108 FERC ¶ 61,130
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Pat Wood, III, Chairman;
Nora Mead Brownell, Joseph T. Kelliher,
and Suedeen G. Kelly.

PacifiCorp Project No. 696-013

ORDER GRANTING SURRENDER APPLICATION
AND APPROVING PROJECT REMOVAL PLAN

(Issued August 4, 2004)

1. In this order, we grant PacifiCorp's application to surrender its license for the 950-kilowatt-megawatt American Fork Project No. 696, located on the American Fork Creek in Utah County, Utah. We also approve an uncontested settlement agreement providing for removal of nearly all project works by December 31, 2007, and adopt the accompanying removal plan.

## PROJECT DESCRIPTION

2. PacifiCorp's current license for the American Fork Project was issued on November 24, 1975, with an expiration date of October 31, 2000.[1] The project has operated since that time on annual licenses.[2]

[1] 54 FPC 2433 (1975). The current project was originally built in 1906-07, and was originally licensed, to Utah Power & Light Company, in 1927, for a term expiring June 30, 1970. *See* Eighth Annual Report of the Federal Power Commission at 52, 125-26 (1928). The license was transferred to PacifiCorp in 1988. 45 FERC ¶ 62,145.

[2] Because its installed capacity is under 1.5 MW, the American Fork Project is a "minor project," for which the license usually waives, pursuant to Federal Power Act (FPA) section 10(i), the federal takeover, annual license, and associated accounting and administrative provisions of the FPA. However, the 1975 license for the American Fork Project did not waive the annual license provisions of section 15. *See* PacifiCorp, 98 FERC ¶ 61,238 at 61,965 (2002).

3. The project consists of a concrete overflow-type diversion dam 4.5 feet high and 29 ¾ feet wide, with steel slide gates; an intake structure with a Tainter gate; two sets of trash racks; a 11,666-foot-long flowline delivering diverted water to the powerhouse, a 2,700-square-foot-masonry brick powerhouse containing one Pelton horizontal synchronous turbine with a Wagner step-up transformer generator rated at 1,000-kVA; a 275-foot-long 12.5 kV transmission line from the powerhouse to its connection to PacifiCorp's interconnected distribution system; and appurtenant facilities.

4. The project operates in a run-of-river mode and releases into the 2.4-mile-long bypassed reach a minimum flow of 4 cubic feet per second or inflow, whichever is less.

5. In recent years, the project has experienced multiple failures of its water conveyance system (flowline), which is situated both above and below ground, paralleling the nearby American Falls Creek. Most of the failures have been attributed to rock fall and landslides along steep hillsides.

## PROCEDURAL HISTORY

6. On October 27, 1998, two years before the expiration of its license, PacifiCorp filed an application to relicense the project. On December 31, 2002, PacifiCorp applied to surrender the license and withdraw its relicense application.[3] On February 13, 2003, it amended its surrender application with the filing of a settlement agreement (agreement) it had reached with a number of state, federal, and private entities as to the voluntary decommissioning of the hydroelectric project and the removal of most of the project works. Signatories to the agreement are PacifiCorp, the U.S. Forest Service, National Park Service, U.S. Fish and Wildlife Service, Utah State Historic Preservation Office, Utah Department of Transportation, Utah Trout Unlimited, and American Whitewater.

7. On February 21, 2003, the Commission issued public notice of the surrender application, as amended by the agreement, and solicited comments, protests, and motions to intervene. The Forest Service and the Department of the Interior intervened timely. Trout Unlimited's late-filed motion to intervene was granted by Commission Secretary notice issued December 3, 2003.

[3] This followed the Commission's denial of PacifiCorp's attempt to withdraw its license application and continue to operate indefinitely pursuant to annual licenses. *See* 98 FERC ¶ 61,238, *supra.* On March 21, 2003, PacifiCorp's December 31, 2002 license application was deemed withdrawn. *See* letter order by Lon Crow, Branch Chief, Hydro West Branch, FERC (unreported).

8. On November 26, 2003, staff issued an Environmental Assessment (EA) on the surrender application, examining PacifiCorp's application and the action alternatives of accepting license surrender with all project facilities remaining in place; federal takeover; and issuance of a nonpower license. The EA concluded by recommending the adoption of PacifiCorp's application, subject to the development of more detailed implementation plans. The EA found that such impacts as may occur as a result of the project's retirement and partial removal will be limited in nature and will not result in any long-term negative effects to the environmental resources of American Fork Creek.

9. Comments on the EA were filed by the licensee, the Forest Service, and Interior. Commission staff addressed these comments in a revised EA, which is attached to this order.

## PROJECT REMOVAL PROPOSAL

10. PacifiCorp proposes the license surrender to be effective upon completion of project retirement measures in accordance with the terms of the agreement. The agreement calls for PacifiCorp to operate the project through August 31, 2006, subject to certain interim safety and documentation measures (section 4 of the agreement), and to complete all project retirement activities by December 31, 2007. Section 3 of the describes the decommissioning (project removal) measures PacifiCorp proposes to undertake, the specifics of which are set forth in the Removal Plan attached as Appendix A to the agreement. In summary, the Removal Plan calls for the following.

### A. Diversion Dam.

11. PacifiCorp will demolish and remove the dam, Tainter gates, hoists and steel structures, trash racks, control building, embedded foundations, and electrical/control wiring, conduits, and panels. All materials will be disposed of at an appropriate site off federal lands. Disturbed areas will be revegetated, and the stream channel will be reconstructed.

### B. Powerhouse Facility.

12. PacifiCorp will repair the powerhouse structure and convey it to the U.S. Government. Depending on the Forest Service's wishes, PacifiCorp will either remove or leave the power generation equipment and appurtenances. It will remove the spillway, the transformer pad, and the tender's house, garage, and shed; rehabitate the site; protect the highway; and modify as necessary the retaining wall protecting the powerhouse from undercutting by the river.

**C. Flowline and Penstock**.

13. PacifiCorp will remove air vent piping, pipeline supports, and exposed sections of the steel flowline pipe; cap exposed pipe ends that are left on site; grout-fill pipe under and next to Utah State Route 92 and below the intake structure; and revegetate disturbed areas. Approximately 550 feet of penstock will remain in place for historical purposes.

**D. Power Line**.

14. PacifiCorp will relocate the project's short primary line out of the Lone Peak Wilderness Area.

**E. Disposition of Water Right**.

15. PacifiCorp will use its best efforts to convey its water right associated with the project to the Utah Division of Water Resources (Utah DWR) for the beneficial uses associated with instream flows, and will cooperate with Utah DWR in securing an approved change application for said purposes.

16. PacifiCorp and the signatory parties ask us to approve the agreement's decommissioning measures (at section 3), interim measures (at section 4), and Removal Plan (at Appendix A to the agreement, and incorporated by reference in section 3).[4]

## DISCUSSION

17. Section 6 of the FPA, 16 U.S.C. § 799, provides that hydropower licenses "may be altered or surrendered only upon mutual agreement between the licensee and the Commission after thirty days' public notice." Our regulations provide that a surrender order will be conditioned on the Commission's directives for the disposition of project works, and, where project works have been constructed on land of the United States, with the requirement that such lands be restored to a condition satisfactory to the agency having supervision over such lands. 18 C.F.R. § 6.2 (2004).

18. The surrender of a license for an existing project is conditioned, at a minimum, on the licensee disconnecting the generating equipment and taking measures to ensure public safety. The issue of whether to authorize or require the removal of some or all project works requires additional analysis,[5] which was undertaken in the EA in this proceeding.

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[4] *See* explanatory statement accompanying the settlement agreement, at 14.

[5] *See* Portland General Electric Co., 107 FERC ¶ 61,158 (2004).

19. PacifiCorp states that it wishes to surrender the American Fork Project license because it has determined that the likely cost of environmental protection, mitigation, and enhancement measures associated with relicensing the project would make continued operation uneconomical. PacifiCorp and the other settlement parties have agreed that removal of the project works will serve the public interest by restoring the resources of American Fork Creek, preventing future flowline failures, and protecting public safety.

20. Based on the record evidence in this proceeding, we find that PacifiCorp's proposal to remove the project works, pursuant to the provisions of the Removal Plan, is reasonable and and in the public interest. We are therefore approving surrender of the license and adopting as license conditions agreement section 3 (decommissioning measures), agreement section 4 (interim measures), and the Removal Plan's protocol and schedule incorporated by reference in section 3.

21. As noted, the EA concluded that approval of PacifiCorp's surrender application will not result in any long-term negative effects to the environmental resources of American Fork Creek. Demolition and removal of the dam, penstock, and associated materials will likely result in short-term ground-disturbing activities and erosion, which may cause an increase in turbidity, and short-term disturbances to some wildlife species and their associated habitats. The licensee will, in cooperation with appropriate natural resource agencies, revegetate disturbed or affected areas after de-construction and will re-seed areas with certified noxious weed-free seed mixes.

22. The application does not specify what would be done with the sediments trapped behind the project dam, and does not include an erosion and sediment control plan. To address this need, we are requiring PacifiCorp to develop an erosion control plan to deal with potential problems such as heavy rains, high water, or failures of rehabilitation measures, and to describe how trapped sediments will be treated (ordering paragraph E, below).

23. After the dam is removed, flows will continue naturally down American Fork Creek,[6] bypassing a shrub wetland. In order to preserve this wetland, the State of Utah recommends that PacifiCorp construct a berm to provide backwater to the

[6] The restoration of natural flows to the creek may provide the necessary habitat in the previously bypassed reach to allow the Bonneville cutthroat trout to colonize there, was well as allow cutthroat trout downstream of the project to migrate upstream to fulfill their life cycle, potentially helping to establish the downstream population as a self-sustaining population.

marsh/backwater wetland, which ultimately feeds into the shrub wetland. We agree. We are requiring the development of a wetland protection plan, which shall include, at a minimum, construction of such berm (ordering paragraph G, below).

24. We are in addition requiring plans, during the decommissioning work, for spill containment and protection (ordering paragraph G) and for the safety of motorists and pedestrians along Utah State Route 92 in the project area.

25. Project removal will have a long-term positive effect on recreational use of the project area. An immediate benefit to public use is the reduced potential for flowline failure. In addition, the landscape will be improved aesthetically, which is in accord with the management goals for the canyon as set out by the Forest Service.[7]

## WATER QUALITY CERTIFICATION

26. Under section 401(a)(1) of the Clean Water Act (CWA),[8] an applicant for a federal license or permit to conduct an activity that may result in a discharge into waters of the United States must provide the licensing or permitting agency a certification from the state in which the discharge originates that the discharge would not violate the state's water quality standards. PacifiCorp's request for water quality certification for its surrender/decommissioning application was received by the Utah Department of Environmental Quality (Utah DEQ) on June 12, 2003. On March 18, 2004, Utah DEQ certified that any discharge resulting from the proposed activities would comply with applicable state water quality standards.

## ENDANGERED SPECIES ACT

27. Section 7 of the Endangered Species Act (ESA)[9] requires federal agencies to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species. Ute ladies'-tresses, a perennial terrestrial orchid, is listed as a threatened species throughout its entire range, which includes Utah. However,

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[7] Part of the project lies within the Lone Peak Wilderness Area, which was included in the National Wilderness Preservation System through the Endangered American Wilderness Act of 1978. The agreement is consistent with the Minimum Management Analysis approved by the Regional Forester for this Wilderness Area.

[8] 33 U.S.C. § 1341(a)(1).

[9] 16 U.S.C. § 1536.

no designated or proposed critical habitats are known to occur in the project area for this or any other species.[10] Therefore, there are no issues requiring consultation under ESA section 7.

## NATIONAL HISTORIC PRESERVATION ACT

28. Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 C.F.R. Part 800) require federal agencies to take into account the effect of any proposed undertaking on properties listed or eligible for listing in the National Register of Historic Places (National Register).

29. The Upper American Fork Hydroelectric Power Historic District (District) was placed on the National Register on April 20, 1989. The District includes the project's dam, penstock, powerhouse, and powerhouse access footbridge. These structures were constructed in 1906 -07. The designation was a part of the Electric Power Plants of Utah Property listings. The flowline and the operator's residence were not included, because they lack historic significance. The District was placed on the National Register because of its association with the development of hydropower in northern Utah County, and because of the distinctive industrial architecture of the powerhouse.

30. By letter dated May 7, 2003, the Forest Service stated that the Utah SHPO and the archaeologist for the Uinta National Forest have determined that the powerhouse is an important historical resource with respect to power development. The proposed repair of the powerhouse would retain the historic value of the structure and allow for interpretive and education opportunities. However, the SHPO and the Forest Service agree that the power generation have undergone too many upgrades and parts replacements over the years to retain any historic value. Removing the units will allow for the building to be used for a variety of purposes, while maintaining the historic character of the structure.

31. By letter dated April 23, 2003 the Utah SHPO stated that transfer of the powerhouse to federal ownership would provide a level of protection beyond what it currently receives in private ownership. The project would be maintained under the provisions of the agreement in the short term by the licensee according to the Secretary of the Interior's Standards for Rehabilitation, therefore preserving its integrity until federal transfer of ownership occurs.

[10] A field study conducted in July 1997 resulted in no observations of this species in the project area.

32. The Commission staff and the Utah SHPO executed a Memorandum of Agreement with regard to cultural resources affected by the actions approved in this order. The Memorandum of Agreement includes a Historic Resources Management Plan (approved herein in ordering paragraph J) which sets forth actions the licensee must undertake to resolve potential adverse effects to historic properties. These actions include, among others, documentation of all historic facilities to be removed pursuant to this order, and monitoring and protection procedures for known archaeological and historic sites within the Area of Potential Effect. The licensee's compliance with the Historic Resource Management Plan will satisfactorily complete the section 106 process.

The Commission orders:

(A) PacifiCorp's application to surrender the license for the American Fork Hydroelectric Project No. 696, filed on December 31, 2002, and amended by the terms of a settlement agreement filed February 13, 2003, is granted, to be effective upon the fulfillment, as determined by the Commission, of all surrender conditions set forth below. Sections 3 and 4 of the parties' settlement agreement, published as Attachment A to this order, are approved and made a part of this order.

(B) The licensee shall, until August 31, 2006, continue to operate the project pursuant to the terms of its annual licenses, and shall in addition implement the interim measures set forth in "Section 4: Interim Measures," in Attachment A to this order. Interim measures shall at a minimum include: (a) installation of a functional safety valve at the Burnt Flats box culvert; (b) installation of hazard warning signs within the National Monument; (c) placement of a chain with an attached sign across the mouth of the entrances and exits of three tunnels located on the National Park Service (NPS) lands; (d) documentation of all project features, prior to their removal; (e) inspection of the flowline once every 2 months, weather permitting, and visually inspection of the flowline with binoculars from the road twice each month; and (f) maintenance of the minimum flow in the bypassed reach of 4 cfs.

(C) The licensee shall implement the decommissioning measures set forth in "Section 3: Decommissioning Measures," in Attachment A to this order. Beginning no later than December 31, 2004, the licensee shall, on an annual basis, file with the Commission and the Division of Dam Safety and Inspections' Portland Regional Engineer a progress report outlining the decommissioning and project removal activities conducted pursuant to the Removal Plan, included in Attachment A to this order. The report shall include: a description of the activities completed during the previous reporting period, including the results of the monitoring required by the Removal Plan

and this order; (2) the status of site restoration efforts; and (3) activities to be completed during the next reporting period. The Commission reserves the right to require changes to the Removal Plan, based on the content of the annual status reports.

Project decommissioning will not be considered complete until the Commission issues a letter order stating that the surrender is effective.

(D) On or before September 1, 2006, the licensee shall file for Commission approval a plan to decommission the American Fork Hydroelectric Project. Also, the licensee shall submit a copy of the plan to the Division of Dam Safety and Inspections, Portland Regional Engineer. The plan shall be in accordance with the Removal Plan included in Appendix A of the settlement agreement, and include, but need not be limited to, a detailed description of: (1) the demolishing, removal and disposition of the existing concrete diversion dam, Tainter gates, hoists and steel structures, trash racks, control building, embedded foundations and existing electrical/control wiring, conduits, and panels. All materials shall be disposed of at an appropriate site off federal lands. The licensee shall also revegetate disturbed areas and reconstruct the stream channel; (2) proposals to repair the powerhouse and remove the spillway, transformer pad, and miscellaneous metals; the tender's house, garage, and shed; and rehabilitate the site. The highway shall be protected, the stream channel reconstructed, and the retaining wall protecting the powerhouse modified, as necessary, to prevent undercutting by the river. The power generation equipment and ancillary appurtenances in the powerhouse may be removed or left on site, as agreed to by the U.S. Forest Service and the licensee; (3) proposals to remove exposed sections of the existing welded steel pipe and cap exposed pipe ends that are left on site, remove existing air vent piping, revegetate disturbed areas, remove existing miscellaneous pipeline supports, grout fill pipeline under and next to Utah State Route 92 and cap ends, and grout fill pipeline below intake structure and cap ends; and (4) proposals to relocate the distribution power (primary) line, consisting of 5 power poles and the associated conductors, out of the Lone Peak Wilderness Area. The poles shall be constructed to raptor-safe standards.

The Commission reserves the right to require changes to the plan. The plans shall not be implemented until the licensee is notified the plan is approved. Upon approval, the licensee shall implement the plan, including any changes required by the Commission.

In addition, the licensee shall submit one copy to the Division of Dam Safety and Inspections, Portland Regional Engineer, and two copies to the Commission (one of these shall be a courtesy copy to the Director, Division of Dam Safety and Inspections), of: (1) a public safety plan for the decommissioning/dam removal period; (2) a Construction Quality Control Inspection Program (CQCIP); (3) a Temporary Construction Emergency Action Plan (TCEAP); (4) a blasting plan; and (5) a supporting design report and final

contract plans and specifications for breaching and removing the American Fork Dam, to be submitted for approval at least 60 days prior to start of construction/removal activities. No construction or removal activities may commence until authorization is given by the Division of Dam Safety and Inspections' Portland Regional Office.

(E) Before starting construction, the licensee shall review and approve the design of contractor-designed cofferdams. At least 30 days before starting construction of the cofferdams, the licensee shall submit one copy to the Division of Dam Safety and Inspections' Portland Regional Engineer, and two copies to the Commission (one of these copies shall be a courtesy copy to the Director, Division of Dam Safety and Inspections) of the approved cofferdam construction drawings and specifications and the letters of approval.

(F) Soil Erosion Plan. At least 60 days before the start of any land-disturbing or land-clearing activities, the licensee shall file, for Commission approval, a plan to control erosion and slope instability and to minimize the quantity of sediment resulting from project removal and other construction activities. The plan shall be based on actual-site geological and soil conditions and on project design, and shall include, at a minimum:

> (1) a description of the actual site condition at laydown/mobilization areas and any other areas that the proposed removal would affect; (2) measures proposed to control erosion, to prevent slope instability, and to minimize the quantity of sediment resulting from project construction and operation; (3) detailed descriptions, functional design drawings, and specific topographic locations of all control measures; and (4) a specific implementation schedule and details for monitoring and maintenance programs for stabilization of water-retaining structures, fishways, and recreational facility construction and operation.

The licensee shall prepare the plan after consultation with the Natural Resources Conservation Service, the Utah Department of Environmental Quality, the U.S. Forest Service and the U.S. National Park Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after they have been prepared and provided to the agencies, and specific descriptions of how the agencies comments are accommodated by the plans. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing should include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No ground-disturbing or land-clearing activities shall begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

(G) Wetland Protection Plan. At least 60 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission, for approval, a wetland mitigation plan to replace, in the vicinity of the project, wetland habitat lost as a result of the project's removal and other construction activities. The plan shall at a minimum include: (1) details of the measures to protect the wetlands affected by the project; (2) a plan for monitoring the effectiveness of the measures to protect wetlands affected by the project, which includes steps to be taken in the event the measures are not effective in protecting the wetlands, including, but not necessarily limited to, modifying the measures or establishing or enhancing additional wetlands; (3) a proposal to provide recommendations to the agencies and the Commission for alternative wetland mitigation due to project removal, if monitoring indicates that the implemented wetland establishment or enhancement is not successful; and (4) schedules for establishing or enhancing of wetlands, for filing the results of the monitoring program, and for filing recommendations for alternative wetland mitigation. The plan shall also include a design and construction schedule for a berm from the existing gabion wall to the downstream end of the shrub wetland.

The licensee shall prepare the plan after consultation with the U.S. Fish and Wildlife Service, the Utah Department of Natural Resources, the U.S. Forest Service and the U.S. National Park Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations before filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No land-disturbing or land-clearing activities shall begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

(H) Spill Containment and Prevention Plan. At least 60 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission, for approval, a plan to develop and implement a spill containment and prevention plan to prevent any discharge into American Fork Creek resulting from the

introduction of concrete dust or petroleum products from construction/removal activities. The plan shall describe all precautionary measures to be taken to prevent a spill or discharge and the appropriate responses and actions to be taken.

The licensee shall prepare the spill containment and prevention plan after consultation with the Utah Department of Water Quality, the U.S. Forest Service and the U.S. National Park Service. The licensee shall include with the plan documentation of consultation, copies of comments and recommendations on the completed plan after it has been prepared and provided to the entities, and specific descriptions of how the entities comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the entities to comment and to make recommendations prior to filing the plan with the Commission for approval. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information. The Commission reserves the right to require changes to the plan.

(I) Traffic Control and Public Safety Plan. At least 60 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission, for approval, a plan to minimize traffic congestion, ensure safety during removal and construction activities. The licensee shall also submit a courtesy copy to the Director, Division of Dam Safety and Inspections, and to the Division of Dam Safety and Inspections' Portland Regional Office. The plan shall include at a minimum : (1) the expected times of construction consistent with the Settlement-established schedule; (2) a discussion of how construction activity will be coordinated to avoid or minimize conflicts with motorists and pedestrians and how traffic delays will be minimized; (3) a description of traffic control methods to be used such as flagging, reflective cones, or other methods; (4) a description of temporary measures to be used such as roadside parking when or if construction equipment blocks existing parking areas; (5) a description of advance notification of construction activity for the public and; (6) documentation of consultation.

The licensee shall prepare the plan after consultation with the Utah Department of Transportation. The licensee shall allow a minimum of 30 days for the agency to comment and to make recommendations prior to filing the plan with the Commission. The licensee shall include with the plan documentation of consultation and copies of comments and recommendations on the completed plan after it has been prepared and provided to the agency, and specific descriptions of how the agency's comments are accommodated by the plan. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.
The Commission reserves the right to require changes to the proposed plan. Removal and construction shall not begin until the licensee is notified by the Commission that the filing is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

(J) The licensee shall implement the "Memorandum of Agreement Between the Federal Energy Regulatory Commission and the Utah State Historic Preservation Officer Regarding the Surrender of License for the American Fork Hydroelectric Project," executed on June 30, 2004, including, but not limited to the Historic Resources Management Plan (HRMP) included in the Memorandum of Agreement. The HRMP included in the executed MOA is hereby approved, and the licensee shall implement its provisions. The Commission reserves the authority to require changes to the HRMP at any time during the term of the license. Within 30 days of removal of the dam, the licensee shall forward all archaeological documentation specified in the Memorandum of Agreement to the Utah SHPO and any other repository designated by the SHPO. Within 60 days of removal of the dam, the licensee shall file a report showing that it has implemented the MOA.

(K) Within 30 days of completing project retirement and dam removal activities, the licensee shall submit a report documenting the structural adequacy of the remaining project features. The report should describe any effects dam removal activities have on the stability of the remaining structures. The surrender will not be effective until the Division of Dam Safety and Inspections' Portland Regional Office performs a final site inspection and issues a letter indicating that the report and the condition of remaining structures are acceptable. During project removal activities, the licensee shall submit to the Division of Dam Safety and Inspections' Portland Regional Engineer three copies of monthly progress reports by the 15$^{th}$ of each month.

(L) This order is final unless a request for rehearing is filed within 30 days from the date of its issuance, as provided in section 313(a) of the FPA. The filing of a request for rehearing does not operate as a stay of the effective date of this order or of any other date specified in the order, except as specifically ordered by the Commission.

By the Commission.

( S E A L )

Linda Mitry,
Acting Secretary.

## ATTACHMENT A

Section 3. DECOMMISSIONING MEASURES

3.1 Implementation of Decommissioning Measures. PacifiCorp will continue to operate and conduct measures described in section 4 of this attachment through August 31, 2006. At that time, flows in American Fork Creek will no longer be diverted, and the frequency and quantity of flows will no longer be modified, by project facilities. Subject to any required Permit, PacifiCorp will begin implementing the decommissioning measures set forth in the Removal Plan, attached as Appendix A to this Agreement and incorporated herein by reference, upon September 1, 2006, or upon FERC's issuance of a decommissioning order consistent with this Agreement and expiration of any term for rehearing or judicial review, whichever is later. The Parties will secure the necessary permits and approvals to conduct the decommissioning measures described in this section 3 prior to the scheduled date for conducting these measures, but in no event will the process for securing permits begin later than January 1, 2006. USFS and/or NIPS shall provide guidance regarding designs and ground work; however, PacifiCorp shall assume the lead in directing decommissioning measures on the ground.

3.2 Timing of Implementation. PacifiCorp will complete the decommissioning measures set forth in this section 3 and Appendix A no later than December 31, 2007. PacifiCorp shall not deviate from this schedule except under extraordinary circumstances. PacifiCorp will notify the Parties in writing explaining the basis for any delay and will provide a revised schedule for completing all decommissioning measures as close to December 31, 2007 as practicable. Any Party's objection to such delay will be addressed in accordance with section 5.10. PacifiCorp's proposal and the Parties' consideration of an alternative to a decommissioning action as set forth in section 3.3 shall not constitute an "extraordinary circumstance" warranting a deviation from the decommissioning schedule.

3.3 Decommissioning Measures. The following sections outline the commitments made by PacifiCorp in the Removal Plan (Appendix A). The Removal Plan provides additional detail regarding the measures discussed herein. With the exception of cost estimates provided in the following sections, if a specific provision of the Removal Plan conflicts with this section 3.3, the specific provision in the Removal Plan shall control. Cost estimates provided in the following sections are not cost caps; PacifiCorp shall implement the following decommissioning actions at their designated implementation time even if costs exceed cost estimates unless, prior to the implementation date designated for a decommissioning action, all Parties agree to an alternative that meets the Parties' objectives at a lower cost. The Parties agree to consider and respond to any such proposed alternatives presented by PacifiCorp at least 60 days prior to the date designated

for implementation of a decommissioning action. PacifiCorp may only substitute any such alternative for the requirements below and in the Removal Plan with the written consent of the Parties and subject to any necessary FERC approval.

3.3.1 Diversion Dam. PacifiCorp shall demolish, remove and dispose of the existing concrete diversion dam, tainter gates, hoists and steel structures, trash racks, control building, embedded foundations and existing electrical/control wiring, conduits, and panels, as described in more detail in subsections (a) through (h) below (see Removal Plan; Appendix A). Materials will be disposed of at an appropriate site off federal lands. This action includes revegetating disturbed areas and reconstructing the stream channel. The total cost to PacifiCorp of completing measures described in subsections (a) through (h), below, is estimated to be $74,000. Pursuant to this measure, PacifiCorp shall perform the following:

(a) Construct cofferdam and install a temporary bypass structure;
(b) Remove flash boards, security fence, walkway across top of the dam, structure that houses the flow monitoring equipment, intake gate and mechanisms, trash rack and sluice gate, existing electrical/control wiring, and conduits and panels;
(c) Seal the intake to the flowline;
(d) Remove the primary dam structure including imbedded foundations, apron and concrete intake structure. Remove all materials except concrete and rebar filly encapsulated in concrete. Some of the broken concrete between 12 inches and 36 inches may be used as the core of a riprap revetment to protect the highway. Concrete in excess of what can be used on site must be removed and disposed of at an approved site off federal lands. Any rebar or metal protruding from concrete used or left on site shall be cut off even with the concrete. Concrete used on-site will be covered with 1-2 feet of native rock at least 12 inches in size and covered with 1-3 feet of earth above bankfull height, defined as 36 inches vertical distance above the river bottom. The earth covering the rock will be revegetated using certified noxious weed-free seed mixes approved by the appropriate land management agency (i.e., NPS or USFS). Riprap below bankfull will consist of native rock at least 36 inches in size;
(e) Retain the roadside cement wall of the intake structure as is. Remove streamside of the intake structure, but retain a portion of the wall to one foot below the final grade. Use or dispose of the concrete and materials as described in subsection (d), above. All pertinent Best Management Practices ("BMPs") will be applied; including stockpiling and later redistributing any topsoil, and use of silt fences or certified weed-free straw bales or other devices to control erosion and entry of fines to the river

(f) The cofferdam used to divert the river during this action shall be removed following completion of construction. Material from the cofferdam shall be used on site or disposed of off site as described in subsection (d), above. Construct a floodplain on the side of the reconstructed river channel opposite the highway. Sediment and native rock from the earthen dam may be used to cover riprap on the terraces. The riprap will be covered with soil to a minimum of one foot, and replanted using native seedlings and seeded using a native, certified noxious weed-free seed mix approved by the USFS;

(g) Reconstruct the stream channel using native materials. The reconstructed channel will follow approximately its current alignment, and the channel gradient will generally be uniform from the top of the existing pool to the bottom of the bypass outlet. Thirty yards of native rock, at least 36 inches in diameter, will be hauled in and stockpiled at an appropriate location on site approved by the USFS. The Parties will consult with the USFS to determine if the streambed should be stabilized using native rock. Based on this consultation, native rock will be used or left on site. Sediment may be used for on-site restoration; and

(h) Lower the earthen dam to maintain stability of the river channel at bankfull, recontouring the site so that it is natural appearing and stable, and use the earth and native rock in rehabilitation of the channel and floodplain. Any concrete in, or underlying the earthen dam will be used or disposed of as described in subsection (d), above. Riprap at least 36 inches in diameter will be used to fill the earthen dam bisected by the bypass channel. The site will be covered with 1-3 feet of native soil and replanted using native seedlings and seeded using a native, certified noxious weed-free seed mix approved by the USFS.

3.3.2 Powerhouse Facility. PacifiCorp shall repair powerhouse structure for conveyance to the U.S. Government, as described in more detail in subsections (a) through (m) below (see Removal Plan; Appendix A). PacifiCorp will repair the powerhouse and remove the spillway, transformer pad, and miscellaneous metals; the tender's house, garage, and shed; and rehabilitate the site; the highway will be protected, the stream channel reconstructed, and the retaining wall protecting the powerhouse modified, as necessary, to prevent undercutting by the river. Power generation equipment and ancillary appurtenances in the powerhouse will be removed or left on site, as agreed to by the USFS and PacifiCorp. The total cost to PacifiCorp of completing measures described in subsections (a) through (m), below, is estimated to be $212,000.

(a) Construct check dam and install temporary bypass structure;

(b) Leave the powerhouse building and foundations in a well-maintained condition, in consultation with and approval by the USFS. This includes

repair of deteriorated woodwork, and refinishing exposed woodwork. All maintenance, repair, and/or restoration activities should be in accordance with the Secretary of Interior's standards for rehabilitation;

(c) Plug with concrete the outlet from the powerhouse at the river;

(d) Remove transformer pad, misc, metals, tender's house, shed, and the garage at the Upper American Fork Plant. Remove the shed, footbridge accessing the powerhouse, fencing, railing, and any power generation equipment in the powerhouse, unless otherwise agreed to by the USFS and PacifiCorp. Remove the abandoned Lower American Fork Plant flowlines;

(e) Construct a new footbridge, at a location approved by the USFS, that meets Americans with Disabilities Act ("ADA") accessibility requirements, conforms to established visual quality objectives, and meets applicable safety standards for a footbridge used for public and administrative access;

(f) Convey title to the powerhouse to the U.S. Government. The USFS will Work with the SHPO, Utah Heritage Foundation, and other interested parties regarding long-term use and maintenance of the powerhouse;

(g) Remove the old septic system (vault and drain lines) for the tender house, and replace on approximately the location of the existing garage with a USFS approved single unit vault toilet. Develop parking for three vehicles, and construct an aggregate surface trail to the footbridge. Locations of the parking lot, trail, and toilet will be approved by the USDA Forest Service. The parking lot and trail will meet ADA standards. Ingress and egress designs will be approved by UDOT;

(h) Protect the highway by backfilling concrete against the existing retaining wall or deepening the wall, if necessary. All concrete backfill must be covered with 3 feet of native rock. The riprap must extend 2 feet below the depth of the reconstructed channel, or to bedrock, and be at least 36 inches in size to bankfull, except where the river channel bends at the lower intake. Riprap at the lower intake will be at least 48 inches in size to bankfull, and an interspersion of 36-48 inch riprap will be used to armor the new river channel for a length of 30 feet opposite the lower intake as indicated in the Removal Plan (Appendix A);

(i) Remove the concrete diversion dam and spillway and roadside retaining wall downstream of the existing footbridge. Modify the powerhouse-side retaining wall, as necessary to prevent undercutting. The purpose of this measure is to ensure a retaining wall protecting the powerhouse and to prevent undercutting by the river;

(j) Retain and fill the abandoned Lower American Fork diversion intake structure, including a top surface appropriate for the aggregate trail. Adjacent area will be replanted using native seedlings and seeded using a native, certified noxious weed-free seed mix approved by the USFS;

(k) Reconstruct a new river channel in accordance with the designs included in the Removal Plan (Appendix A). The final gradient of the new river channel will be uniform from the upstream end of the powerhouse to the point where the new river channel rejoins the old river channel. The width of the channel at the bend of the powerhouse will be at least 25 feet. The river channel will be reconstructed with native materials where the diversion dam and spillway are removed;

(l) Remove the cofferdam. Earth and native rock should be used onsite in channel reconstruction. Concrete in excess of what can be used for riprap to protect the roadway will be disposed of at an approved site off federal lands. All concrete used on site will be covered with 1-3 feet of native soil and replanted using native seedlings and seeded using a native, certified noxious weed-free seed mix approved by the USFS; and

(m) Apply all pertinent Best Management Practices ("BMPs") including stockpiling and later redistributing topsoil. Construct a floodplain on the hill side of the new channel. Armor the toe of the channel bank using native rock at least 36 inches in size except as indicated in subsection (h), above. Revegetate the streambank using native seedlings, and seed all disturbed areas using native, noxious weed- free seed. All seedlings and seed mixes, and specifications and locations for the reconstructed floodplain must be approved by the USFS prior to implementation.

3.3.3 Flowline and Penstock. PacifiCorp shall remove exposed sections of the existing welded steel pipe and cap exposed pipe ends that are left on site, remove existing air vent piping, revegetate disturbed areas, remove existing miscellaneous pipeline supports, grout fill pipeline under and next to Utah State Route 92 and cap ends, and grout fill pipeline below intake structure and cap ends (see Removal Plan; Appendix A). Work on the flowline within the Lone Peak Wilderness Area will be conducted in a manner consistent with the Minimum Management Analysis as indicated in the Removal Plan (Appendix A). The Minimum Management Analysis will authorize the controlled use of culling torches, portable welders, generators, air compressors, helicopters, and controlled blasting, if necessary. The NPS will approve such work practices on Monument land. The total cost to PacifiCorp of completing measures described in subsections (a) through (e), below, is estimated to be $503,394.

(a) Remove fully and partially exposed sections of the pipeline and cap exposed pipe ends that are left on site. Leave the penstock (cement anchor blocks, 2 short penstock segments between the powerhouse and block, and about 550 feet of penstock above the block) for historical purposes. Cap the ends of unremoved flowline and penstock segments;

(b) Remove existing air vent piping. Remove to at least 2 inches below ground level. If the entire pipe is not removed, cap the ends of the remaining pieces;
(c) Remove the cement footers to at least 2 inches below ground level;
(d) Grout fill pipeline under and next to Utah State Road 92, and below the intake structure, and cap ends; and
(e) Seed areas of disturbed soil with native, certified noxious weed-free seed mixes approved by the appropriate land management agency (i.e., NPS or USFS).

3.3.4 Power Line. PacifiCorp shall relocate the distribution power line, consisting of 5 power poles and the associated conductors, out of the Lone Peak Wilderness Area (see Removal Plan; Appendix A). The poles will be constructed to raptor-safe standards. Work within the Lone Peak Wilderness Area will be conducted in a manner consistent with the Minimum Management Analysis as indicated in the Removal Plan (Appendix A). The Minimum Management Analysis authorizes the controlled use of cutting torches, portable welders, generators, air compressors, helicopters, and controlled blasting, if necessary. The total cost to PacifiCorp of completing measures described in this section 3.3.4 is estimated to be $40,000.

3.4 Disposition of Water Right. PacifiCorp will use its best efforts to convey its water right associated with the Project to the UDWR for the beneficial uses associated with instream flows, and will cooperate with UDWR in securing an approved change application for said purposes.

SECTION 4: INTERIM MEASURES

4.1 Implementation of Interim Measures. PacifiCorp will implement the actions described in subsections (a) through (e), below, immediately upon FERC's issuance and PacifiCorp's acceptance of a decommissioning order consistent with this Agreement, except as provided in subsection (a).

(a) No later than March 1, 2003, weather permitting and subject to receipt of Permits, PacifiCorp will install a functional safety valve at the Burnt Flats box culvert. This valve shall be designed to filly and quickly open upon flowline failure. The total cost to PacifiCorp of this measure is estimated to be $40,000. The Parties will work together to facilitate rapid resumption of operation should flowline failure occur during the interim operations time period.

(b) Where hazard signs within the Monument are currently lacking, PacifiCorp shall install hazard warning signs. A chain with an attached sign shall be placed across the mouth of the entrances and exits of 3 tunnels located on the NPS lands. The total cost to PacifiCorp of this measure is estimated to be $5,000.

(c) PacifiCorp shall document all Project features, prior to their removal, in a manner consistent with the standards at 36 C.F.R. Parts 60 and 63 in consultation with the SHPO, USFS and NPS.

(d) PacifiCorp shall conduct safety inspections by walking the flowline once every 2 months, weather permitting, and visually inspect the flowline with binoculars from the road twice each month.

(e) PacifiCorp will continue to maintain a minimum flow in the bypassed reach of American Fork Creek of 4 cfs.

# ENVIRONMENTAL ASSESSMENT

## APPLICATION FOR SURRENDER OF LICENSE

## American Fork Hydroelectric Project

**FERC No. 696-013**
**Utah**

**Federal Energy Regulatory Commission**
**Office of Energy Projects**
**Division of Hydropower Administration and Compliance**
**888 First Street, NE**
**Washington, D.C. 20426**

**July 2004**

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## SUMMARY

On December 31, 2002, PacifiCorp filed a surrender application with the Federal Energy Regulatory Commission (Commission) to retire the existing 950-kilowatt (kW) American Fork Hydroelectric Project (project) and simultaneously requested that their application for new license, filed October 27, 2000, be withdrawn. On February 13, 2003, PacifiCorp supplemented the surrender application with a comprehensive Settlement Agreement (Settlement).

The project occupies about 28.8 acres of land within the Uinta National Forest, administered by the U.S. Forest Service (USFS), and the project flowline passes through the Lone Peak Wilderness Area, within that Forest. Additionally, approximately 2,000 feet of the project's flowline passes through the Timpanogos Cave National Monument, administered by the U.S. Department of the Interior, National Park Service. Since 1957, the project has experienced nine flowline failures, with six of them occurring during the 1990s. Most of the failures were attributed to falling rocks.

PacifiCorp proposes to surrender the project in a manner consistent with the Settlement. The Settlement supports PacifiCorp's continued operation of the project through August 31, 2006, and completion of all decommissioning measures by December 31, 2007. It is PacifiCorp's proposal to remove all above-ground project facilities by December 31, 2007, with the exception of the powerhouse and lower section (about 550 feet) of the penstock which will be repaired and conveyed to the USFS.

Through the National Environmental Policy Act Scoping process, we identified several resource areas that may be affected by the surrender of the project's license: water quantity and quality; aquatic, terrestrial, botanical, and wetland resources; land use; and scenic, aesthetic, recreational, and cultural resources. This EA analyzes the effects of surrendering the project's license on the above-mentioned resources, and also the effects of a no-action alternative.

Staff concludes that PacifiCorp's proposal and the Settlement provides a basic plan to retire the project. However, if the Commission were to implement this alternative, staff believes that more specific detail on measures for public safety and environmental protection would be needed. This detail could be provided with the development of the following environmental resource protection and public safety measures: (1) a project and site-specific erosion and sediment control plan; (2) wetland protection measures; (3) a spill containment and prevention plan; (4) a traffic control and visitor safety plan and; (5) a Historic Resources Management Plan.

Staff also concludes that, under the no-action alternative, the project would continue to operate as licensed but the project's flowline would remain at risk for failure from falling rocks and flooding.

Based on our analysis, implementation of the proposed alternative would not be a major federal action significantly affecting the quality of the human environment, provided certain resource protection measures are developed and implemented.

# ENVIRONMENTAL ASSESSMENT

**Federal Energy Regulatory Commission**
**Office of Energy Projects**
**Division of Hydropower Administration and Compliance**
**Washington, D.C.**

**American Fork Hydroelectric Project**
**FERC Project No. 696-013**

## 1.0. APPLICATION

On December 31, 2002, PacifiCorp (Applicant or Licensee) filed a surrender application with the Federal Energy Regulatory Commission (Commission) to retire the existing 950 kilowatt[11] (kW) American Fork Hydroelectric Project (P-696) (project) and supplemented it on February 13, 2003, with a comprehensive Settlement Agreement (Settlement). The project is located on American Fork Creek near the City of American Fork, about three miles east of Highland, in Utah County, Utah. The project occupies about 28.8 acres of land within the Uinta National Forest, administered by the U.S. Forest Service (USFS) and approximately 2,000 feet of the project's flowline passes through the Timpanogos Cave National Monument, managed by the National Park Service (NPS), (See Figures 1 and 2 in the Appendix).

### 1.1 Background

Process History

On October 27, 1998, PacifiCorp filed an application to relicense the American Fork Hydroelectric Project. On December 31, 1998, we issued Scoping Document 1 (SD1) to identify issues, concerns, and opportunities associated with relicensing the project. Based on comments we received, we revised SD1 and re-issued it on June 22, 1999, again soliciting written comments and scheduling a site visit. On November 12, 1999, we issued Scoping Document 2 (SD2). In SD2, we presented the alternatives to be analyzed. On January 20, 2000, we issued and additional information request (AIR) in order to adequately analyze the alternatives. After granting an extension of time to PacifiCorp for their responses to the AIR, PacifiCorp filed a letter on May 28, 2002,

[11] The approximate annual generation of the American Fork Hydroelectric Project is 5.2 gigawatthours.

requesting to withdraw their relicense application for the project. We denied that request on June 10, 2002, and advised PacifiCorp that they could not withdraw their license application; they needed to either have a current license or be actively seeking a new license. However, if they decided not to seek a new license, they could file a surrender application at which time we would reconsider their request to withdraw their license application.

On December 31, 2002, PacifiCorp filed a surrender application and again requested that their license application filed on October 27, 2000, be withdrawn. On February 13, 2003, PacifiCorp supplemented the surrender application by filing the Settlement. We issued a notice of the surrender application and requested comments on February 19, 2003. On March 19, 2003, we issued a letter accepting PacifiCorp's surrender application and March 21, 2003, we deemed PacifiCorp's license application withdrawn.[12]

Historic Flowline Failures

Since April 1957, the project has experienced nine failures of the project's water conveyance system (flowline) with six of them occurring during the 1990s, the most recent one on March 16, 1998.[13] See Table 1.

[12] 18 C.F.R. § 385.216.

[13] PacifiCorp, in their June 19, 2001 response to the Commission's January 20, 2000 Additional Information Request, stated that the project's flowline has a 1 in 4 chance of failure in any given year.

Table 1. Summary of American Fork Hydroelectric Project flowline failures.*

| Failure Date | Cause of Failure |
|---|---|
| April 28, 1957 | Falling Rocks |
| February 23, 1958 | Falling Rocks |
| June 2, 1983 | Flooding washed out highway and flowline near highway crossing. |
| May 2, 1990 | Falling Rocks |
| March 27, 1991 | Falling Rocks |
| May 1991 | Falling Rocks |
| April 1, 1992 | Falling Rocks |
| May 10, 1993 | Falling Rocks |
| March 16, 1998 | Thermal Stresses** |

* Source: PacifiCorp, Structural Adequacy Report, filed June 17, 1999.
** Source: PacifiCorp, March 18, 1998 filing.

Given the close proximity of the project's flowline to American Fork Creek and the gradient of the hillside the flowline is perched on, it is likely that each of the flowline failures deposited large volumes of material into the creek. The Commission's Environmental Inspection Report dated May 25, 1993, states "In the last ten years, rock fall, landslides, or ruptured pipe welds have resulted in environmental damage and compromised project structures..." That report describes the erosion that occurred on May 10, 1993, as a result of the failure and the crater that was formed in the hillside due to the failure. The report estimated that two failures, the May 10, 1993 failure and the March 27, 1991 failure, which occurred in the same vicinity, resulted in 8,000 – 13,000 cubic yards of material being deposited into the American Fork Creek or along its banks.

## 2.0 PURPOSE AND NEED FOR ACTION

The purpose of the proposed federal action is a Commission decision to approve or deny PacifiCorp's application to surrender the American Fork Hydroelectric Project's license, remove most of the project facilities, restore the site, and return full stream flow conditions to American Fork Creek. This EA analyzes the environmental and economic effects of retiring the project and provides a basis for the Commission to make an informed decision on the surrender application.

In the course of pursuing a new license for the continued operation of the American Fork Hydroelectric Project, PacifiCorp entered into a Settlement Agreement

with several state and federal agencies and non-governmental organizations for the surrender of the hydropower license and removal of the project works.[14] It is Commission policy to promote settlement agreements as an important tool in administering its jurisdictional responsibilities.

In this EA we assess the environmental and economic effects of (1) surrendering the projects license, retiring project facilities and removing most above ground project features, as proposed by the applicant and (2) continued operation of the project under the no-action alternative.

The 950-kilowatt (kW) project is located in the Northwest Power Pool Area of the Western System Coordinating Council (WSCC) region. In its September 2002 report, WSCC reports an available summer peak capacity of 72,183 MW in 2002 and shows 16,307 MW of generation additions planned for the period 2002 through 2011 in the NWPP power area. The project's capacity is a small part of the regional capacity needs. The capacity lost by removing the project would be replaced by other generating resources available in the region. The most likely replacement to the project's capacity and generation would be natural gas fueled combustion and turbine generators, which make up nearly 100 percent of the new capacity additions proposed in the region.

If the project is not retired, the power from the project would continue to be useful in meeting a small part of the region's need for power and would continue to avoid the air pollution effects associated with an equivalent amount of fossil-fueled generation.

## 3.0 PROPOSED ACTION AND ALTERNATIVES

### 3.1 Applicant's Proposal

#### 3.1.1 Current Project Description and Operation

The existing project consists of: (1) a 29-foot-9-inch-wide and 4.5-foot-high concrete overflow type diversion dam with steel slide gates; (2) an intake structure with a tainter gate; (3) two sets of trash racks; (4) a 11,666-foot-long flowline; (5) a 2,700-square-foot-masonry brick powerhouse; (6) one Pelton horizontal synchronous turbine with a Wagner step-up transformer generator having a rated capacity of 1,000-kVA; and (7) other appurtenances.

[14] Settlement Agreement, filed February 13, 2003.

The project operates in a run-of-river mode and provides a minimum flow of 4 cubic feet per second (cfs), or inflow, to the 2.4-mile-long bypass reach.

### 3.1.2 Applicant's Proposal

PacifiCorp proposes to surrender the project's license upon completion of project retirement measures, including removal of the project's diversion dam, in accordance with the Settlement.

The Settlement supports PacifiCorp's continued operation of the project through August 31, 2006, provided that PacifiCorp performs the specified interim measures listed below. The Settlement also requires PacifiCorp to complete all project retirement measures, summarized below, by December 31, 2007.

#### 3.1.2.1 Interim Measures

PacifiCorp proposes to conduct the following interim measures as agreed in the Settlement:

(a) Install a functional safety valve at the Burnt Flats box culvert
(b) Install hazard warning signs within the National Monument
(c) Place a chain with an attached sign across the mouth of the entrances and exits of three tunnels located on NPS lands
(d) Appropriately document all project features, prior to their removal
(e) Walk and inspect the flowline once every 2 months, weather permitting, and visually inspect the flowline with binoculars from the road twice each month.
(f) Maintain the minimum flow in the bypassed reach of 4 cfs

#### 3.1.2.2 Project Retirement Measures

Following is a summary of the project retirement measures proposed by PacifiCorp in the Settlement, to be completed by December 31, 2007.

<u>Diversion Dam</u>

PacifiCorp proposes to demolish, remove and dispose of the existing concrete diversion dam, Taintor gates, hoists and steel structures, trash racks, control building, embedded foundations and existing electrical/control wiring, conduits, and panels. All materials would be disposed of at an appropriate site off federal lands. This action would also include the revegetation of disturbed areas and reconstruction of the stream channel.

Powerhouse Facility

PacifiCorp proposes to repair powerhouse structure for conveyance to the USFS. PacifiCorp proposes to repair the powerhouse and remove the spillway, transformer pad, and miscellaneous metals; the tender's house, garage, and shed; and rehabilitate the site. The highway would be protected, the stream channel reconstructed, and the retaining wall protecting the powerhouse modified, as necessary, to prevent undercutting by the river. PacifiCorp proposes that the power generation and ancillary equipment in the powerhouse may be removed or left on site, as agreed to by the USFS and PacifiCorp.

Flowline and Penstock

PacifiCorp proposes to remove exposed sections of the existing welded steel pipe and cap exposed pipe ends that are left on site, remove existing air vent piping, revegetate disturbed areas, remove existing miscellaneous pipeline supports, grout fill pipeline under and next to Utah State Route 92 and cap ends, and grout fill pipeline below intake structure and cap ends.

Power Line

PacifiCorp proposes to relocate the distribution power line, consisting of five power poles and the associated conductors, out of the Lone Peak Wilderness Area. The poles will be constructed to raptor-safe standards.

Disposition of Water Right

PacifiCorp proposes to convey its water right associated with the project to the Utah Division of Water Resources (UDWR) for the beneficial uses associated with instream flows, and will cooperate with UDWR in securing an approved change application for said purposes.

## 3.2 Alternatives to the Proposed Action

### 3.2.1 No-Action Alternative

Under the no-action alternative, the project would continue to operate under the terms and conditions of the existing license, and no new environmental protection, mitigation, or enhancement measures would be implemented. We use this alternative as the baseline environmental condition for comparison with the proposed alternative.

### 3.3 Alternatives Deleted from Detailed Study

We considered and eliminated from detailed study the alternative of retirement of the project and leaving all of the facilities in place, the possibility of federal takeover of the project, and the issuance of a non-power license to PacifiCorp.

Leaving the American Fork Project facilities in place under any project retirement alternative isn't reasonable for the following reasons: (1) PacifiCorp would no longer be responsible for maintaining the abandoned facilities; (2) the project occupies federal lands managed by the USFS and the NPS, which desire the removal of most of the project facilities; and (3) section 6.2 of the Commission's regulations say that the Commission shall require the licensee in a surrender application to restore federal lands to a condition satisfactory to the Department having supervision over such lands.[15]

We don't consider federal takeover to be a reasonable alternative. Federal takeover and operation of the project would require Congressional approval. While that fact alone would not preclude further consideration of this alternative, there is no evidence to indicate that federal takeover should be recommended to Congress. No party has suggested that federal takeover would be appropriate, and no federal agency has expressed an interest in operating the project.

A non-power license is a temporary license that the Commission terminates when it determines that another governmental agency will assume regulatory authority over the lands and facilities covered by the non-power license. At this point, no agency has suggested a willingness or ability to do so. No party has sought an non-power license. Thus, we do not consider a non-power license a realistic alternative in this circumstance.

[15] 18 CFR § 6.2

## 4.0 CONSULTATION AND COMPLIANCE

### 4.1 Interventions and Comments On Notice of Application

On February 21, 2003, the Commission issued a Notice Soliciting Comments, Motions to Intervene, and Protest on the surrender application, which set March 24, 2003 as the due date for responses. The following entities responded:

| Intervening Entity | Date of Motion |
|---|---|
| U.S. Forest Service | March 13, 2003 |
| Department of the Interior | March 21, 2003 |
| Trout Unlimited | March 31, 2003 |

The USFS and the Department of the Interior (DOI) filed their motions to intervene, to secure their "party" status. Trout Unlimited filed their motion to intervene in support of PacifiCorp's application to surrender, and the Settlement.

| Commenting Entity | Date of letter |
|---|---|
| U.S. Forest Service | March 13, 2003 |
| Department of the Interior | April 7, 2003 |

The USFS and the DOI filed comments in support of the surrender application and the Settlement.

### 4.2 Environmental Assessment

On November 26, 2003, we issued an EA on the proposed surrender and Settlement. The Notice for the EA indicated that any comments on the EA should be filed within 45 days. The USFS, DOI, and PacifiCorp responded with comments, dated December 24, 2003, January 6 and January 9, 2004, respectively. PacifiCorp indicated that the comments it submitted were on behalf of the parties to the Settlement. The comments filed by the agencies and PacifiCorp primarily addressed minor technical errors in the November 26, 2003 EA. Some comments also sought to correct minor instances where the EA did not correctly reiterate issues in the Settlement. All three sets of comments discussed aspects of historic properties protection, which a Memorandum of Agreement addressed through implementation of a Historic Resource Management Plan (HRMP) (See section 5.3.6, Cultural Resources).

The DOI addressed the issue of section 18 fishway prescriptions. The DOI said that it is satisfied that project decommissioning and dam removal as described in the Settlement and the EA would satisfy these authorities. However, the DOI noted, until the project is decommissioned, the dam removed, and the stream channel repaired as necessary to ensure fish passage, it maintains its right to prescribe fishways.

All of the comments received on the November 26, 2003 EA are reflected in this EA.

### 4.3 Water Quality Certification

On June 9, 2003, PacifiCorp applied to the Utah Department of Environmental Quality (UDEQ) for water quality certification (WQC), as required by section 401(a) of the Clean Water Act.[16] Section 401(a)(1) states that certification is deemed waived if the certifying agency does not act on a WQC request within a reasonable period of time, not to exceed 1 year. The UDEQ received PacifiCorp's request on June 12, 2003.[17] The UDEQ filed a March 18, 2004 letter concluding that the decommissioning of the project would have no significant impact on the quality of surface water. The UDEQ certified that any discharge resultant from the project would comply with applicable State water quality standards and with applicable provisions of the Clean Water Act.

## 5.0 ENVIRONMENTAL ANALYSIS

In this section, we analyze and compare the environmental effects of PacifiCorp's proposal and the no action alternative. In addition to project-specific impacts, we analyze the potential for significant cumulative impacts to resources affected by the project and by other past, present, and reasonably foreseeable activities in the watershed. Unless otherwise cited, the information presented below in the Affected Environment sections has been taken from the Settlement (2003), PacifiCorp's surrender application (2002), the application for license (1998), and/or any additional information that PacifiCorp has filed with the Commission since October 1998.

[16] 33 U.S.C. § 1341(a)(1)

[17] Letter filed by PacifiCorp with proof of receipt on June 16, 2003.

## 5.1 Description of Project Area

The project is located near the City of American Fork, in northern Utah County. The City is fifteen miles northwest of Provo and thirty miles southwest of Salt Lake City. It is bordered by Utah Lake on the south and by the Wasatch Mountains to the east. Adjacent to it lie the recently organized communities of Highland and Cedar Hills, the unincorporated area of Manila, and the nearby cities of Pleasant Grove on the east, Lehi on the west, and Alpine on the north**.**

The project area is in the Middle Rocky Mountain physiographic province which includes the Wasatch Range. The Wasatch Range, and subsequently the American Fork Canyon, is consistent with the characteristics of the Middle Rocky Mountain physiographic province. American Fork Canyon is a riparian corridor, with very steep topography and is vertical in some areas.

The Timpanogos Cave National Monument sits high in the Wasatch Mountains, on the north slope of Mt. Timpanogos in the project's vicinity. The interiors of the caves are decorated with a colorful variety of dripstone, flowstone, and rimstone formed by minerals in the ground water that enters the caves. The monument consists of three caves connected by manmade tunnels. Hansen Cave was the first to be discovered, in 1887, followed by Timpanogos Cave in 1915 and Middle Cave in 1921. During the 1890s, crews working for a Chicago onyx company stripped Hansen Cave of most of its calcite and other mineral deposits. On October 14, 1922, President Warren G. Harding established the Timpanogos Cave National Monument by Presidential Proclamation, under authority of the 1906 Antiquities Act.

## 5.2 Cumulative Effects

According to the Council on Environmental Quality's regulations for implementing NEPA (50 CFR §1508.7), an action may cause cumulative impacts on the environment if its impacts overlap in space and/or time with the impacts of other past, present and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time, including hydropower and other land and water activities.

Based on the staff's review of PacifiCorp's Surrender Application with Decommissioning Plan, and the Settlement, staff has determined that the surrender and retirement of the project would not cumulatively affect any resources.

## 5.3 Proposed Action and Action Alternatives

In this section, we discuss the effects of the alternatives on environmental resources. For each resource, we first describe the affected environment (the existing condition and baseline against which we measure effects) and then discuss the environmental effects.

### 5.3.1 Terrestrial Resources

#### 5.3.1.1 Affected Environment

Wildlife

American Fork Canyon is comprised largely of forested riparian habitat that provides a variety of habitat types including oak/maple, conifer (primarily spruce/fir), and aspen forests. The dominant habitat type is cottonwood / box elder forested riparian habitat. There are also two wetland areas within the project boundary that cover approximately one-quarter acre. These habitats a broad array of wildlife species.

Many wildlife species could occur in the project area. Mammals include but are not limited to mule deer, mountain goat, striped skunk, raccoon, porcupine, Uinta and Townsend chipmunks, chickaree (red squirrel), various species of mice, and the rock squirrel. Various species of bats including the Mexican free-tail, small-footed myotis, and the little brown myotis could also occur in the Timpanogos caves very near the project area. Seldom seen in the project area are large predators such as the coyote, mountain lion, and bobcat.

Habitats in the project area support a rich and diverse avifauna of neotropical migratory land birds, waterfowl, and other species including but not limited to wrens, chickadees, thrashers, kinglets, thrushes, waxwings, vireos, wood warblers, juncos, and sparrows. Raptors include the prairie falcon, sharp-shinned hawk, and the Cooper's hawk. Large raptors are also known to exist within the project vicinity. It is known that golden eagles nest in the upper American Fork Canyon, however have not been observed within the project area (PacifiCorp 1997). In 1995, an osprey was observed nesting on a transmission line west of the canyon.

Several sensitive species may occur in the American Fork Canyon, but have not been known to occur within the project area. Those species include the 13-lined ground squirrel, bald eagle, western yellow-billed cuckoo, spotted bat, Townsend's big-eared bat, northern goshawk, and peregrine falcon. Bald eagles are known to winter near the mouth of the canyon, approximately two miles west of the project area. Although habitat exists

within the project area for peregrine falcons, none have been observed within the project area. Caves and mines in the vicinity of the project area provide important roosting habitat for Townsend s big-eared bat and other bat species. Specifically, spotted bats, classified as sensitive by the USFS, have been recorded in American Fork Canyon.

A herd of mountain goats occurs within the Lone Peak Wilderness Area. The herd originated from mountain goats that were translocated into the Twin Peaks area in 1967, the first mountain goat introduction in the state of Utah. Rocky Mountain bighorn sheep also occur within the Lone Peak Wilderness Area as a result of recent re-introductions. Oak/maple, mountain brush, and sagebrush vegetation associations along the west slope of the management area provide critical and high value deer winter range and high value elk winter range.

The rubber boa, milk snake, and veery have been recorded within the vicinity of the project area (USFS 2003). Veerys were reported to have bred within American Fork Canyon between 1926 and 1942 (USFS 2003). However, veerys and western yellow-billed cuckoos have disappeared from American Fork Canyon.

Vegetation

Vegetation within the project area is diverse and variable due to varying topography along the canyon, with a difference of 600 feet from the powerhouse to the water diversion structure. Canyon walls delineate abrupt changes from riparian to arid vegetative communities. Dominant vegetation communities in the project area include riparian hardwood forests, cotton-wood/box elder, oak brush-bunchgrass, oak brush, and mixed conifer and aspen communities.

Three special status botanical species may occur with the project area: Ute ladies'-tresses (*Spiranthes diluvialis*) (federally listed as threatened) and two species designated by the USFS as sensitive, Wasatch jamesia *(Jamesia americana* var. *macrocalyx*) and Garret's bladderpod (*Lesquerella garrettii*). Impacts to Ute ladies' tresses is discussed in the Threatened and Endangered Species section below.

Although Garrett's bladderpod has been observed in the Wasatch mountain range, it typically occurs at high elevations (8,900 - 11,400 feet Mean Sea Level (msl) (Tuhy 1991), much higher than the elevation of the project area, which is 5,600 - 6,000 feet msl. A field study conducted in July 1997 resulted in no observations of Garrett's bladderpod within the project area.

Habitat for the Wasatch jamesia is comprised of rock crevices and rocky slopes, features found within American Fork Canyon. However, a field study conducted in July 1997 resulted in no observations of Wasatch jamesia within the project area.

Wetlands

Two wetlands exist within the project area above the diversion dam and collectively cover approximately 1/4 acre. One is a palustrine, intermittently-exposed aquatic bed or "marsh/backwater." The other is a palustrine, seasonally-flooded scrub-shrub (willows, box elder, red osier dogwood, and river birch) or "shrub wetland."

The marsh/backwater wetland was likely created by the diversion dam when high water backed up into the area where the wetland is currently located. Over time, the wetland evolved into a more diverse system suitable for many wetland-dependant species. Further, old fill material was placed in the area of this wetland many years ago. It appears that water flows from beneath this fill material in a spring-like fashion keeping the wetland hydrated much if not all of the time. When water levels at the diversion dam drop where water is not backing up into the wetland, the wetland becomes "perched" and is hydrated from the flow from underneath the fill material.

### 5.3.1.2 Staff's Analysis

Proposed Alternative

a. Wildlife

Removing the diversion dam, flowline, and all associated materials as prescribed in the Removal Plan (Appendix A of the Settlement), would likely result in short-term, minor disturbance to some wildlife species and their associated habitats. Some species may become displaced during construction/demolition activities. Activities including but not limited to, the operation of heavy machinery, noise, and increased human activity in the area will likely create an environment undesirable to many species that currently utilize the areas where demolition/construction will take place, specifically the diversion dam and the flowline. Terrestrial wildlife that utilize the immediate project area, including the area around the diversion dam and flowline, may become temporarily displaced during the demolition of the dam and removal of the flowline. However, habitat surrounding the project area provides an ample buffer and will likely accommodate displaced individuals with ample provision of food, cover, and water during deconstruction. It is likely that displaced individuals will return once the construction/demolition is complete and recovery of the project area begins to take effect.

Birds frequently become electrocuted when they come into contact with distribution lines either by perching or nesting on the transmission lines or by striking them directly in flight. Specifically, large birds such as raptors, or birds of prey, are more susceptible to electrocution by power lines. Currently, five power poles and associated conductors comprise the power distribution line and are located with the Lone Peak Wilderness Area. Per the Settlement, the five poles and conductors would be re-located out of the Lone Peak Wilderness Area and would be designed and constructed in a manner consistent with the guidelines set forth to prevent raptor-electrocution.

b. Vegetation

Demolition of the diversion dam may result in ground disturbing activities and erosion, which may cause American Fork Creek to become turbid. This may adversely affect botanical resources that directly utilize the stream for habitat. However, these impacts will likely be short-term and the applicant would take every precaution to mitigate for any damages as stipulated in the Settlement.

Noxious weeds are frequently introduced into wildscapes through transportation on vehicles that flow into and out of the project area. Seeds can lodge themselves in tires and other equipment and fall off during transport. Frequent soil disturbances, including road maintenance, can also exacerbate the situation by making conditions undesirable for native species to exist and out-compete more aggressive noxious weed species. Eventually, populations of noxious weeds can become established.

Per the Settlement, the applicant, in cooperation with appropriate natural resource agencies, will revegetate disturbed or affected areas after de-construction and will re-seed areas with certified noxious weed-free seed mixes. Due to the absence of sensitive botanical species within the project area and to measures proposed by the applicant to recover disturbed areas after the project's retirement, it is not likely that Applicant's proposed action, will result in adverse impacts to botanical resources.

c. Wetlands

Once the diversion dam is removed, flows will continue naturally down American Fork Creek bypassing the shrub wetland. The shrub wetland would become perched similar to the marsh/backwater wetland and would likely incur adverse affects due to lack of hydration currently provided by the diversion. The Utah Department of Natural

Resources [18] recommended that the applicant construct a properly designed berm from the existing gabion wall to the downstream end of the shrub wetland and the applicant supported that recommendation and included it as part of their proposal.[19] The berm would provide backwater to the marsh/backwater wetland which ultimately feeds into the shrub wetland. This structure would likely preserve these wetlands with minimal loss once the project is retired.

No Action Alternative (Wildlife, Vegetation and Wetlands)

Under the no-action alternative, the American Fork Hydroelectric Project would continue to operate. None of the proposed environmental measures analyzed in this EA would be implemented. The existing flowline is located on steep rocky slopes of the canyon. Seismic activity and mass movement events (landslides) have resulting in flowline failure cause massive erosion, sedimentation, and flooding events. Under the no-action alternative, these events would likely continue and cause significant adverse effects to terrestrial resources.

### 5.3.2 Geology and Soils

#### 5.3.2.1 Affected Environment

The project is located in the American Fork Canyon which is in the Wasatch Mountain Range in the Middle Rocky Mountain physiographic province. The Wasatch Mountain Range rises abruptly from about 5,000 feet above sea level to about 11,000 feet above sea level. At the project area the elevation ranges from approximately 5,000 feet at the powerhouse to 6,000 feet at the diversion structure. The Wasatch Mountains were formed from a tilted fault block and is an assemblage of sedimentary, igneous, and metamorphic rocks. American Fork Canyon's sides are steep, rocky and unstable.

[18] Letter from Utah Department of Natural Resources to PacifiCorp dated May 6, 2003.

[19] PacifiCorps response to the Commission's additional information request filed May 13, 2003.

#### 5.3.2.2 Staff's Analysis

Proposed Alternative

PacifiCorp proposes to restore American Fork Creek to a more natural setting. PacifiCorp proposes a number of measures that would be completed to retire the project. However, some of the measures, such as removal of the diversion dam, flowline, and powerhouse spillway, have the potential to cause significant erosion and sedimentation, as well as endangering the public. PacifiCorp has provided through the Settlement steps to address these issues.

While PacifiCorp proposes through the Settlement to use sediments trapped behind the dam, as well as some native earth and rock, to rehabilitate the stream channel and floodplain, there is no erosion and sediment control plan in the Settlement. An erosion and sediment control plan could address potential problems such as heavy rains or high water and failures of rehabilitation measures, and describe how trapped sediments would be addressed. In addition, we would expect PacifiCorp to obtain appropriate state and federal permits regarding sedimentation and water quality prior to the start of work.

No Action Alternative

Under the no-action alternative the project would continue its current operation resulting in no change to the existing environment. None of the environmental measures proposed by the applicant or agencies as analyzed in this assessment would be implemented.

While the continued operation of the project would have minimal effect on geology and soils, there is a historical record of flowline failures during project operation. Although much of the flowline is underground, there are portions that traverse the sides of the steep canyon walls. The steep rocky slopes with mass wasting, slope failures, rock falls, and debris slides are a constant threat to the stability and integrity of the flowline. As stated previously, a damaged and/or ruptured flowline on the steep canyon wall has the potential to result in significant erosion and sedimentation, and affect public safety. The project's steel flowline has been in operation for over 40 years and the condition and structural adequacy of the flowline over the term of a new license is questionable.

### 5.3.3 Water Quantity and Quality

#### 5.3.3.1 Affected Environment

Water Quantity

The project currently diverts up to 26 cfs from American Fork Creek for power generation. Silver Lake, Silver Lake Flat Reservoir, and Tibble Fork Reservoir all feed American Fork Creek and the project development. American Fork Creek flows through American Fork Canyon and is a tributary to Utah Lake and the Jordan River basin. The canyon drains from east to west within the north/south trending Wasatch Front Mountain Range. The canyon gradient between the diversion and powerhouse averages 223 feet per mile (4 percent slope). Below the powerhouse, where the river emerges into Utah Valley, the water in the stream is apportioned into irrigation canals and water systems of the surrounding communities.

Based on available U.S. Geological Survey (USGS) data summarized for the October 1, 1927 to September 30, 1992 period, the average annual discharge for the period is 55.8 cfs.[20] The highest mean discharge, which occurred on July 30, 1953, was not specifically determined. The lowest mean discharge was 1.1 cfs on December 20, 1976. Mean monthly flows for the period mentioned above are displayed in Table 2.

The hydrology of American Fork Creek is typical of intermountain aquatic ecosystems. The majority of flows are the result of melting snowpacks that occur between May and July, or are releases from upstream reservoirs. Peak flows of 1,000 cfs have occasionally occurred, but annual peaks are more typically in the range of 100 to 500 cfs. Summer flows in American Fork Creek are augmented by the release of irrigation water stored upstream of the project in Silver Lake Flat and Tibble Fork reservoirs. Summer flows have ranged from 15 to 439 cfs. The lowest flows in the creek typically occur during the fall/winter period, and range from 10 to 64 cfs upstream of the project.

The maximum hydraulic capacity of the project is 26 cfs and is only exceeded during the months of April, May, June, July, August and September in average years. During the remaining six months (average years), the mean monthly flow in American Fork Creek is less than the project's maximum hydraulic capacity. Between 1986 and

[20] USGS streamflow gaging station No. 10164500.

1991, winter flows in American Fork Creek, downstream of the project ranged between 10 to 15 cfs. In contrast, flows within the bypass reach for the same period ranged between 1 and 10 cfs with a calculated average of 3.87 cfs.[21]

Table 2. Mean monthly flows for American Fork Creek between October 1, 1927 and September 30, 1992 as recorded at USGS streamflow gage No. 101645500.

| **Month** | **Mean Monthly Flow (cfs)** |
|---|---|
| January | 15.1 |
| February | 14.8 |
| March | 18.3 |
| April | 53.4 |
| May | 164.7 |
| June | 188.4 |
| July | 84.6 |
| August | 37.5 |
| September | 26.1 |
| October | 22.7 |
| November | 19.8 |
| December | 17.1 |

Water Quality

Ambient water quality data have been collected at the USGS gaging station on American Fork Creek above the diversion dam (Station 1) and on American Fork Creek at the mouth of the canyon below the site of the former lower powerhouse (Station 2). American Fork Creek in the project area has been designated by Utah Water Quality Standards as a Class 2B, 3A, and 4. Class 2B waters are protected for secondary contact recreation such as boating, wading, or similar uses. Class 3A waters are protected for coldwater species of game fish and other coldwater aquatic life, including necessary organisms and their food chain. Class 4 waters are protected for agricultural uses including irrigation of crops and stock watering. Dissolved oxygen, pH, water

[21] On August 27, 1997, the Commission issued an order (80 FERC ¶ 62,186) establishing a minimum flow release of 4 cfs and requiring a minimum flow monitoring plan for the bypass reach of the American Fork Hydroelectric Project.

temperature, dissolved solids, nitrate, and phosphate concentrations at both stations are in compliance with the Utah's water quality standards for 2B, 3A, and 4 waters. The water quality of American Fork Creek is typical for intermountain aquatic ecosystems in Utah.

#### 5.3.3.2 Staff's Analysis

Proposed Alternative

a. Water Quantity

The applicant's proposal with removal of the diversion dam would result in uncontrolled flows within the bypass reach and all flows will remain in stream with no water being diverted for project operations. Currently, the bypass reach receives a minimum flow of 4 cfs or inflow; whichever is less.

b. Water Quality

This alternative proposes a significant amount of construction/demolition that will take place within the stream channel or within close proximity to it. Construction/ demolition activities can significantly affect water quality. Ground disturbing activities can result in soil erosion which may cause increased turbidity of surface waters. The removal of concrete dams has the potential to increase the pH levels of surface waters when concrete dust, from sawing of the dam, mixes with the stream's water. Additionally, the proposed construction/demolition will likely require the use of heavy equipment increasing the likelihood of spills of petroleum products or other toxicants.

However, PacifiCorp in their proposed alternative, has considered these possible impacts to water quality and identify general measures in their alternative to prevent or limit impacts to water quality resulting from erosion, concrete removal, and spills.[22] With the appropriate protection measures, any impacts that may occur as a result of PacifiCorp's proposal, should be minor and for a short duration and should not result in any long term negative effects to the water quality of the American Fork Creek.

[22] Settlement Agreement, Appendix A, Removal Plan Specifications for General Construction.

No-ActionAlternative

a. Water Quantity

The No-Action alternative would allow the continued diversion of up to 26 cfs from American Fork Creek for hydroelectric power generation. The bypass reach would continue to be regulated and receive the minimum flow of 4 cfs or inflow, whichever is less.

b. Water Quality

With this alternative the project would continue to operate as currently licensed. No water quality issues as a result of normal project operation have been identified; therefore, continued operation under normal conditions should not negatively impact the water quality of American Fork Creek.

However under this alternative, the project does have potential to significantly affect the turbidity of American Fork Creek. Given the project's history of flowline failures, and the flowline's proximity to the creek, it is likely that a future failure may deposit large volumes of material into the creek, having a significant and immediate effect on the turbidity and total dissolved solids in the waters of American Fork Creek.

### 5.3.4 Aquatic Resources

#### 5.3.4.1 Affected Environment

American Fork Creek is a perennial, cold water, high gradient stream dominated by boulder and cobble substrates, with a few areas of silt and gravel. It supports populations of aquatic macroinvertebrates and fish.

The American Fork Creek provides habitat for macroinvertebrates including mayflies, stoneflies, and caddisflies, all of which are indicators of good water quality conditions. The explanatory statement for the Settlement states that these species to be abundant and estimated the Biotic Condition Index (BCI) for American Fork Creek to be between 86 and 91 on seven different sampling dates in 1978 and 1979, indicating that the creek is in good to excellent condition.[23]

[23] A BCI of above 90 indicates an excellent condition and a BCI between 75 and 90 indicates good condition.

The fishery resources of the American Fork Creek include Bonneville cutthroat trout, rainbow trout and brown trout. American Fork Creek in the vicinity of the project supports a wild brown trout population. The creek is also stocked with catchable rainbow trout from May through July. During fish population studies conducted in 1996 by the UDWR, USFS, NPS, and PacifiCorp, brown trout were identified to be the dominant species, resulting in 88-93 percent of the population with rainbow trout representing the remaining 7-12 percent. No Bonneville cutthroat trout were recorded during this study; however, Bonneville cutthroat trout are known to occupy six miles of the upper reaches of the American Fork drainage above the project, and some Bonneville cutthroat trout (although not an established population) occur below the project.

### 5.3.4.2 Staff's Analysis

Proposed Alternative

This alternative proposes a significant amount of construction/demolition, much of which will take place within the stream channel or within close proximity to it. As stated earlier, construction/demolition and the associated ground disturbing activities can significantly affect water quality and soil erosion, resulting in impacts to aquatic fauna. Increased sediment loads and soil erosion may cause the stream's substrate to become embedded, potentially reducing fish spawning habitat and habitat for macroinvertebrates that would normally reside within the interstitial spaces of the cobble substrate. The suspension and deposition of silt and concrete dust in the creek could also impact fish and macroinvertebrate respiration, and fish spawning redds, thereby suffocating fish eggs or non-emergent fry.

However, PacifiCorp in their proposed alternative has given some consideration to these possible impacts to water quality and its resulting affect on aquatic fauna and have briefly described some measures to prevent or limit impacts to the aquatic habitat of American Fork Creek. For example, the construction of coffer dams and bypasses of the stream's flow around instream construction/demolition sites may prevent concrete dust from mixing with the stream's water, thereby protecting the aquatic fauna from the introduction of concrete dust into the creek. Additionally, as discussed in *Geology and Soils*, PacifiCorp has proposed some erosion control measures to help prevent impacts that may occur as a result of land disturbing activities.

Surveys conducted by PacifiCorp show that, while Bonneville cutthroat trout are located above and below the project's bypass reach, where natural flows are occurring, they are not found within the bypass reach; indicating that the current 4 cfs minimum flow may be limiting the available habitat for cutthroat trout. The discontinuation of project operations should restore flows within the project's bypass reach which mimic the

natural hydrograph. The restoration of these natural flows may provide the necessary habitat in the bypass reach allowing the Bonneville cutthroat trout to colonize within that reach. Additionally, because cutthroat trout typically migrate upstream in the spring to spawn, removal of the project's diversion structure will allow Bonneville cutthroat trout downstream of the project to migrate upstream to fulfill their life cycle, potentially helping to establish the downstream population as a self sustaining, viable population.

No-Action Alternative

With this alternative the project would continue to operate as currently licensed. The naturally reproducing brown trout fishery in the bypass reach would continue to be protected with the 4 cfs minimum flow requirement. However, no improvements would be made to the habitat within the bypass reach for Bonneville cutthroat trout.

This alternative does have potential to significantly affect macroinvertebrate and fish populations within the bypass reach and downstream of the project's powerhouse in American Fork Creek. As previously discussed, in the event of a flowline failure, it is likely that large volumes of material would be deposited into the creek, thereby negatively affecting macroinvertebrates and fish.

### 5.3.5 Recreation, Aesthetics and Other Land Uses

#### 5.3.5.1 Affected Environment

Recreational Resources

The American Fork Project currently provides no developed recreational facilities. However, some impromptu fishing and hiking does occur along the 2.6-mile-long bypassed reach. The USFS reports that the canyon area receives about one million recreation visitors each year. In the immediate vicinity of the project is the Timpanogos Cave National Monument administered by the NPS. Most of the project's flowline is located on the extremely steep canyon walls within the Lone Peak Wilderness Area, within the USFS's Uinta National Forest. A picnic area and nature trail are located directly below exposed sections of the project's flowline, affecting the area's aesthetics and decreasing public safety. Highway 92 runs parallel to the flowline and the American Fork River. It has been designed as an "Alpine Scenic Loop" by the state. The Highway is the primary access road to all of the above-mentioned areas.

The Wasatch National Forest is located to the north of the project. The Uinta and Wasatch National Forests and the Timpanogos Cave National Monument are located adjacent to urban areas (Ogden, Salt Lake, and Provo) which comprise 80 percent of Utah's population. The USFS considers the American Fork Canyon to be one of the most-visited canyons in region.

The National Monument entrance station is located less than a mile from the project's powerhouse. The Timpanogos Cave is one of the most prominent features of the National Monument. Visitors hike a strenuous 2-mile-long trail up to a 2,000 foot vantage point to tour the cave (NPS guided tours only). Project segments are visible at various points on the trail.

A highly-visited NPS Visitor Center is located at the trail head to the Cave. Directly across the highway from the Visitor Center is the American Fork River and a public walking bridge over the river. This portion of the river is within the bypassed reach of the project.

The closest USFS recreation facilities are the Gray Cliffs Picnic Area and the North Mill Campground. These areas are located within a mile of the project's intake structure.

Aesthetic Resources

As mentioned, Highway 92 is the road through the canyon and has been designated as the Alpine Scenic Loop. The American Fork Creek parallels the road through the canyon and it provides tremendous foreground scenery. Middleground views from the road are generally forested areas backed by the steep canyon walls. The project's structures are visible from a variety of vantage points within the canyon. The flowline is buried for most of its length; however, it is exposed at two creek crossings and at four locations along the canyon wall. The combination of forested areas, steep-sided colorful canyon walls, and America Fork Creek and taller mountains in the far background make the area highly attractive. The management goal of the USFS and the NPS in the canyon area is to maintain a high standard for retaining visual quality.

Land Uses

The USFS and NPS are the administrators of land within the Canyon. Other than the hydropower project no private or commercial properties exist in the Canyon area where the project is located. The only manmade structures in the steep canyon area are the project features, the project operator's house, the NPS Visitor Center, Highway 92, parking areas, visitor walkways and shelters. Timpanogos Cave National Monument is a

250 acre unit of the NPS which was established in 1934. The National Monument is divided into four management units; natural, historic, development and special use. The project's flowline is in the NPS special use zone. About 95% of the National Monument is managed as natural.

Most of the project area is within the Uinta National Forest, and the Forest's Lone Peak Wilderness area. The project predates the wilderness designation.

#### 5.3.5.2 Staff's Analysis

Proposed Alternative

The Settlement addresses recreation, aesthetic, and land use issues in the following ways: (1) all work performed to remove the project's structures would be done in consultation with the NPS, USFS and other parties to the Settlement; (2) the schedule for in-stream work and pipeline removal has been established to avoid traffic and other visitor conflicts; (3) the flowline, transmission lines and poles located within the Lone Peak Wilderness Area would be removed in accordance with the USFS Minimum Management Analysis (designed to minimize the use of mechanized equipment); (4) riprap revetment and re-vegetation materials would be used where ground disturbances occur, especially along the highway; (5) safety signs would be installed where needed to protect travelers and recreationists during and after construction and; (6) additional recreational amenities would be provided such as a footbridge upgrade, parking at the restored powerhouse, a single-vault toilet, and some improvements for persons with disabilities.

The proposed retirement and dismantling of the project will have a long-term positive effect on recreational use of the project area. An immediate benefit to public use and safety in the project area is the reduced potential for flowline failure. The project has had a history of flowline failures that have caused notable damage to public areas and public safety concerns. Further, the natural flow rates will greatly improve the scenic and recreational value in the area. The river flows will be much more favorable for scenic and recreational values and the removal of the aboveground portions of the flowline is expected to return the area to a natural condition.

Other public safety issues will be resolved as a result of the retirement of the project such as the removal of the flowline crossings of the ravines and canyons and the associated footbridges. The USFS describes these crossings as attractive nuisances for the public. Removal of existing flowline crossings and associated footbridges would

have mixed effects according to the USFS because while these bridges provide a benefit to hikers, they are substandard and are not usable for persons with disabilities. These bridges have, however, provided an option for river crossings during times of high flow.

Staff anticipates that the retirement and removal of project features, as proposed, would result in a long-term benefit to the public for several reasons: (1) the project structures that are presently visible in the canyon would be removed; (2) removing these manmade structures from the natural landscape would compliment the management goals for the canyon as set out by the USFS and the NPS; (3) public use of the canyon and river would be improved by safer access via improvements to the river crossing at the powerhouse and by development of a parking area, and (4) some improvements would be made to accommodate persons with disabilities.

Short-term adverse effects on recreation are anticipated as a result of construction activity along the river and highway. Visitor use during certain times is very high and parking is limited, particularly roadside parking. Drivers may also be distracted by construction-related activity. As mentioned, the Settlement contains several mitigation, enhancement and safety measures to reduce traffic problems. However, developing a specific safety plan would help ensure public safety along the road. By letter dated April 25, 2003, the Utah Department of Transportation states that it intends to require the licensee to file a traffic plan to address these issues.

No Action Alternative

Under the no action alternative, the project features would remain visible from various vantage points in the canyon, and within the Lone Peak Wilderness Area. Flowline failures would continue to threaten the safety of visitors and the integrity of the natural landscape. The short-term traffic problems associated with the removal of project features would not occur. However, under the no-action alternative, flowline failures would likely cause traffic problems and disruption of visitor activities, and importantly, affecting public safety. It is likely that, if relicensed, the project would likely require a new flowline for continued operation. Because the specifications and location of a new flowline are not known, the environmental impacts resulting from the replacement of the flowline are not addressed in this EA.

Additionally, the proposed recreation improvements would also not occur.

### 5.3.6 Cultural Resources

#### 5.3.6.1 Affected Environment

The Upper American Fork Hydroelectric Power Historic District was placed on the National Register of Historic Places on April 20, 1989. The District includes the project's dam, penstock, powerhouse, and powerhouse access footbridge. These structures were constructed in the period of 1906 and 1907. The designation was apparently a part of the Electric Power Plants of Utah Property listings as explained by a June 12, 1995 letter from Ms. B. Murphy, Utah State Historic Preservation Office (SHPO). The flowline (the upper portion of the penstock) and the operator's residence (adjacent to the powerhouse) were not included due to the lack of historic significance (NPS, 1989). The District was placed on the Register because of its association with the development of hydropower in Northern Utah County and because off the distinctive Bungalow/Craftsman-style industrial architecture of the powerhouse.

According to the USFS, there are no known cultural resource sites within the project's boundary. The USFS states, however, that there is still the possibility that buried sites exist and may be found during any ground disturbing activity.

#### 5.3.6.2 Staff's Analysis

Proposed Alternative

The Settlement addresses historic resource issues in the following ways: (1) the licensee would document all project related features, prior to their removal, in a manner consistent with the standards at the Commission's regulations in consultation with the SHPO, USFS, and NPS; (2) the licensee would restore the powerhouse facility and convey it to the USFS (restoration would include repair of deteriorated wood and refinish exposed woodwork and all work would be done in accordance with the Secretary of the Interior's standards for rehabilitation); (3) the licensee would construct a barrier-free parking area, footbridge and access trail to accommodate visitors to the restored powerhouse for historic education and interpretive purposes; and (4) the licensee would remove the power generation units.

By letter dated May 7, 2003 the USFS stated that the SHPO and the archeologist for the Uinta National Forest have consulted about the historical and archeological properties associated with the project. They have determined that the powerhouse is an important historical resource with respect to power development. Such power generation structures were once common in northern Utah, almost all of these structures have been

modified, destroyed, or are now in a state abandonment. The American Fork Project powerhouse is one of the few remaining such structures and available for historic interpretation.

The 2003 USFS Revised Uinta Forest Plan includes a goal to provide interpretation of heritage resources.[24] The proposed repair of the powerhouse would retain the historic value of the structure and allow for interpretive and education opportunities. However, the SHPO and USFS agree that that power generation units in the building have undergone upgrading and parts replacement over the years to the point that they now have minimal historic value. Removing the units would allow for the building to be used for a variety of purposes while maintaining the historic character of the structure.

By letter dated April 23, 2003 the Utah State SHPO states that the transferal of the powerhouse to federal ownership would provide a level of protection beyond what it currently receives in private ownership. Under federal laws and agency procedures designed to protect cultural resources for the long-term. The SHPO also points out that the project would be maintained under the provisions of the Settlement in the short-term by the licensee according to the Secretary of the Interior's Standards for Rehabilitation, therefore preserving its integrity until federal transfer of ownership occurs.

The Settlement calls for the installation of a barrier-free bridge and a toilet facility to accompany future use of the powerhouse for public education. The SHPO states that the continued use of the facility would aid in the preservation of the building.

The SHPO further states that some loss of the historic features of the project will occur because the flowline and other project structures will be removed. These structures are considered secondary in historic importance and the removal will also the ongoing public safety concern associated with pipeline failure. Overall, the SHPO states that the Settlement serves to protect the historic value of the facilities.

Staff anticipates that the provisions in the Settlement would provide some protection for the historic resources that will remain intact, specifically the powerhouse and portions of the penstock. The Settlement, however, does not offer any specific proposal such as a plan for the treatment of the all historic resources included in the

[24] As indicated by the USFS in its response to PaciCorp's request to answer FERC's additional information request. The USFS response was included in PacifiCorp's letter to FERC dated May 13, 2003.

National Register of Historic Places. The Settlement also does not provide any details on how proper documentation of facilities proposed for removal will be accomplished. Further, the Settlement does not address the proposed treatment of archeological resources that may be unearthed during facility removal.

Commission staff subsequently executed a Memorandum of Agreement[25] which includes a HRMP and includes the following provisions for the licensee to perform for the resolution of potential adverse effects to historic properties, which include the historic facilities, and archeological and historic sites; (1) within 90 days of the issuance of any surrender order, the licensee shall file with the SHPO, NPS, USFS, and the Northern Ute Tribe (Tribe) detailed drawings and a description of the Area of Potential Effect (APE) on historic and archaeological sites that could be affected by the removal of project features and designate the project personnel who will be responsible for oversight and training; (2) within 6 months of the issuance of any surrender order, the licensee shall file with the SHPO, NPS, USFS, and the Tribe the following: (a) monitoring and protection procedures that will be followed during the completion of all decommissioning measures for any known or inadvertent discoveries of archeological sites, historic sites, or human remains within the APE; and (b) a list of the specific tasks which will require cultural resource expertise prior to, and during project removal and restoration and the contracting out of this work to professionals who meet the professional qualification standards for architectural history and archeology in the Secretary's Standards; (3) within 1 year of the issuance of any surrender order, the licensee shall file with the SHPO, NPS, USFS, and the Tribe audio and visual documentation of the historic facilities for future reference. All documentation shall be prepared pursuant to the SHPO's standard historic structure documentation requirements; (4) the Licensee shall file reports documenting the activities and consultation conducted under the implemented HRMP. These reports shall be filed with the Commission, the SHPO, the Tribe, the NPS and the USFS. The first report will be filed within 30 days after the first anniversary of issuance of the surrender order and then annually thereafter until the surrender becomes effective. If no work was completed, a letter from the Licensee will be prepared to that effect and will satisfy the intent of this stipulation; and (5) the tasks listed above do not release the licensee from

[25] On June 30, 2004, the Commission staff executed a Memorandum of Agreement with the SHPO. By letter to the Commission dated June 21, 2004, the Advisory Council on Historic Preservation filed a letter stating it did not believe that its participation in consultation was needed to resolve adverse effects. Concurring parties who signed onto to the agreement include PacifiCorp, National Park Service (Timpanogos Cave National Monument), and Forest Service (Uinta National Forest). The Northern Ute Tribe was asked to sign as a concurring party, however, no response from the Tribe was filed.

any provisions that may be set by other pertinent land management agencies (NPS or USFS) who have regulatory roles and permitting requirements within their administrative boundaries. Under this alternative, a Commission approved HRMP would complete the Section 106 process, pursuant to the National Historic Preservation Act.

No Action Alternative

Under the no action alternative, none of the historic protection or education measures proposed by the applicant or analyzed in this assessment would be implemented. The powerhouse would not be restored or conveyed to the USFS for historic education and interpretation purposes. Improvements to the powerhouse parking area, footbridge and access trail, and stream crossing would not occur. The power generation units would remain as is and operational.

### 5.3.7 Threatened and Endangered Species

Pursuant to the ESA, as amended, Ute ladies'-tresses, a perennial terrestrial orchid, was listed as a threatened species by the U.S. Fish and Wildlife Service on January 17, 1992. Listing was due primarily to habitat loss and a low reproductive rate. Ute ladies'-tresses was listed as threatened throughout its entire range, which includes Utah. Although habitat conditions for this species may be consistent with the project area, a field study conducted in July 1997 resulted in no observations of this species in the project area. No designated or proposed critical habitats are known to occur in the project area for any species, including Ute ladies'-tresses. Therefore, no issues have been identified for any alternative that require consultation under section 7 of the ESA.

## 6.0 DEVELOPMENTAL ANALYSIS

This section presents the costs of project removal in accordance with PacifiCorp's proposal and the costs associated with continuing to operate the project as licensed (the no-action alternative). The basic elements of PacifiCorp's proposal for retiring the project and removing the project facilities are described in the Settlement.

## 6.1 Cost of Proposed Alternative

Under PacifiCorp's proposal, project operations would terminate by August 31, 2006. The flows would be restored to the natural levels of the American Fork Creek, where they would not be affected by any project facilities. At this point, PacifiCorp would cease operations and begin the process of removing the dam and project facilities. This is in accordance with the Removal Plan (Appendix A of the Settlement). PacifiCorp proposes to complete the retirement measures no later than December 31, 2007.

For the surrender of the project's license, PacifiCorp has proposed the following measures, listed in Table 3, with a total cost of approximately $874,000. With PacifiCorp's proposal for the continued operation of the project until August 2006, we estimate these costs would be offset by nearly $200,000 in project revenue.

Table 3. Proposed Measures and their Estimated Costs.

| Measure | Description | Estimated Cost |
|---|---|---|
| Diversion Dam | Demolishment, removal, and disposal of existing concrete diversion dam and related structures. | $74,000 |
| Powerhouse Facility | Repair and rehabilitation of powerhouse facility. Removal of spillway and other extraneous components. Protection of the highway and reconstruction of the stream channel. | $212,000 |
| Flowline and Penstock | Removal of exposed penstock and revegetation of disturbed areas. Grout fill pipeline under and next to Utah State Route 92 and cap ends, and grout fill pipeline below intake structure and cap ends. | $503,400 |
| Power Line | Relocate the distribution power line, out of the Lone Peak Wilderness Area. | $40,000 |
| Functional Safety Valve | Install a functional safety valve at the Burnt Flats box culvert. | $40,000 |
| Hazard Signs | Install Hazard Signs | $5,000 |
| Project Features | Document all Project Features | ------- |
| Safety Inspections | Safety inspections of the flowline | ------- |
| Minimum Flow | Maintain a minimum flow of 4 cfs in the bypassed reach of American Fork Creek | ------- |
| All Measures | | $874,400 |

## 6.2 Cost of Proposed Alternative as Modified By Staff

Table 4 identifies expenses that PacifiCorp would be responsible for if the Commission were to accept the surrender application and require PacifiCorp to develop the environmental resource protection and public safety plans identified and discussed in Section 7.0, Staff Conclusions.

Table 4. Estimated Cost of surrendering the projects license as proposed with Staff's identified environmental resource protection and public safety plans.

| | Estimated Cost |
|---|---|
| *All measures as proposed by the Applicant* | *$874,400* |
| Erosion and Sediment Control Plan | $10,000 |
| Wetland Protection Measures | $18,000 |
| Spill Containment and Prevention Plan | $2,000 |
| Traffic Control and Visitor Safety Plan | $2,000 |
| Historic Resources Management Plan | $125,000 |
| **Total Cost of Proposal with Staff's Identified Measures** | **$1,031,400** |

## 6.3 Cost of No-Action Alternative

Under the no-action alternative, the 950-kW American Fork Project would continue to operate and have an annual generation of about 5,612 MWh. In addition to various economic assumptions (Table 5) we used the energy value from the 1998 relicense application and escalated it to 2003 dollars, giving it a value of 40.6 mills/kWh. This resulted in a total energy benefit of $228,000 (40.6 mills/kWh). The total annual cost is about $156,300 (27.8 mills/kWh), resulting in net annual benefits of about $71,700 (12.8 mills/kWh). This does not include costs of repairs and remediation if the pipeline were to rupture again. Staff identified the need for a flowline integrity study which should be completed prior to issuing a new license to the American Fork Hydroelectric Project. This study should inspect the flowline for pipe roundness, pipe wall thickness, weld strength and areas of erosion and corrosion and would inspect the flowline supports to ensure the structural adequacy of the supports on the constantly moving slope; and would need to be completed as part of the project's relicensing. We estimate the cost of this study to be approximately $210,000[26], with an estimated annual cost of $23,000.

[26] In PacifiCorp's response, dated June 19, 2001, to the Commission's Additional Information Request dated January 20, 2000, PacifiCorp estimated the cost of the Flowline integrity study to be $200,000, or $210,000 in 2003 dollars.

Table 5. Staff's Assumptions used to complete the economic analysis of the No-Action Alternative.

| Assumption | 2003 Value | Source |
|---|---|---|
| Period of Analysis | 30 years | Staff |
| Term of Financing | 20 years | Staff |
| Energy Value | 40.6 mills/kWh | Applicant |
| Interest Rate | 10.3 percent | Applicant |
| Cost of Money | 10.3 percent | Applicant |
| Operation & Maintenance | $55,000 | PacifiCorp Form 1 |
| Net Investment of the Project | $901,406 | Applicant |
| Relicensing Cost | $459,406 | Applicant |

### 6.4 Effect of Project Retirement on Electric Transmission

The power provided by the project would be displaced by other generation sources available in the region. The most likely resource to replace the project's capacity and generation would be natural gas fueled combustion and turbine generators, which accounts for most of the new capacity additions proposed in the region.

## 7.0 STAFF CONCLUSIONS

### 7.1 Proposed Action Alternative

PacifiCorp's proposal and the Settlement provide a basic plan for surrendering the project's license and retiring the project's facilities. However, if the Commission were to implement this alternative, staff believes that more specific detail on measures for public safety and environmental protection would be needed. This detail can be provided with the development of a Final Site Plan prior to project removal to ensure environmental resource protection and public safety, including: (1) a project and site specific erosion and sediment control plan; (2) measures to protect wetlands; (3) a spill containment and prevention plan; (4) a traffic control and visitor safety plan; and (5) a HRMP.

The erosion and sediment control plan would outline specifically the steps to be taken during land-disturbing and instream activities that would prevent erosion and sedimentation. According to the Settlement, sediments currently trapped behind the dam will be used on-site in restoring the river channel gradient following dam removal.

Included in an erosion and sediment control plan would be procedures to be taken if problems occur such as heavy rains, high water and a failure of rehabilitation measures. The plan would provide measures for monitoring to ensure that all rehabilitation measures are working and what steps would be followed if they are not.

The Final Site Plan would include design drawings of the berm to be constructed, following dam removal, to ensure the continued existence of the wetlands located above the project's dam. In addition, the Final Site Plan would include, but not be limited to, monitoring procedures, pre-and post-dam removal to document the presence of all aquatic and terrestrial species found in the wetlands.

The spill containment and prevention plan would be developed in an effort to prevent any discharge into American Fork Creek resulting from the introduction of concrete dust and/or petroleum products from construction/demolition activities. The plan would describe in detail all precautionary measures to be taken to prevent a spill and/or discharge and the appropriate response and actions to be taken in the event of a spill or discharge to American Fork Creek.

A traffic control and public safety plan would be needed to ensure the safety of motorists and pedestrians along Highway 92 in the project area. The plan would include: (1) expected times of construction consistent with the Settlement-established schedule; (2) a discussion of how construction activity will be coordinated to avoid or minimize conflicts with motorists and pedestrians and how traffic delays will be minimized; (3) a description of traffic control methods to be used such as flagging, reflective cones, or other methods; (4) a description of temporary measures to be used such as roadside parking when or if construction equipment blocks existing parking areas; (5) a description of advance notification of construction activity for the public and; (6) documentation of consultation.

A HRMP would be needed because the Settlement does not provide any details on proper documentation of facilities proposed for removal will be accomplished, nor does it address the proposed treatment of archeological resources that may be unearthed during facility removal. The final HRMP includes the appropriate measures for PacifiCorp to perform for the resolution of potential adverse effects to historic properties, which include the historic facilities, and archeological and historic sites. Implementation of the Memorandum of Agreement and a Commission-approved HRMP would complete the section 106 process, pursuant to the National Historic Preservation Act.

Finally, we note that all of the aforementioned measures would be developed in coordination with the parties to the Settlement prior to their filing with the Commission for approval. With the implementation of the plans, any environmental impacts that may

occur as a result of the project's retirement, should be limited in nature and should not result in any long term negative affects to the environmental resources analyzed in the EA.

### 7.2 No-Action Alternative

Under the no-action alternative, continued operation of the project would have minimal effect on the existing environment, in the absence of a flowline failure. The potential for flowline failures during project operations would continue to exist. The project's steel flowline has been in operation for over 40 years and the condition and structural adequacy of the flowline for another license term is questionable. The continued operation of the project in combination with the steep rocky slopes with mass wasting, slope failures, rock falls, and debris slides are a constant threat to the stability and integrity of the flowline. Damage and/or rupture of the flowline while the project is in operation would likely result in a catastrophic event that could cause erosion of the canyon walls, turbidity and sedimentation of American Fork Creek, potentially negatively affecting aquatic life, and threatening public safety.

Therefore, to continue operating the project in a safe manner, surveys would need to be conducted to locate all potential hazard areas that have the potential to affect the flowline. A study of the flowline supports, pipe roundness, wall thickness, weld strength and areas of erosion and corrosion would need to be completed.

With the no-action alternative, none of the environmental measures proposed by the applicant or analyzed in this assessment would be implemented, and existing minimum flow releases to the bypass reach would continue to prevent the colonization of Bonneville cutthroat trout in that reach. Project features would remain visible from various vantage points. Additionally, potential flowline failures would continue to pose a threat to terrestrial and aquatic resources, visitor activities, and public safety.

## 8.0 FINDING OF NO SIGNIFICANT IMPACT

Based on our analysis, implementation of the proposed alternative would not be a major federal action significantly affecting the quality of the human environment, provided the resource protection measures discussed above are developed and implemented.

## 9.0 LITERATURE CITED

National Park Service. 1989. National Register of Historic Places Registration Form: Upper American Fork Hydroelectric Plant Historic District. Unpublished. NPS Form 10-900 (Rev. 8/86).

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# Appendix

# Figures 1 & 2

Appendix Figure 1.

Public access for the this information is available only through the Public Reference Room, or by e-mail at public.referenceroom@ferc.gov. The figure is attached to the November 26, 2003 EA for the American Fork Hydroelectric Project, P-696-013.

Appendix Figure 2.

Public access for the this information is available only through the Public Reference Room, or by e-mail at public.referenceroom@ferc.gov. The figure is attached to the November 26, 2003 EA for the American Fork Hydroelectric Project, P-696-013.