runs through the Ouray Valley and Ouray Park Canals.

#### **Proposed Action Alternative**

The Proposed Action Alternative would eliminate seepage from the Ouray Valley and Ouray Park canals. This would result in an estimated 20 to 30 percent increase in water available to agricultural users from reduced canal seepage, thereby improving the efficiency of the irrigation system. This additional water would be used on existing agricultural lands to reduce current shortages. Water to serve the 900 acres currently served from Brough Reservoir would be brought through existing WSCCSP facilities instead of being released from the reservoir. This would further improve the efficiency of Brough Reservoir and the entire conveyance system.

The proposed Ouray Park Canal pipeline would be installed adjacent to the existing Brough Pipeline and Ouray Park Canal (Figure 1) and therefore would not impact water deliveries during construction. Further, connections from the existing canal to the new pipeline system would be done during the non-irrigation season in order to avoid the need to shut down the canal and curtail water deliveries.

### **3.4.2 Water Rights**

#### **No Action Alternative**

If this salinity project is not constructed, then OPIC would continue to have the option of diverting a portion of its water rights through the Ouray Valley Canal during one month of the year to help fill Brough Reservoir.

#### **Proposed Action Alternative**

Under the Proposed Action alternative, the water rights that have historically been delivered through the Ouray Valley Canal would be delivered exclusively through the Ouray Park Canal. These water rights will continue to be used to fill Brough Reservoir and to irrigate lands within the OPIC service boundaries.

The piped section of the Ouray Park Canal will continue to transport water under the same OPIC water rights as it has historically. There should be no significant

modification to the points of diversion, places of use, nature of use, or reservoir storage associated with the OPIC water rights as a result of the piping project.

### **3.4.3 Water Quality**

#### **No Action Alternative**

Under the No Action Alternative, there would be long-term minor to moderate adverse impacts to the water quality of the Colorado River Basin. Salt loads from the deep percolation of seepage from the Ouray Valley and Ouray Park canals would continue to degrade water quality in the Basin. The Ouray Valley Canal would continue to contribute phosphorus to Brough Reservoir through erosion.

#### **Proposed Action Alternative**

The Proposed Action Alternative would reduce seepage from the Ouray Valley and Ouray Park Canals. The reduced seepage would result in an estimated 1,662 fewer tons of salt reaching the Colorado River Basin annually. Use of the Ouray Valley Canal for filling Brough Reservoir would be discontinued, which would eliminate the canal as a phosphorus source to the reservoir.

### **3.4.4 Wetlands and Vegetation**

#### **No Action Alternative**

Riparian habitat and vegetation would remain in its current condition, experiencing minor fluctuations in quantity and quality, as naturally occurring precipitation patterns vary. Routine canal maintenance would continue to disturb these areas, and the area is likely to see an increase in the composition and infestation of noxious and non-native species, due to their ability to thrive in disturbed areas. Though periodically removed within the ditch during maintenance, these plant species would likely increase their dominance within the project area, resulting in degradation of habitat quality.

#### **Proposed Action Alternative**

Many of the wetland and vegetation areas in the project area are canal-induced, supported by seepage from the canals. Under the Proposed Action Alternative, the majority of long-term project impacts to these areas would be the result of reducing or eliminating the seepage water that supports this vegetation. Direct impacts to vegetation would take place within a 100-foot right of way adjacent to the existing Brough Pipeline and Ouray Park Canal right-of-way corridors.

Riparian habitat would be impacted by total abandonment of the Ouray Valley Canal and piping the Ouray Park Canal, through the loss of canal-induced riparian habitat. These areas may see increases in non-native species including tamarisk and Russian olive, as these two species may be able to out-compete native species for limited water supplies when irrigation flows cease. As required by the Colorado River Basin Salinity Control Act (43 U.S.C. 1571-1599), any wildlife values lost as a result of project implementation must be replaced by OPIC through habitat replacement and management plans approved by Reclamation following coordination with Federal and state wildlife officials. Replacement habitat must be of an equal or greater value to the habitat lost by the Proposed

Action, and must be managed to maintain its value for the life of the salinity control project (50 years). Riparian habitat would also be managed during construction under the guidelines set forth in the Colorado River Basin Salinity Control Act and Executive Order 11990.

To minimize impact to native riparian vegetation, previously disturbed areas would be used for construction activities, where possible. Best Management Practices would be followed to reduce construction impacts. After any surface disturbance, proper rehabilitation procedures would be followed to prevent the infestation of invasive riparian species. This would include seeding mixtures of desirable native riparian species.

### **3.4.5 Fish and Wildlife Resources**

#### **No Action Alternative**

Under the No Action Alternative, terrestrial wildlife habitat would remain in its current condition, and there would be no gains or losses to the wildlife habitat. Salinity loading of the Colorado River drainage would continue at current rates, which may affect water quality within the drainage, thereby continuing to impact the wildlife using the area.

#### **Proposed Action Alternative**

There would be no long-term detrimental effects to wildlife from implementing the Proposed Action Alternative. Construction activities would cause minor and temporary negative impacts to some wildlife species due to stress from noise, dust, displacement, and temporary loss of habitat, until construction was completed and habitat restoration is successful.

The Proposed Action would result in a decrease in salinity, which would improve water quality in the Colorado River and potentially indirectly benefit fish within the Colorado River System. The total habitat value that would be lost long-term would be replaced through acquired replacement habitat to be proposed by the applicant and approved by Reclamation.

### **3.4.6 Threatened, Endangered, and Sensitive Species**

#### **No Action Alternative**

There would continue to be minor direct or indirect impacts to threatened, endangered, or candidate species from continued salt loading in the Colorado River Basin. Salinity loading of the Colorado River Basin would continue at current rates due to seepage from the Ouray Valley and Ouray Park Canals, which would impact water quality within the drainage, thereby impacting wildlife using the area. Any impacts to federally listed species and their habitat from the salt loading would continue.

#### **Proposed Action Alternative**

There have been no documented occurrences of any federally listed threatened, endangered or candidate species within the project area. There are, however, endangered fish species in the Green and Colorado Rivers. Construction activities

would not take place in the immediate proximity of any natural stream that feed these rivers, as neither the Ouray Valley Canal nor the Ouray Park Canal connects directly to the Green or Colorado Rivers. As a result, no impact to endangered fish species within the Colorado River Basin would result from sedimentation entering the laterals during construction activities. The Proposed Action may result in long-term, minor depletions of flows to the Colorado River Basin due to reduced seepage. The Proposed Action would result in a long-term decrease in salinity which would increase water quality in the Colorado River and may contribute to cumulative benefits for endangered fish species from improved water quality.

### **3.4.7 Cultural Resources**

#### **No Action Alternative**

Under the No Action Alternative, there would be no adverse effects to cultural resources. There would be no need for ground disturbance for any pipe installation, staging areas, or access roads. The existing conditions would remain intact and would not be affected.

#### **Proposed Action Alternative**

Under the Proposed Action Alternative, there would be no foreseeable impacts to cultural resources. There would, however, be ground-disturbing activities which have the potential to disturb subsurface cultural material. The Ouray Park and Ouray Valley Canals would be abandoned, but no adverse effects to the historic properties would occur.

### **3.4.8 Paleontological Resources**

#### **No Action Alternative**

Under the No Action Alternative there would be no impacts to paleontological resources. There would be no need for ground disturbance for any pipe installation, staging areas, or access roads. The existing conditions would remain intact and would not be affected.

#### **Proposed Action Alternative**

Under the Proposed Action Alternative, there would be no foreseeable impacts to paleontological resources. There would, however, be ground-disturbing activities which have the potential to disturb subsurface fossil material.

### **3.4.9 Public Safety, Access, and Transportation**

#### **No Action Alternative**

The No Action Alternative would have no impact on public safety, access, and transportation.

#### **Proposed Action Alternative**

The Proposed Action would have minor short-term effects during construction, but no long-term effects on transportation would be realized. Although no temporary road closures are planned, any temporary road or access closure would be coordinated with local law enforcement and emergency services. The public

would also be notified of any road closures that take place due to the Proposed Action.

### 3.4.10 Lands

#### No Action Alternative

The No Action Alternative would have no impact on land resources.

#### Proposed Action Alternative

Since this is not a Reclamation project, it will have no effect on land management or facilities inventories under Reclamation jurisdiction.

### 3.4.11 Socioeconomics

#### No Action Alternative

The No Action Alternative would have no impact on the current socioeconomics.

#### Proposed Action Alternative

The Proposed Action would have a minor impact resulting from reduced losses due to evaporation and seepage along the enclosed canal. This would result in less water being required for losses. While there could potentially be additional effects none would be significant.

## 3.5 Summary of Environmental Consequences

Table 8 summarizes environmental effects under the No Action Alternative and the Proposed Action Alternative.

**Table 8  
Summary of Environmental Effects**

Resource	No Action Alternative	Proposed Action Alternative
Water Resources	No Effect	Moderate positive long-term effect
Water Rights	No Effect	No effect
Water Quality	No Effect	Moderate positive long-term effect
Wetlands and Vegetation	No Effect	No effect (impacts mitigated)
Fish and Wildlife Resources	No Effect	Minor adverse effect (short-term)
Threatened, Endangered, and Sensitive Species	No Effect	No effect
Cultural Resources	No Effect	Potential effects to subsurface cultural material during construction
Paleontological Resources	No Effect	Potential effects to subsurface paleontological material during construction
Public Safety, Access, and Transportation	No Effect	Minor adverse effect (short-term)
Lands	No Effect	No effect
Socioeconomics	No Effect	No effect



### **3.6 Indian Trust Assets**

Indian Trust Assets (ITA's) are legal interests in property held in trust by the United States for federally recognized Indian tribes or individuals. Interior's policy is to recognize and fulfill its legal obligations to identify, protect, and conserve the trust resources of federally recognized Indian tribes and tribal members, and to consult with the tribes on a Government-to-Government basis whenever plans or actions affect tribal trust resources, trust assets, or tribal safety (please refer to the Departmental manual, 512 DM 2). Under this policy, as well as Reclamation's ITA policy, Reclamation is committed to carrying out its activities in a manner which avoids adverse impacts to ITAs when possible, and to mitigate or compensate for such impacts when it cannot. All impacts to ITAs, even those considered insignificant, must be discussed in the trust analyses in NEPA compliance documents and appropriate compensation or mitigation must be implemented.

Trust assets may include lands, minerals, hunting and fishing rights, traditional gathering grounds, and water rights. Impacts to ITAs are evaluated by assessing how the action affects the use and quality of ITAs. Any action that adversely affects the use, value, quality or enjoyment of an ITA is considered to have an adverse impact on the resources. There are no known ITAs in the project area vicinity, and no ITA concerns were identified through tribal consultation

### **3.7 Environmental Justice**

Executive Order 12898, established environmental justice as a Federal agency priority, to ensure that minority and low-income groups are not disproportionately affected by Federal actions. The GRPP is located in Uintah County. The 2010 census statistics for Uintah County shows a total county population of 32,588, of which an estimated 10.1 percent are living below poverty level and 14.4 percent belonging to various minority groups (US Census Bureau).

Implementation of the Proposed Action would not disproportionately (unequally) affect any low-income or minority communities within the project area. The reason for this is that the Proposed Action would not involve major facility construction, population relocation, health hazards, hazardous waste, or substantial economic impacts. This alternative would therefore have no adverse human health or environmental effects on minority and low-income populations as defined by environmental justice policies and directives.



## Chapter 4 – Environmental Commitments

The following environmental commitments would be implemented as an integral part of the Proposed Action for the abandonment of the Ouray Valley Canal and the piping of the 5-mile segment of the Ouray Park Canal.

- **Standard Reclamation Best Management Practices** – Standard Reclamation management practices would be applied during construction activities to minimize environmental effects and would be implemented by 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. Excavated material and construction debris may not be wasted in any stream or river channel or placed in flowing waters. This includes material such as grease, oil, joint coating, or any other possible pollutant. Excess materials must be wasted at an upland site well away from any channel. Construction materials, bedding material, excavation material, etc. may not be stockpiled in riparian or water channel areas. Silt fencing would be appropriately installed and left in place until after vegetation becomes established, at which time the silt fence can then be carefully removed. Machinery must be fueled and properly cleaned of dirt, weeds, organisms, or any other possibly contaminating substances offsite prior to construction.
- **Additional Analysis** – If the proposed action were to change significantly from that described in this EA because of additional or new information, or if other spoil, or work areas beyond those outlined in this analysis are required outside the defined project construction area, additional environmental analyses may be necessary.
- **State Stream Alteration Permit** – Before implementing the selected alternative, the contractor would obtain a State Stream Alteration Permit (if required) from the Utah Department of Natural Resources. The conditions and requirements of the State Stream Alteration Permit would be strictly adhered to by the contractor.
- **Water Quality Certification and 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. Whenever

the project proponent causes the water turbidity in an adjacent surface water to increase 10 NTU's or more, the Utah Division of Water Quality shall be notified.

- **Cultural Resources** – In the case that any cultural resources either on the surface or subsurface is discovered during construction, Reclamation's Provo Area Office archaeologist shall be notified, and construction in the area of the inadvertent discovery will cease until an assessment of the resource and recommendations for further work can be made by a professional archaeologist.

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 are 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 SHPO and interested Native American tribal representatives would be promptly notified. Consultation would begin 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).

- **Paleontological Resources** – Anyone who inadvertently discovers possible paleontological resources must stop work immediately and contact the Reclamation's Provo Area Office archaeologist. Construction must be suspended until a qualified paleontologist can be contacted to assess the find.
- **Construction Activities Confined to the Surveyed Corridor** – All construction activities would be confined to the 100-foot wide corridor that has been surveyed for cultural, paleontological, and biological resources.
- **Roads** – Existing roads would be used whenever possible for project activities. New access roads would be necessary along the canals.
- **Disturbed Areas** – Construction activities should be confined to previously disturbed areas where possible for such activities as work, staging, and storage; waste areas; and vehicle and equipment parking areas. Vegetation disturbance should be minimized as much as possible.

During construction topsoil would be saved and then redistributed after completion of construction activities. All disturbed areas resulting from the project would be smoothed, shaped, contoured, and rehabilitated to as

near their pre-project construction condition as practicable. Disturbed areas would be seeded at appropriate times with weed-free, native seed mixes having a variety of appropriate species to prevent erosion. The composition of seed mixes would be coordinated with wildlife habitat specialists. Weed control on all disturbed areas would be required. Successful re-vegetation efforts must be monitored and reported to Reclamation along with photos of the completed project.

- **Habitat Replacement** – A plan to replace wildlife values foregone has been prepared by the applicant and approved by Reclamation following coordination with the U.S. Fish and Wildlife Service and Utah Department of Wildlife Resources. Total acreage of wildlife habitat predicted to be lost is 9 acres along the Ouray Valley Canal. Replacement will be provided on lands adjacent to the Ouray Park Canal, as described in the approved habitat replacement plan.



# **Chapter 5 – Coordination and Consultation**

## **5.1 Introduction**

Reclamation’s public involvement process presents the public with opportunities to obtain information about a given project and allows all interested parties to participate in the project through written comments. The key objective is to create and maintain a well-informed, active public that assists decision makers throughout the process, culminating in the implementation of an alternative. This section of the EA discusses public involvement activities undertaken to date for the Proposed Action.

## **5.2 Native American Consultation**

Reclamation conducted Native American consultation throughout the public involvement process. Consultation letters and copies of the Class III cultural resource inventory report were sent to the Ute Indian Tribe of the Uintah and Ouray Reservation and the Northwestern Band of Shoshoni Nation of Utah. This consultation was conducted in compliance with 36 CFR 800.2(c)(2) on a government-to-government basis. Through this effort, each tribe is given a reasonable opportunity to identify any concerns about historic properties; to advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance; to express their views on the effects of the Proposed Action on such properties; and to participate in the resolution of adverse effects. Tribal consultation for this Proposed Action is pending.

## **5.3 Utah State Historic Preservation Office**

A copy of the Class III cultural resource inventory report and a determination of no historic properties affected for the Proposed Action were submitted to the Utah SHPO. Utah SHPO concurred with Reclamation’s determination in a letter dated November 17, 2011.”

## **5.4 Utah Geological Survey**

A paleontological file search was conducted by Martha Hayden, Paleontological Assistant with the UGS. File search results and recommendations from the UGS were received in a letter dated October 24, 2011.



## Chapter 6 – Preparers

The following contributed to the preparation of this EA.

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Jeffrey D’Agostino	Chief, Environmental Group	Bureau of Reclamation - NEPA Compliance, Environmental Justice, Agency Review
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## Chapter 7 – References

- Britt, Brooks B., Ph.D. and Rodney D. Scheetz, Ph.D. (2011). Paleontology Report for Ouray Park Canal in Township 6 South, Range 19 East, SLB&M Uintah county, Utah. Prepared by Paleo Mentors, Orem, Utah. On file Bureau of Reclamation, Provo, Utah.
- Jordan, Aaron A. and Jon R. Baxter (2011). A Cultural Resource Inventory of the Proposed Ouray Park Canal Project, Uintah County, Utah. Prepared by Bighorn Archaeological Consultants, LLC, Orem, Utah. On file, Bureau of Reclamation, Provo, Utah.
- Utah Department of Environmental Quality (2008). Total Maximum Daily Load Water Quality Study: Brough, Red Fleet, and Steinaker Reservoirs. Prepared for Utah Division of Water Quality. Prepared by Millennium Science & Engineering, SLC, UT, and by Limno-Tech, Inc., Ann Arbor, MI.
- Utah Department of Environmental Quality (2010). Utah 2010 Integrated Report: 303(d) List of Impaired Waters. Division of Water Quality. Salt Lake City, Utah