

## **Chapter 3: Affected Environment and Environmental Consequences**

### **3.1 Introduction**

This chapter describes the existing environment of the resources that may be affected by the proposed action as described in Chapter 2. It also describes the potential consequences for the human environment. The human environment is defined as all of the environmental resources, including all physical, biological, social, and economic conditions, occurring in the affected area.

The analysis presented in this chapter includes impacts that would occur from the implementation of the proposed action and continued existing conditions under the no action alternative. It is organized by resource, giving a description of the baseline conditions for that resource, and then the effects for each alternative on that resource.

### **3.2 Summary of Resources Not Analyzed in Detail**

As noted in Section 2.4.1, issues or resources determined to have no relevance to the decision or have effects inconsequential to the decision were eliminated from further analysis. These issues or resources are:

- Air Quality
- Water Quality
- Wetlands and Vegetation
- Terrestrial Wildlife Resources
- USDA Forest Service, Management Indicator Species
- Paleontology
- Geology
- Visual Resources
- Health, Safety, and Noise
- Transportation

### **3.3 Summary of Resources Analyzed in Detail**

Resources that may potentially be affected by the proposed action are analyzed in detail. These issues or resources are:

- Water Rights and Delivery Systems
- Threatened and Endangered Species
- Fisheries
- Recreation
- Cultural Resources
- Land Use
- Socioeconomics
- Environmental Justice
- Indian Trust Assets

## **3.4 Water Rights/ Delivery Systems**

### **3.4.1 Introduction**

This section describes the Provo Reservoir Water Users Company (PRWUC), PRP water, and non-PRP waters that are currently conveyed in the facilities for the proposed title transfer. This section discusses the potential impacts of the proposed action on the water rights owned by the Federal Government.

### **3.4.2 Affected Environment**

#### **3.4.2.1 Provo Reservoir Water Users Company's Water Rights in the PRC**

PRWUC holds contractual rights with the Federal Government. This is the only other entity, aside from PRWUA, to hold contractual rights with the Federal Government. The contractual basis of these water rights warrants a discussion apart from other water rights in this EA.

The PRC was originally constructed by the PRWUC, and was enlarged and title conveyed to Reclamation as part of the PRP. PRWUC has a contractual proportional right to use approximately one-third of the enlarged capacity of the PRC. PRWUC also has direct flow water rights on the Provo River, direct flow rights on the Weber River, Uinta upper lakes storage (now moved to Jordanelle), and Weber River Project storage water rights that are conveyed through the PRC. On occasion, CUP water has been conveyed using the PRWUC capacity. This right is proportional in that if capacity were restricted PRWUC would be entitled to approximately 1/3 of the available capacity. If PRWUC does not use all of its allotted capacity, it then becomes available to PRWUA and through PRWUA to its shareholders.

#### **3.4.2.2 Provo River Project Water Rights in the PRC and SLA**

The PRC and SLA currently convey Provo River Project water originating from direct flow rights in the Provo River, storage rights in Deer Creek Reservoir, and non-Provo Basin water rights from the Weber River through the Weber-Provo Canal and from the Duchesne River through the Duchesne Tunnel.

#### **3.4.2.3 Other Water Rights Conveyed in the PRC and SLA**

The PRC and SLA also convey non-PRP water, including CUP water rights and various private water rights. The conveyed CUP water originates from direct flow rights in the Provo River, storage rights in Jordanelle Reservoir, and various exchange rights. The various private water rights are conveyed in the PRC as space is available and are governed by the Warren Act. The deliveries of these private rights are expected to decrease as CUP deliveries in these facilities increase.

Although CUP water may be conveyed in the PRC and SLA facilities, some corresponding flows may have to occur at the Olmsted Flowline in order to maintain the multi-purpose operations of the CUP and management of the CUP by CUWCD to fulfill multiple obligations.

#### **3.4.2.4 Future Water to be Conveyed via the PRC**

The Utah Lake Drainage Basin Water Delivery System (ULS) is the final component of the Bonneville Unit of the CUP. The preferred alternative of the ULS, according to the draft EIS published in March 2004, would bring approximately 30,000 acre-feet of water per year from Strawberry Reservoir to the PRC through the Spanish Fork Canyon - Provo Reservoir Canal Pipeline, if the ULS preferred alternative is constructed.

#### **3.4.3 Impact Analysis**

##### **3.4.3.1 No Action Alternative**

Under the no action alternative, the ownership of the PRC and SLA would remain in Reclamation's name. Title to PRP water rights would not change. The use of the water right would continue to be administered by the Utah State Engineer's Office and by the various existing contracts among Reclamation, PRWUC, PRWUA, MWDSLS, and others.

MWDSLS and JWCD would use their present capacity in the PRC to delivery ULS project water.

##### **3.4.3.2 Proposed Action**

Under the proposed action, there would be no impacts to project water rights. Title to PRP water rights would be unchanged after the title transfer. PRWUA and MWDSLS will provide to Reclamation the necessary easements to meter and monitor project water use in order to maintain the Project Water Rights with the Utah State Engineer's office.

MWDSLS and JWCD would use their present capacity in the PRC to delivery ULS project water.

Section 6 of the Operating Agreement assigns capacity rights in the PRC to CUWCD if it participates in the proposed enclosure project. It reads, "It is anticipated that following title transfer, as a part of separate agreements, CUWCD will have a right to utilize 50 cfs of PRC capacity to transport any waters available to CUWCD." Section 21 further states, "In return for participation in the PRC enclosure project costs as outlined, CUWCD would  give a PRC capacity right of 50 cfs, and agreement for the water conserved as a result of construction of the PRCEP (perhaps in the form of 8000 AF of CUP water turned back pursuant to Section 207 of CUPCA) to be used for recovery of the June Sucker and other CUP purposes."

## **3.5 Threatened, Endangered, and State Sensitive Species**

### **3.5.1 Introduction**

This section describes Federal or state listed threatened, endangered, and sensitive plant and animal species that may be affected by the proposed action. Potential effects of the no action alternative and proposed action are discussed in this section.

Threatened or Endangered (T&E) species that may exist in the project area include June sucker, bald eagle, desert milkvetch, clay phacelia, Ute ladies'-tresses, yellow-billed cuckoo, Utah valvata snail, Canada lynx, and Columbia spotted frog, a candidate species.

### **3.5.2 Affected Environment**

#### **3.5.2.1 June Sucker (*Chasmistes liorus*)**

The June sucker is native only to the Utah Lake Drainage basin in Utah. It is known to spawn in the Provo River and may have spawned in other tributaries to Utah Lake. On March 31, 1986, the June sucker was listed as an endangered species. Critical habitat for the June sucker was recognized as the lower 4.9 miles of the Provo River upstream from Utah Lake. Factors contributing to its decline include its localized distribution, failure to recruit individuals to the adult life stage, habitat alteration, and nonnative predation and competition for resources.

On Sept. 22, 1994, Reclamation received the Fish and Wildlife Service's (FWS) Biological Opinion (BO) on the PRP. The opinion stated that the PRP, as operated, is likely to jeopardize the continued existence of the June sucker and is likely to destroy or adversely modify its designated critical habitat. Under requirements of the ESA and this BO, Reclamation is committed to aid in the recovery of the June sucker and the removal of jeopardy status. The FWS developed a reasonable and prudent alternative (RPA) containing 4 elements to avoid the likelihood of jeopardy and to avoid the destruction or modification of critical habitat. The 4 elements of the RPA were:

1. Identify, store, deliver, and protect water necessary for minimum annual flushing, spawning, and nursery flows in the Provo River. Studies will be conducted for a 3-year period (from 1995 to 1997) to refine these flow recommendations.
2. Ensure that storage flexibility in Deer Creek Reservoir occurs to assist with flow requests during June sucker spawning.
3. Install a water quality monitoring system and use the system to maintain adequate riverine water quality during June sucker residence in the Provo River.
4. Ensure full discussion and action for June sucker flow and habitat needs through the interagency/interdisciplinary Provo River Resource Team.

Reclamation, and other agencies, had substantially implemented these measures by 1999 and continue to implement elements of the RPA through the interagency June Sucker Flow Workgroup and the June Sucker Recovery Implementation Program (JSRIP).

On April 17, 2002, the JSRIP was formalized by the issuance of a Program Document. The goals of the JSRIP are 1) to recover June sucker so that it no longer requires protection under the ESA, and 2) to allow continued operation of existing water facilities and future development of water resources for human use. The JSRIP will coordinate and implement recovery actions using an adaptive management approach.

Commitments that have been made by Reclamation and the CUPCA Office to aid in June sucker recovery include:

*Reclamation Commitments:*

- Implement the 4 elements of the RPA from the 1994 BO; specifically: provide needed flows, conduct flow study, ensure storage flexibility, and monitor water quality
- Lead the June Sucker Flow Workgroup
- Participate on the June Sucker Recovery Implementation Program and June Sucker Recovery Team

*CUPCA Office Commitments:*

- Acquire water dedicated to June sucker needs
- Participate on the June Sucker Recovery Implementation Program

### **3.5.2.2 Bald Eagle (*Haliaeetus leucocephalus*)**

The bald eagle is a Federally protected threatened species. There are only four known nest sites in Utah. Although bald eagles are found within the project area, there are no nest sites in the area. The 1994 BO for the PRP concurred with Reclamation's determination that the PRP as operated would have no effect on this species.

### **3.5.2.3 Columbia Spotted Frog (*Rana luteiventris*)**

The Columbia spotted frog, a state sensitive species and Federal candidate species, inhabits riparian and wetland habitats along the Wasatch Front and in the West Desert. Many populations within the state are declining, fragmented and of limited size. Habitat loss due to water development is a threat to these frogs. Reclamation is working cooperatively within a conservation agreement to eliminate or reduce the threats to this species. No adults or egg masses were observed during field studies conducted along the PRC during fall 2001. Spotted frogs do not exist along the SLA or within the PRWUA office complex.

No critical habitat for any of these T&E species exists on or near any of the three facilities proposed for transfer.

### **3.5.2.4 Other Listed Species**

Other species that may have habitat near the facilities proposed for transfer include Ute ladies'-tresses, yellow-billed cuckoo, desert milkvetch, Utah valvata snail and Canada lynx. These species are not known to exist in the area.

### **3.5.3 Impact Analysis**

#### **3.5.3.1 No Action Alternative**

Under the no action alternative, current operations would continue. Reclamation would continue to oversee operation of the Provo River Project under the 1994 biological opinion, in which the FWS issued a jeopardy opinion. Environmental commitments would not change.

The no action alternative would not affect listed or candidate species within the project area.

#### **3.5.3.2 Proposed Action**

##### **3.5.3.2.1 June Sucker**

The proposed action is not likely to adversely affect the June sucker population or its critical habitat, nor does it conflict with the objectives of the JSRIP. The proposed action may positively affect June sucker within the Provo River Drainage by facilitating the enclosure of the PRC, which may result in the availability of saved water to augment in-stream flows needed by June sucker.

Dam operations and river flows would not be altered by the proposed action.

The operating agreement between Reclamation and the new owners would ensure that no environmental commitments on the Provo River would change as a result of title transfer. The June Sucker Flow Workgroup would continue to coordinate efforts to provide flows needed for the recovery of the June sucker. The JSRIP would continue to coordinate and implement actions aimed at recovery of the June sucker. Reclamation would retain its authority and commitments under these programs and agreements. Reclamation would continue to provide funding and technical resources to ensure the success of these programs. Reclamation would continue to oversee operations of those facilities of the PRP not included in the transfer.

Language in Section 12, "Environmental Commitments Relating to Provo River, PRP, and CUP" of the draft Title Transfer Agreement (contract no. 04-WC-40-8950) states: "No environmental commitments on the Provo River will change as a result of title transfer."

The draft operating agreement of the Jordan Aqueduct, PRC, and SLA contains the following language:

“22. Section 303 of CUPCA mandates certain minimum Provo River flows. The Deer Creek/Jordanelle Operating Agreement, in articles 21 through 25, allocates responsibility and identifies certain means for meeting these minimum flows. The parties are committed to finding additional means to assist CUWCD in providing CUPCA-mandated Provo River minimum flows without a reduction in the yields of either PRP or the CUP and without impairment of the rights of PRWUA shareholders.”

“23. All of the parties have a strong and practical interest in diligently assisting with the recovery of the June Sucker in a manner consistent with the June Sucker Recovery Implementation Program.”

“24. Each party shall designate one or more persons to be responsible for contacts and coordination regarding this Operating Agreement. The designated representatives shall...:

6. Suggest voluntary actions and agreements of the parties and non-parties which may assist CUWCD in meeting minimum stream flows in ways that will not reduce the yields of the CUP or PRP.
7. Confer and suggest voluntary actions and agreements of the parties and non-parties which may assist the recover of the June Sucker.
8. Confer regarding proposed changes in water rights which might impact Provo River stream flows.
11. Suggest support for June sucker scientific study and the June Sucker Recovery Implementation Program.”

Reclamation, PRWUA, and MWDSLS are signatories to the Title Transfer Agreement. Reclamation, CUPCA office, PRWUA, MWDSLS, JWWCD, and CUWCD are signatories to the Operating Agreement. The language in these agreements provides adequate protection to June sucker and fishery resources. These agreements would need to be in place before title to the PRC could be transferred.

Reclamation has consulted with the U.S. Fish and Wildlife Service which has concurred that the proposed action may affect, but is not likely to adversely affect the June sucker. A copy of their letter of concurrence is found in Appendix B.

### **3.5.3.2.2 Other Listed Species**

The proposed action would not affect bald eagle, Columbia spotted frog, Ute ladies'-tresses, desert milkvetch, clay phacelia, yellow-billed cuckoo, Utah valvata snail, or Canada lynx populations within the project area.

## **3.6 Fisheries**

### **3.6.1 Introduction**

This section describes the fishery resources that may be affected by the proposed action. The possible effects of the no action alternative and the proposed action are described in this section.

### **3.6.2 Affected Environment**

The Provo River provides a high value, blue-ribbon sport fishery, managed by the Utah Division of Wildlife Resources. The tail waters of the Deer Creek Dam maintain healthy populations of cutthroat, rainbow, and brown trout. Brown trout within this river recruit adults into the population by natural reproduction. The river is relatively unique in its proximity to a large urban area. This has made the Provo River below Deer Creek Dam the most popular fishing section of the river. Steady water flows have created a river that has good fishing year round. This lower section of the river averages approximately 7,500 trout per mile.

In October 1992, the Central Utah Project Completion Act (CUPCA) (PL 102-575) established the following in-stream flow requirements to improve the sport fishery: from the base of Jordanelle Dam to Deer Creek Reservoir a minimum of 125 cfs, from the confluence of Deer Creek and the Provo River to the Olmsted Diversion a minimum of 100 cfs. It also established a target in-stream flow from the Olmsted Diversion to Utah Lake, a minimum of 75 cfs through the acquisition of water rights from willing sellers.

### **3.6.3 Impact Analysis**

#### **3.6.3.1 No Action Alternative**

Under the no action alternative, current operations would be continued. In-stream flows required by CUPCA would continue to be met. The no action alternative would have no effect on fishery resources.

#### **3.6.3.2 Proposed Action**

The proposed action would have no effect on fishery resources. The operating agreement between Reclamation and the new owners would ensure that no environmental commitments on the Provo River would change as a result of title transfer.

Language in Section 12, "Environmental Commitments Relating to Provo River, PRP, and CUP" of the draft Title Transfer Agreement (contract no. 04-WC-40-8950) states: "No environmental commitments on the Provo River will change as a result of title transfer."

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6. Suggest voluntary actions and agreements of the parties and non-parties which may assist CUWCD in meeting minimum stream flows in ways that will not reduce the yields of the CUP or PRP.
7. Confer and suggest voluntary actions and agreements of the parties and non-parties which may assist the recover of the June Sucker.
8. Confer regarding proposed changes in water rights which might impact Provo River stream flows.
11. Suggest support for June sucker scientific study and the June Sucker Recovery Implementation Program.”

Reclamation, PRWUA, and MWDSLS are signatories to the Title Transfer Agreement. Reclamation, CUPCA office, PRWUA, MWDSLS, JVVCD, and CUWCD are signatories to the Operating Agreement. The language in these agreements provides adequate protection to June sucker and fishery resources. These agreements would need to be in place before title to the PRC could be transferred.

### **3.7 Recreation**

#### **3.7.1 Introduction**

This section addresses potential impacts on recreation resources from the proposed action and no action alternative. Potential socioeconomic effects related to recreation are discussed in Section 3.10.

#### **3.7.2 Affected Environment**

Use of fee title and withdrawn lands, easements, and Federal reserved rights-of-ways along the PRC for recreation purposes is not authorized.

Crossing of fee title lands administered by Reclamation for the SLA to access Forestlands for recreational purposes is allowed. The scope of the existing easements and Federal reserved rights-of-way over private land is not broad enough to allow uses for general public recreation. There are some locations where, through coordination with Reclamation and the underlying private landowner, agreements have been reached to allow crossings to National Forest lands. However, in response to requests by Mountainland Association of Governments and the Cities of Orem, Lindon, Pleasant Grove, Cedar Hills, American Fork, Highland, and Lehi, Reclamation has supported allowing non-motorized trail use on fee title lands, provided that water quality, public safety, liability, and operation and maintenance issues can be resolved. Access will not be allowed, however, if it in any way degrades water quality, or presents a threat to public safety. A short section of trail on the SLA at McKinley Drive in Lindon has been approved by Reclamation, but the trail section has not yet been constructed. The SLA is in close proximity to the Bonneville Shoreline Trail in some locations.

The NPS and the USDA Forest Service have requested that a short portion of the SLA corridor which bisects the Highland property remain in Federal ownership. The USDA Forest Service has also expressed the desire to maintain existing and proposed corridor crossings which access trailheads serving National Forest System lands.

### **3.7.3 Impact Analysis**

#### **3.7.3.1 No Action Alternative**

Conditions as described in 3.7.2 would be expected to continue under the no action alternative. Reclamation would support public trail use and crossings on the SLA and the PRC, provided that issues such as public safety, liability, water quality, operation, and maintenance are resolved first. Reclamation would continue to work with the MWDSLs, the NPS, and the USDA Forest Service to resolve issues involved with existing and proposed USDA Forest Service crossings and the proposed Highland property. Use of existing easements and Federal reserved rights-of-way to accommodate trails would require the permission of both the fee owners of the underlying lands and Reclamation, and any easement or license for 25 years or longer would require water user concurrence. Any recreational development along the canal would be coordinated with PRWUA and Reclamation.

#### **3.7.3.2 Proposed Action**

Any existing access to recreational lands, including the Bonneville Shoreline Trail, would be maintained.

Trail uses on fee title lands would be subject to permission by the MWDSLs, the PRWUA and/or a new joint public management entity, rather than Reclamation. Permission by the present landowners and the new management entities would also be needed to allow trails on existing easements and Federal reserved rights-of-way.

As stated in Contract number 04-WC-40-8950, PRWUA would continue to plan and negotiate with representatives of Utah County and interested municipalities to identify opportunities for a recreation trail and related facilities along the PRC on terms which are fair and equitable and which do not interfere with the use, operation, or maintenance of the canal. At such time as an agreement has been reached on fair and equitable terms, and all other water quality, safety and security features and procedures deemed necessary by PRWUA have been completed, and arrangements are in place suitable to PRWUA for operation and maintenance of the PRC and any recreation features and improvements, PRWUA shall allow access for recreational use of the PRC.

Any new recreational opportunities or developments would be coordinated through the new owners. Reclamation would not be involved in these discussions.

### **3.8 Cultural Resources**

#### **3.8.1 Introduction**

Cultural resources are parts of the human environment valued by a particular socio-cultural group or community. Historic properties are the subset of cultural resources including sites, districts, buildings, structures, or objects that are at least 50 years of age and are included in or eligible for inclusion in the *National Register of Historic Places* (NRHP). Historic properties also include properties of traditional religious and cultural importance to tribes and other communities that meet one or more of the NRHP criteria for evaluation (see 36 CFR 60). Cultural resources also include sacred sites as defined under Executive Order 13007.

Under 36 CFR 800, an undertaking is defined as a “project, activity or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency, those carried out with Federal financial assistance, those requiring a Federal permit, license or approval; and those subject to State or local regulation administered to a delegation or approval by a Federal agency.

Title transfers meet the definition of an undertaking and, therefore, are subject to the National Historic Preservation Act (NHPA), Section 106 process. Furthermore, 36 CFR 800.5(a)(2)(vii) of the regulations states that the transfer, lease, or sale of historic properties out of Federal ownership is an adverse effect, unless there are adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the properties’ historic significance.

Reclamation’s Directive No. LND 02-01 reinforces the need to comply with Section 106 during the title transfer process. It states that “If Reclamation transfers title of Reclamation lands or facilities to a non-Federal entity, Reclamation shall, prior to transfer, comply with Section 106 and other applicable laws, regulations, and policies.” In accordance with Section 101(d) (6) (B) of the National Historic Preservation Act (NHPA), consultation with the Northwest Band of the Shoshone of Brigham City, Utah,

the Paiute Indian Tribe of Utah (PITU), in Cedar City, Utah, the Northern Ute Tribe in Fort Duchesne, Utah, the Utah State Historic Preservation Office (SHPO), and the Advisory Council on Historic Preservation has been completed.

### **3.8.2 Affected Environment**

Three facilities are proposed to be included in the transfer: the SLA, the PRC, and the Pleasant Grove Property. Detailed descriptions of each property can be found in Sections 1.5.2 through 1.5.4 (see Figure 1.1 for facility locations).

#### **3.8.2.1 History of the Provo River Project Area**

The prehistoric cultures found in the proposed project area began at least 10,000 to 12,000 years ago. These paleo and Archaic peoples were hunters and gatherers, making seasonal migrations to find selected resources from the rich environment of the Eastern Great Basin. They were followed by the Fremont Culture, which refers to several cultural variants that appear to be related, but who were geographically diverse. From approximately A.D. 400 to 1300, they practiced a more or less sedentary horticulturalist lifestyle, mixed with foraging. They lived around the lakes and marsh areas, probably to exploit the waterfowl and fish.

Ancestors of present day Utah tribes, including the Northwest Band of the Shoshone, Paiute, and the Northern Utes, utilized the proposed project area prior to the arrival of Euroamericans.

The area was first explored and documented by John C. Fremont in 1843. Prior to that in 1825, a trading post, Fort Ashley, was established on Utah Lake. A settlement, known as Old Fort Field, was established in 1849. The Fort location is now within the city limits of Provo. Communities were settled at American Fork, Lehi, and Pleasant Grove in 1850.

A severe drought in 1931-1935 and the subsequent water storage loss in Utah Lake prompted implementation and construction of the Provo River Project. The project was constructed beginning in May 1938, and the Deer Creek Dam began delivering water in 1941. Construction of some of the features of the Aqueduct Division began in 1939 and was completed in 1951.

#### **3.8.2.2 Salt Lake Aqueduct**

The SLA and all of its various features, including the Olmsted and Alpine-Draper Tunnels, are historic properties which are eligible for the NRHP. Consultation with SHPO has been completed to mitigate for adverse effects to the Aqueduct from transfer of the SLA to non-Federal ownership. A Memorandum of Agreement (MOA) has been executed and signed by all parties detailing the mitigation to be completed.

### **3.8.2.3 Provo Reservoir Canal**

The Deer Creek Division facilities, including the PRC, the Murdock Diversion Dam, and the Jordan Narrows Pumping Plant are all considered to be historic properties and are eligible for the NRHP.

As part of the PRC Enclosure EA (completed in 2003), a cultural resource survey was completed on the Provo Reservoir Canal in 2002. *A Cultural Resource Inventory of the Provo Reservoir Canal, Utah County, Utah*, (report number U-01-EP-0773s, p) encompassed 21.5 miles (approximately 267 acres) of the entire canal. A total of 113 historic water management features and six bridges are documented in the report. The canal is recommended as eligible for the NRHP. An addendum to this report was completed and submitted to the SHPO in September 2004. Consultation with SHPO has been completed, and a MOA has been executed and signed by all parties.

### **3.8.2.4 Pleasant Grove Property**

PRWUA recently built, at its own expense, a new facility for office space and storage and maintenance of equipment, on approximately 3.79 acres of land now owned by the Federal government, administered by Reclamation. Before authorizing the construction of that facility, Reclamation completed NEPA and NHPA compliance and consultation with SHPO.

This property previously contained six structures that were the remnants of Civilian Conservation Corps Camp BR-91, built and occupied between 1935 and 1942. The camp had originally encompassed 13 acres. Over time, the buildings were either destroyed or moved to this location. In 2002, as a result of consultation with SHPO, a MOA was executed among Reclamation, PRWUA, the Pleasant Grove Certified Local Government, and SHPO. Under the terms of that agreement, two of the original buildings were stabilized, preserved, and moved to a parcel adjacent to the land proposed for transfer that would remain in Federal ownership. The remaining historic structures were destroyed and the new PRWUA facility built on the property.

Consultation with SHPO, Indian tribes, the Advisory Council on Historic Preservation (ACHP) and other interested parties is complete for the Pleasant Grove property.

## **3.8.3 Impact Analysis**

### **3.8.3.1 No Action Alternative**

#### **3.8.3.1.1 Salt Lake Aqueduct**

This facility consists of a large buried pipeline, which will remain intact and used for its historic purpose of conveying water. The operation and maintenance of the pipeline for the foreseeable future will remain the same.

Under the no action alternative, the SLA would continue to be used as a conveyance system for municipal water supply. There would be no effect to the historic nature of this facility, which would remain in Federal ownership.

#### **3.8.3.1.2 Provo Reservoir Canal**

The PRC would continue to be used in the same manner as in the past to convey water for municipal water supply and irrigation. This system differs from the SLA since it is an open canal and has turnouts for individual shareholders as well as cities for irrigation purposes.

The facilities would remain in Federal ownership and there would be no effect to this historic system.

#### **3.8.3.1.3 Pleasant Grove Property**

Under the no action alternative, there would be no effect to this property, and the land would remain in Federal ownership.

#### **3.8.3.2 Proposed Action**

##### **3.8.3.2.1 Salt Lake Aqueduct**

If the proposed action were implemented, the transfer of this historic property would constitute an adverse effect. Under 36 CFR 800.6(c), Reclamation has consulted with the SHPO and has completed a MOA to mitigate those effects. This MOA has been signed and is on file.

##### **3.8.3.2.2 Provo Reservoir Canal**

If the proposed action were implemented, the transfer of this historic property would be an adverse effect. With the exception of the Murdock Diversion and the Jordan Pumping Plant, the property had been previously documented according to the guidelines stipulated under 36 CFR 800. Consultation with SHPO determined that some mitigation in addition to that which was completed for the canal enclosure would be necessary. The mitigation consisted of preparing an addendum report to the Cultural Resource Inventory of the PRC, Utah County, Utah (U-010EP-0773s,p) documenting the Murdock Diversion structure and the Jordan Pumping Plant. This addendum report was completed and submitted to SHPO in September 2004.. A MOA documenting this mitigation has been signed.

##### **3.8.3.2.3 Pleasant Grove Property**

If the proposed action were implemented, the transfer of this property would not constitute an adverse effect. The property formerly housed a historic CCC camp. Prior to the construction of the PRWUA office building, the property was documented

according to the guidelines stipulated according to the *Secretary's Standards* ((48 FR 44716). Two preserved CCC camp buildings are located on adjacent parcel of Federal land under Reclamation jurisdiction and would remain in Federal ownership. Previous consultation and mitigation on this property is discussed in the MOA mentioned in Section 3.8.2.4, and in the July 2002 EA, "Treatment of Provo River Water Users Association Office Building," PRO-02-003.

### **3.9 Land Use and Land Ownership**

#### **3.9.1 Introduction**

This section describes the lands that may be affected by the proposed action. Details of current land ownership and management issues are described in this section.

The lands proposed for transfer are held in one of four ways: fee title, easement, right-of-way, or withdrawn. The definitions of these terms are as follows:

Fee Title: An absolute estate in land; ownership.

Easement: A right which one party has to use the land of another party for a specific purpose. An easement gives no title to the land and is not an estate in land. An easement is, however, an "interest" in land.

Right-of-Way: The right to pass across the lands of another. This term sometimes causes confusion because it is frequently applied to fee title ownership, especially if they are linear in nature. However, as used in this EA the term "right-of-way" does not include fee ownerships.

Withdrawn: United States lands withdrawn from the public or National Forest Lands and under the jurisdiction of Reclamation. Comparable to fee title lands, as per an absolute estate in land.

#### **3.9.2 Affected Environment**

The SLA is owned by the Federal government under Reclamation's jurisdiction, and the operation and maintenance is performed by MWDSLs under an existing contract. The PRC is also owned by the Federal government under Reclamation's jurisdiction and the operation and maintenance is performed by the PRWUA under an existing contract.

The SLA runs 43 miles from Deer Creek Dam to the terminal reservoirs located at approximately 33<sup>rd</sup> South near I-215 in Salt Lake City. The PRC runs 21.5 miles from the mouth of Provo Canyon to the Point of the Mountain, near the Utah/Salt Lake County Boundary.

### **3.9.2.1 Land Ownership**

The Federal government currently owns the land rights for the SLA as follows:

Fee Title: approximately 250 acres

Easement: approximately 600 Acres

Federal Reserved Rights-of-Way (obtained under the 1890 Act): approximately 300 acres

There are approximately five portions of the SLA that run through the USDA Forest Service lands. These lands were withdrawn by Reclamation between 1905 and 1947 for construction, operation, and maintenance of the SLA.

The Federal government currently owns the land rights for the PRC as follows:

Fee Title: approximately 222 acres

Easement: approximately 134 acres

### **3.9.2.2 Third Party Rights of Use**

Currently there are many existing agreements that allow various third party crossings and encroachments of the SLA and PRC easements and fee title properties. Examples of these are landscaping, roads, utility crossing, sport courts, and trails. To request an agreement, an applicant contacts the PRWUA or the MWDSLs to request an application. Once the applicant submits the request, the PRWUA or MWDSLs reviews the application to ensure the requested encroachment will not hinder operation and maintenance of the SLA or the PRC. Once the PRWUA and MWDSLs have completed their review, each agency submits the application to Reclamation for review and approval. Once Reclamation approves the request, including compliance with NEPA and other environmental and cultural resource laws, an agreement is prepared based on the request in the original application. The process of issuing third party rights of use is governed by 43 CFR 429, and Section 10 of the Reclamation project act of 1939.

There are numerous areas along both the SLA and the PRC where private individuals are in trespass on Federal land. Trespass issues are dealt with on an individual basis by working with individuals to resolve the trespass.

### **3.9.2.3 Land Use Plans**

Easements and Federal reserved rights-of-way lands may be subject to various county master plans, and activities occurring on these lands would probably need to comply with the land use plans.

Communities in Utah and Salt Lake Counties through which the PRC and SLA run include Orem, Lindon, Pleasant Grove, American Fork, Cedar Hills, Lehi, Highland, Alpine, Draper, Sandy, and Salt Lake City. Various land use and zoning rules and requirements are associated with each of these incorporated areas. In the unincorporated portions of Utah County, the following plans may affect the proposed action:

- The Utah County Master Plan, adopted in 1980, includes a countywide profile of natural and human elements, and presents goals, policies and plans for land use, public facilities, transportation and housing.
- The Provo Canyon Plan, prepared by the planning commissions of Wasatch and Utah Counties, was adopted in 1974 and 1975.

The current operation of the PRC and the SLA is consistent with established land use and zoning designations.

The PRC and SLA are in close proximity and operationally related to CUP facilities, including the Jordan Aqueduct and the Alpine Aqueduct, which would remain in Federal ownership. When the CUP facilities were planned and constructed, in many cases no additional rights-of-way were acquired when the CUP features were constructed within Federal rights-of-way and land ownership which included the SLA and the PRC facilities and therefore share the lands utilized by SLA, PRC, and CUP facilities. For a sizeable portion of its alignment, the canal lies so near key CUP facilities that lack of access to the PRC rights-of-way would make operation and maintenance of those CUP facilities difficult.

### **3.9.3 Impact Analysis**

#### **3.9.3.1 No Action Alternative**

If transfer title does not occur, there are no changes to how the properties would be managed, including issuing of third party rights of use. PRWUA would continue to operate and maintain the PRC, and MWDSLS would operate and maintain the SLA. Third party rights of use would continue to be issued through the current application process, subject to 43 CFR 429. Reclamation would continue to deal with trespass issues and occurrences on a case-by-case basis.

#### **3.9.3.2 Proposed Action**

##### **3.9.3.2.1 Land Ownership**

If the proposed action were implemented, land rights owned as fee title or easement by the Federal government would be transferred to these agencies. Any Federal reserved rights-of-way would be transferred as easements to the applicants. The corridor of land

that bisects the Highland property, the site of the proposed Interagency Center, would remain in Federal ownership, with a permanent easement granted to MWDSLs.

Reclamation's withdrawn lands would be relinquished back to the USDA Forest Service, and an easement would be conveyed to MWDSLs by the Federal Government to allow for the continued O&M, and replacement, when necessary, of the SLA where it runs through USDA Forest Service lands. This easement should have a described width, for example, 100 feet left and right of the centerline of the SLA. There are no withdrawn lands associated with the PRC.

In addition to the relinquishment of the withdrawals, Reclamation would transfer, to the USDA Forest Service, jurisdiction over that portion of fee title land that bisects the land referred to as the Highland Property, which is planned for exchange to the USDA Forest Service for the building of the Timpanogos Interagency Center (an interagency administrative facility and visitor's center). Prior to this transfer, as part of conveyance of the SLA to MWDSLs, Reclamation would grant to MWDSLs an easement for the use, operation, maintenance, repair, construction, improvement or replacement of the SLA.

All trespass issues would become the responsibility of PRWUA and MWDSLs.

#### **3.9.3.2.2 Third Party Rights of Use**

If the proposed action were implemented, all existing agreements pertaining to the SLA would be transferred to MWDSLs and all existing agreements pertaining to the PRC would be transferred to the PRWUA. MWDSLs and PRWUA would be obligated to honor the existing agreements that are currently in place. These agencies would be responsible for how and when to issue new agreements and renew existing agreements. These agencies would be responsible for all matters pertaining to the agreements, including all benefits and obligations. The new owners would assume responsibility for trespass issues, and they would work toward resolving these issues after transfer.

#### **3.9.3.2.3 Land Use**

There are no conflicts between the proposed action and any existing land use plans or zoning ordinances.

No foreseeable changes to the existing land use are anticipated. The narrow corridor of the land being transferred precludes development, and substantially limits future uses of the surface area. The water delivery infrastructure is critical for Salt Lake and Utah Counties, so it would be unlikely that the facilities would ever be decommissioned.

Provisions for accessing those CUP facilities in close proximity to the PRC and SLA would be provided for by contract number 04-WC-40-8950 between Reclamation and PRWUA and MWDSLs.

## **3.10 Socioeconomics**

### **3.10.1 Introduction**

This section describes social and economic aspects of the human environment that may be affected by the proposed action. There are five areas of the human environment that the proposed action may affect. Potential impacts to these areas from the proposed and no action alternatives are described in this section, including indirect impacts associated with the PRC enclosure.

### **3.10.2 Affected Environment**

The PRP facilities for which title may be transferred could affect socioeconomic resources in five ways: (1) water use and conveyance, (2) recreation access, (3) road and highway crossings, and (4) activities related to project operation and maintenance, and (5) Reclamation oversight costs and revenue streams received from Federal ownership of the facilities. This section describes the affected environment for these five elements.

#### **3.10.2.1 Water Use and Conveyance**

The SLA has a conveyance capacity of approximately 175 cfs, and is used to convey project water subscribed to by the MWDSLS from Deer Creek Reservoir to two large terminal reservoirs near I-215 and 3300 South in Salt Lake City, with multiple turnout points along the aqueduct's 43-mile length. The water conveyed in the aqueduct represents a significant portion of Salt Lake County's domestic water supply. Users of this water are assessed charges by MWDSLS which cover the costs of operation and maintenance of MWDSLS's water delivery facilities, and capital costs, including repayment to Reclamation for costs of construction of project facilities, required facility improvements, etc., in accordance with MWDSLS' agreements with its member cities.

The PRC is used to convey both irrigation and municipal water to numerous shareholders of the PRWUA. Users of this water are assessed charges by PRWUA to cover the costs of operation and maintenance of the facility, and capital costs, such as repayment to Reclamation for costs of construction of the project facilities, required facility improvements, etc. in accordance with the bylaws of the PRWUA.

In a study conducted by Reclamation in 2002, (See Deer Creek Dam Modification Report, December 2002) Reclamation calculated the following economic benefits from the use of Provo River Project Water for Irrigation and Municipal and Industrial (M&I) uses.

**Table 3.1 Irrigation and M&I Benefits of Provo River Project Water**

Benefits	Annual (\$ millions)	Capitalized (\$ millions)
Irrigation	1.30	20.0
Municipal and Industrial	17.60	273.0
Total Benefits	18.9	293.0

### **3.10.2.2 Recreation Access**

Recreational opportunities carry local and regional economic benefits, as well as social implications.

The SLA crosses or is adjacent to National Forest lands for much of its 43-mile length. Numerous points of access to the National Forest and other recreational opportunities (such as the Bonneville Shoreline Trail) via the aqueduct corridor currently exist by means of easements and other legal rights-of-way. In many instances, these points of access are the only ones available for accessing National Forest lands and other recreational areas.

The corridor of the PRC is seen by many interested parties as an ideal resource for the creation of public trails or other related recreational assets. Local and regional economic benefits could result from such recreational use of the canal corridor. Both PRWUA and Reclamation have expressed willingness to consider the implementation of recreation-related proposals using the canal corridor if the canal is enclosed.

During the decision making process for any development issues, including recreational facilities/usage, Reclamation consults with the PRWUA for the PRC and MWDSLS for the SLA. Consensus among all parties involved is sought before actions are approved.

With respect to the development of possible recreational opportunities along the PRC if the canal is enclosed, both PRWUA and Reclamation have expressed a willingness to support such development. Responsibility for construction and maintenance costs has not been determined.

### **3.10.2.3 Road and Highway Crossings**

After emerging from the Alpine-Draper tunnel into Salt Lake County, significant portions of the SLA corridor are in areas that have become very urbanized. Numerous roads and highways currently cross the corridor using easements and rights-of-way granted by Reclamation, generally with the consent and approval of the MWDSLS. In many cases, rights-of-way and easements have also been granted for residential yards, commercial parking lots, and other such uses on top of the aqueduct corridor. It is

anticipated that this trend will continue, with numerous future requests for easements and rights-of-way, particularly for transportation purposes, being made by developers, utility companies, and city and county officials. The uses enabled by these easements and rights-of-way represent important economic benefits for the adjacent communities.

The PRC corridor also traverses both highly urbanized and rapidly developing areas. Numerous easements and rights-of-way for road and highway crossings exist on the canal corridor, granted by Reclamation, with the consent of the PRWUA. It is anticipated that this trend will continue, with numerous future requests for easements and rights-of-way, particularly for transportation purposes, being made by developers, utility companies, and city and county officials. The uses enabled by these easements and rights-of-way represent important economic benefits for the adjacent communities. In determining whether any significant changes would occur in the process for evaluating these requests, it is important to note that Reclamation's current policy is to consider what impacts the requested use would have on project operation. If no negative impacts are determined, the use is granted and a fair market value is charged for the use, as well as staff costs to evaluate and issue permits by Reclamation and MWDSL or PRWUA.

#### **3.10.2.4 Activities Related to Project Operation and Maintenance**

The PRWUA was given operation and maintenance responsibility for the Pleasant Grove Property in 1956, and has used the property for activities related to operation and maintenance of the Deer Creek Division of the PRP. The PRWUA recently constructed, at its own expense, an office building and shop complex on the property to facilitate its operation and maintenance activities. Operation and maintenance activities for the Deer Creek Division are the statutory responsibility of Reclamation, but have been contractually assigned to the PRWUA by Contract No. IIR-874, dated June 27, 1936, in accordance with Reclamation law.

#### **3.10.2.5 Reclamation Oversight Costs And Revenue Streams Received From Federal Ownership Of The Facilities**

Reclamation currently expends appropriated Federal funds in activities related to its statutory responsibilities for oversight of the PRP. Reclamation Law (a body of U.S. Statutes that governs Reclamation projects) stipulates that some of these activities are reimbursable by the water users and some are non-reimbursable. Also, Reclamation receives payments from the water users and other parties as a result of its ownership of the facilities. The majority of these payments are collected from PRWUA and MWDSL pursuant to contracts for repayment of project construction costs.

Other payments are collected from third parties for miscellaneous and incidental uses of the facilities, such as crossing agreements, land use permits, and other licensed uses. Generally, Reclamation law requires these payments to be applied as a tail-end credit to the water users' obligation to repay the construction costs of the Federal project.

### **3.10.3 Impact Analysis**

#### **3.10.3.1 No Action Alternative**

Under the no action alternative, there would be no impacts to socioeconomic resources. Reclamation would continue to hold title to the facilities, and the water users would continue to operate and maintain the facilities.

During the scoping process, the issue of how title transfer and PRC enclosure are related was raised. An indirect effect of title transfer is to enable PRWUA and MWDSLs to obtain tax-exempt bonding. Tax-exempt bonding could not be obtained for improvements to Federally owned facilities. Therefore, under the no action alternative, in financing future anticipated capital improvements, such as the enclosure of the PRC, the water users, including PRWUA, MWDSLs, and the CUWCD (which may participate financially in the PRC enclosure project) would not be able to obtain tax-exempt bonding, and would therefore be subject to higher financing costs than would be the case under the proposed action.

Under the no action alternative, requests to develop and operate trails and other recreational assets in the PRC corridor would be considered in light of their impact on the operation of the PRC. Reclamation has a statutory responsibility to protect the project interests. Subject to this requirement, Reclamation also has an interest in allowing the development of recreational facilities on Federal projects. Therefore, under the no action alternative, Reclamation would be inclined to grant such requests, within the limits of its ownership rights, if the proposed facilities or activities did not interfere with the operation of the PRC for PRP Purposes.

#### **3.10.3.2 Proposed Action**

This section describes the effects of the proposed action to the five resource issues described in Section 3.10.2.

##### **3.10.3.2.1 Water Use and Conveyance**

Under the proposed action, no changes are anticipated which would affect current deliveries to PRP water users. The MWDSLs will continue to deliver its PRP water through the aqueduct according to its obligations to its subscribers. The PRWUA will continue to make deliveries to its subscribers through the canal as it does at present.

##### **3.10.3.2.2 Recreation Access**

Article 8 of the draft Title Transfer Agreement states that the Secretary of the Interior may, subject to appropriate provisions for use, operation and maintenance, repair, improvement, replacement, and protection of the SLA, and subject to appropriate security rules, regulations, and ordinances enacted from time to time by MDSLs, provide for continued non-motorized public access to and across the SLA for

recreational purposes. Thus, no impacts to this aspect would occur under the proposed action.

Nearly 15 years ago, the City of Orem approached Reclamation and PRWUA regarding the feasibility of the PRC corridor for a non-motorized trail. PRWUA and Reclamation believe that while the canal is open there would be a significant public safety risk to allow the general public access to the canal corridor. In the last 7 years, Reclamation has communicated with the Cities of Orem and Lindon, and other local municipalities, and the Sojourner's Running Club, and has taken part in a panel regarding recreation held at UVSC. These interactions have proven meaningful, however, an agreement to allow for recreation that addresses Reclamation's and PRWUA's concerns regarding liability, public safety, and water quality, has not been reached.

Under the proposed action, the PRC would be owned by PRWUA and/or a Joint Public Agency representing the public entities that have capacity rights in the PRC. In considering requests for permission to develop and operate trails and other recreational assets in the PRC corridor, PRWUA or the JPA would be obligated to consider such requests in light of their fiduciary responsibilities to their shareholders/members. This responsibility would require that any permission to develop trails or other recreational assets would not interfere in any significant ways with delivery of PRP water to its shareholders. PRWUA would not likely be willing to provide the funding for such recreational development. As such, little difference exists between the conditions under which recreational development could occur in the PRC corridor for the no action alternative or the proposed action. Therefore, it is not anticipated that the proposed action would have any significant impact on the ability of interested parties to develop recreational opportunities on the enclosed PRC.

PRWUA would continue to plan and negotiate with representatives of Utah County and interested municipalities to identify opportunities for a recreation trail and related facilities along the PRC on terms which are fair and equitable and which do not interfere with the use, operation, or maintenance of the canal. At such time as an agreement has been reached on fair and equitable terms, and all other water quality, safety and security features and procedures deemed necessary by PRWUA have been completed, and arrangements are in place suitable to PRWUA for operation and maintenance of the PRC and any recreation features and improvements, PRWUA shall allow access for recreational use of the PRC. This understating is documented in Article 8 of the Title Transfer Agreement.

### **3.10.3.2.3 Road and Highway Crossings**

Article 7 of the draft Title Transfer agreement expressly provides that all existing easements, rights-of-way and other licensed uses related to the facilities be transferred as they exist at the time of transfer. Therefore, there would be no impacts to such existing rights and uses under the proposed action. Any future requests, under the proposed action, would be evaluated, approved, or rejected at the discretion of PRWUA, MWDSLS and/or the joint public managing entity. While it is impossible to

predict exactly what policies would be used by the water users to evaluate these requests, it is reasonable to assume that a very similar process to the current one would be used, for a number of reasons. First, the water user's primary interests would remain the same, i.e., the efficient operation of the facility for water delivery purposes. Second, boards of both PRWUA and MWDSLs are made up primarily (PRWUA) or completely (MWDSLs) of representatives from public entities, and are therefore subject to public input from the entities that would presumably be involved in making such requests for rights-of-way, easements, etc. Additionally, if the PRC and SLA are under non-Federal ownership, municipal entities through which the canal and aqueduct corridors pass have condemnation authority to obtain rights to such use when necessary. Therefore, no significant impacts are expected as a result of this change under the proposed action. It is possible, however that the application process or rates could change under this new management. PRWUA has an adopted resolution in place to process third party rights of use agreements at cost. PRWUA has indicated that its policy to process such agreements at cost would continue (Denos, PC, 2004).

#### **3.10.3.2.4 Activities Related to Project Operation and Maintenance**

As stated previously, PRWUA and MWDSLs currently operate and maintain the facilities proposed for transfer for project purposes pursuant to contracts with Reclamation. Transfer of title of these facilities, while releasing PRWUA and MWDSLs from Reclamation's authority to set guidelines for the operation and maintenance of these facilities, is not expected to effect any significant changes in the way these facilities are operated. Additionally, those project facilities that remain in Federal ownership, under Reclamation jurisdiction, would continue to be operated and maintained in precisely the same manner as they currently are. Therefore, operations at the Pleasant Grove Property and the Deer Creek Operations Building are not anticipated to change significantly. The proposed action would therefore have no impact on this resource.

#### **3.10.3.2.5 Reclamation Oversight Costs And Revenue Streams Received From Federal Ownership Of The Facilities**

Certain non-reimbursable activities of Reclamation related to the administration, inspection, etc. of the three facilities would either no longer be performed, or if performed by Reclamation, would require reimbursement from the water users. Also, under the proposed action, future revenue streams from the issuance of permits, license agreements, and other land use fees, and other miscellaneous revenues would no longer be credited to Reclamation, but rather to the water users. In order to capture the value of this future revenue to the Federal treasury, the water users would be required to pay at the time of transfer the net present value of all anticipated future revenue streams associated with the facilities to be transferred, including the net present value of the water users' annual repayment obligations attributable to the transferred facilities. This amount is expected to be approximately \$1.6 million for the three transferred facilities. A more detailed description of the process used for determining these values are contained in Exhibits A and B of the Title Transfer Agreement.

A change from Federal to non-Federal ownership would not be expected to impact the value of properties adjacent to the canal.

### **3.10.3.2.6 Indirect Effects on PRC Enclosure**

If, and how, title transfer and PRC enclosure are related was identified as a concern during the scoping process. Reclamation believes that these actions are indirectly related. Enclosure may occur, but is not required, under either alternative. Title transfer may affect how the enclosure is financed.

Subscribers to PRWUA's water supply are required to pay charges assessed by PRWUA for expenses related to operation and maintenance of facilities as well as costs for capital improvements deemed necessary by PRWUA in accordance with its bylaws and articles of incorporation. PRWUA has determined that enclosure of the PRC is in the Association's best interests, and has obtained estimates of the cost of enclosure from an independent consulting firm, Bowen and Collins. The cost of enclosure is estimated to be approximately \$115 million. This amount is tied to the Construction Cost Index and will increase in accord with that Index until implementation of the enclosure project occurs.

An important motivation for PRWUA and MWDSLS in seeking title to these facilities is for purposes of financing the PRC enclosure as well as future anticipated improvements to the SLA. PRWUA can significantly decrease the costs of financing the PRC enclosure by using tax-exempt bonding. However, facilities in Federal ownership or private ownership are not eligible under IRS tax rules to receive such financing. Therefore, it is anticipated that after title transfer from Reclamation to PRWUA, PRWUA would then transfer ownership of that portion of the canal capacity, which is currently held by public entities, to a Joint Public Agency in order to obtain this tax-exempt bonding capability. PRWUA estimates that they would save approximately \$26 Million by being able to finance the PRC enclosure project with tax-exempt bonding and CUWCD participation. This savings would be passed on to PRWUA's shareholders in the form of lower capital cost assessments. The CUWCD would also be able to obtain lower financing costs in the same manner for its participation in the canal enclosure project. This represents a significant positive financial impact to PRWUA shareholders that would result from the proposed action.

Table 3.2 provides details of the cost estimates for the enclosure project, as well as the method PRWUA anticipates using to allocate these costs to its shareholders. This determination and the resulting assessments are a discretionary decision which PRWUA, according to its bylaws and articles of incorporation, as well as its contracts with Reclamation, is authorized to make. It is not a discretionary decision to be made by Reclamation, and is not dependent on the proposed action. Therefore, the only impact of the proposed action in this area would be to reduce the cost of canal enclosure to PRP subscribers.

**TABLE 3.2 Preliminary Cost Estimate for PRC Enclosure**

No.	Item	Quantity	Units	Unit Cost	Cost
1	Demolition of concrete lining	93,333	SY	15	\$1,399,995
2	Disposal of concrete lining	10,400	CY	18	\$187,200
3	Excavation	119,500	CY	5.5	\$657,250
4	Pipe material costs	100,850	LF	457	\$46,088,450
5	Pipe handling, bed prep., and install	100,850	LF	84	\$8,471,400
6	Bedding material	60,000	CY	14	\$840,000
7	Backfill and compaction to spring line	272,400	CY	20	\$5,448,000
8	Other backfill and compaction	698,300	CY	15	\$10,474,500
9	Replacement of existing crossings	29	EA	150,000	\$4,350,000
10	Transitions to or from siphons	4	EA	10,020	\$40,080
11	Lining of American Fork Siphon	1,280	LF	500	\$640,000
12	Additional install cost through Dry Creek	1,190	LF	100	\$119,000
13	Diversion structures	40	EA	16,500	\$660,000
14	Outlet valve structure	1	LS	332,500	\$332,500
15	Conversion of Olmsted box to overflow	1	LS	112,500	\$112,500
16	Isolation valve	1	EA	80,000	\$80,000
17	Flow meters	2	EA	40,000	\$80,000
18	Pigging Launching Facilities	2	EA	250,000	\$500,000
19	Pigging Retrieval Facilities	2	EA	500,000	\$1,000,000
20	Murdock diversion modifications	1	LS	571,300	\$571,300
21					
22	Subtotal				82,052,175
23					
24	Contingency	20%			16,410,435
25	Engineering, Legal & Administration	15%			14,769,392
26					
27	Total Cost				113,232,002

**Financing Costs**

Assumptions:

1. One half of the project funded by PRWUA
2. Tax Exempt financing at 4.5%, Taxable financing at 6.5%. Source Jim Matsumori at GK Baum (2/24/04)
3. Based on 30 year financing

	Interest Rate	Amount Financed	Annual Payment	Total Payments
Tax Exempt	4.5%	\$ 56,616,001	(\$3,475,744)	\$ 104,272,310
Taxable	6.5%	\$ 56,616,001	(\$4,335,509)	\$ 130,065,256
Difference			(\$859,765)	\$25,792,947

PRWUA is exploring a number of potential sources of funding or financing for enclosure of the PRC, in addition to title transfer and Section 207 funding. One additional source being pursued by PRWUA is funding from the state Board of Water Resources for financing the non-public capacity of the canal.

### **3.11 Environmental Justice**

The impact area of influence is the Provo River Project area, which includes parts of Wasatch, Summit, Utah, and Salt Lake Counties. Through a review of the United States 2000 census information and socioeconomic data available for Salt Lake and Utah Counties, populations that could potentially be affected by the proposed transfer were evaluated. No predominantly low-income, minority, or Native American populations were identified in the affected area. No specific Environmental Justice issues were raised during the scoping process.

### **3.12 Indian Trust Assets**

Indian Trust Assets are legal interests in property held in trust by the United States for the benefit of Federally recognized Indian tribes or individual tribal members. Examples of things that may be trust assets are lands, mineral rights, hunting, fishing, or traditional gathering rights, and water rights. The United States, including all of its bureaus and agencies, has a fiduciary responsibility to protect and maintain rights reserved by or granted to Indian tribes or individual tribal members by treaties, statutes, and Executive Orders, which are sometimes further interpreted through court decisions and regulations. This trust responsibility requires the Federal government to take all actions reasonably necessary to protect trust assets, in accordance with the Secretary's Principles for Managing Indian Trust Assets in 303 DM 2.

For the proposed action, there would be no known Indian trust assets affected. Tribal consultation the proposed project was undertaken in February 2004, with letters and information sent to the Northern Ute Tribe in Fort Duchesne, Utah, the Northwest Band of the Shoshone in Brigham City, Utah, and the Paiute Tribe of Utah, in Cedar City, Utah. The proposed project region is the aboriginal territory of the Northern Ute people as judicially established on the 1978 Indian Land Areas map. No concerns regarding Indian Trust Assets were communicated by any of these tribes.

### **3.13 Unavoidable Adverse Impacts**

This section describes unavoidable adverse impacts that would occur under the proposed action. Unavoidable adverse impacts may include temporary impacts, mitigated impacts, and impacts that remain after mitigation. It is the unavoidable adverse impacts that remain after mitigation which determine whether these impacts are acceptable and if a FONSI is appropriate.

As stated in Section 3.8, transfer of the SLA and PRC would be an automatic adverse effect on these historic properties as defined by Section 106 of the NHPA. Reclamation

has completed MOAs with SHPO to mitigate for these effects. No other unavoidable adverse impacts have been identified.

### **3.14 Cumulative Impacts**

#### **3.14.1 Introduction**

The NEPA and CEQ Regulations for Implementing the Procedural Provisions of NEPA (40 CFR Part 1500-1508) require Federal agencies to consider the cumulative impacts of their actions. As stated at 40 CFR 1508.7, cumulative impacts are the impacts on the environment which result from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Cumulative impacts are based on impacts that remain after mitigation.

#### **3.14.2 Impact Analysis**

As stated in Section 1.6.2.1, the PRWUA intends to enclose the PRC. The proposed action would enable the PRWUA to acquire tax-exempt bonding, greatly reducing the costs of enclosing the PRC. This facilitates enclosure and may increase the likelihood that the enclosure project could occur at an earlier date.

The PRWUA estimates the total cost of PRC enclosure to be \$115 million. Transfer of title would allow PRWUA to obtain tax-exempt financing for the PRC enclosure. This would significantly decrease the costs of enclosure to be borne by PRWUA and its members.

The proposed action would facilitate the enclosure, and if Section 207 funds were used, the water saved from enclosure could be used as in-stream flows earlier, as opposed to the no action alternative. These in-stream flows would aid in the recovery of the June sucker, as well as improving other fisheries in the Provo River. This saved water amounts to approximately 8,000-acre feet. This saved water would provide a significant portion of the water needed to aid in the recovery of the June sucker.

If Title Transfer were to proceed, all negotiations for conveyance of water for the ULS project, as described in Section 1.6.2.2, would occur with PRWUA and/or the new Joint Public Agency.

As stated in Section 1.6.2.7, CUWCD proposes to construct a new 48-inch diameter pipeline to connect to an existing 42-inch diameter turnout. This turnout would be used to convey the original design capacity of water to the North Branch of the Alpine Aqueduct. If Title Transfer were to occur, all crossing agreements pertaining to the PRC would need to be negotiated with the PRWUA.

Should Lehi City/UDOT proceed with the widening of SR 92 after implementation of the proposed action, all crossings and easements pertaining to the PRC would need to be issued by PRWUA.

If the proposed action were implemented, all existing and future license agreements would be managed by the PRWUA and MWDSLs for the PRC and SLA, respectively. It is possible that the application process or rates could change if the proposed action is implemented.

If the proposed action were implemented, general activities on the PRC and SLA , including the possible construction of a recreational trail along the PRC, would no longer require approval by Reclamation. Approval would be at the discretion of PRWUA, MWDSLs, and/or the Joint Public Agency.

### **3.15 Short-Term Use of the Environment Versus Long-Term Productivity**

There are no changes in operations of the facilities for the foreseeable future. There would be no effect to the long-term productivity of the environment if the proposed action were implemented.

### **3.16 Irreversible and Irretrievable Commitment of Resources**

There would be no irreversible or irretrievable commitment of resources.

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