

## **8.0 COMPREHENSIVE DEVELOPMENT AND PREFERRED ALTERNATIVE**

A requirement for any Federal Energy Regulatory Commission (Commission or FERC) License issued for a Hydroelectric Project is that the license must be consistent with the FPA. FPA Section 4(e) requires the Commission to take a comprehensive look at power and non-power issues prior to issuing a new license. The Commission must give equal consideration to the purposes of energy conservation; the protection, mitigation, and enhancement of fish and wildlife; the protection of recreational opportunities; and the preservation of other aspects of environmental quality. In addition, FPA Section 10(a)(1) gives the Commission similar direction and lists other beneficial public uses, such as irrigation, flood control, and water supply. Overall, the FPA requires that any license issued must be, in the judgment of the Commission, best adapted to a comprehensive plan for improving or developing a waterway(s) for beneficial public uses. This section of the APDEA explains the basis for the Commission to adopt the Preferred Alternative to meet these FPA requirements.

### **8.1 PREFERRED ALTERNATIVE**

Based on the review and evaluation of the Proposed Action (Section 5.0), the CDFG Alternative (Section 6.0), and the No Action Alternative in Sections 5.0 – 7.0, the Proposed Action is the Preferred Alternative. The Proposed Action was developed from a comprehensive analysis of data collected during the 67 Big Creek ALP technical studies that lead to the identification of potential resource issues and limiting factors associated with the existing operation of the Projects (No Action Alternative). The National Environmental Policy Act (NEPA) requires that the Commission conduct an appropriate level of environmental review prior to issuing the new hydropower licenses. The Commission would be justified in choosing the No Action Alternative, with a few mitigation measures designed to protect sensitive species, as the Preferred Alternative because it does not result in any additional impacts to existing natural resources. The status quo would be maintained and resources in the area will remain at current conditions (baseline levels), without any additional degradation, and power generation would be maximized. However, the Proposed Action is more consistent with the Commission's mandates under the FPA, evaluating the protection of the environmental resources under the Projects' control with power generation. The Proposed Action addresses each of the existing potential resource issues and appropriately balances developmental and environmental values by focusing on Project-related factors that are adversely affecting environmental (including cultural) resources and beneficial uses at a reasonable cost to power generation.

The Proposed Action was finalized after evaluation of the flow recommendations (MIF) in the CDFG's alternative were provided to SCE, and the resulting effects of that alternative on environmental and power values were known. In developing the Proposed Action, consideration was given to the comments provided by stakeholders during the Big Creek ALP. Unlike the CDFG Alternative, the Proposed Action considers that solely increasing flow-related habitat will not automatically result in measurable environmental benefits. Specifically, in the Proposed Action, flows are recommended at a magnitude, duration, and frequency appropriate to address Project impacts that are

affecting existing resources, including aquatic habitat so that baseline environmental resources are enhanced effectively, without resulting in an excessive amount of power generation loss.

The Proposed Action includes CRMF releases, which are not included in the CDFG Alternative. This makes a direct comparison of the generation losses between the two alternatives more complicated. However, when the lost generation caused by the CRMF releases is not considered, the resulting effects of the MIF releases on hydroelectric generation and air quality differ markedly among the alternatives. Minimum instream flow releases recommended in the CDFG Alternative result in approximately 11,775 MWh (7.47%) higher generation losses and increased air emissions than the MIF releases recommended under the Proposed Action. Section 6.3 provides a comparison of the Proposed Action and the CDFG Alternative, and Section 7.2 provides a comparison of the generation loss and annual energy benefit between the two alternatives.

Although the Proposed Action and the CDFG Alternative each address impacts from current Project operations and meet regulatory environmental objectives, the mitigation measures recommended in the Proposed Action represent a more equitable approach for protecting and enhancing resources. In contrast, the CDFG Alternative results in a significantly higher generation loss and reductions in air quality, while not providing substantially greater resource benefits. Thus, the Proposed Action was selected as the Preferred Alternative.

The mitigation measures proposed in the Preferred Alternative (Proposed Action) are contained in the Big Creek ALP Settlement Agreement, which includes an Appendix A, with measures proposed to the Commission for adoption in new licenses to address Project effects, and Appendix B, with contractual obligations among SCE and various stakeholders to address local issues which are outside Commission jurisdiction and not for inclusion in new licenses. These Settlement Agreement measures are summarized below by resource topic.

### **Settlement Agreement Appendix A Provisions**

#### **Aquatic**

Enhancements that address aquatic resources were designed to mitigate project impacts identified in study plans. Stakeholders agreed on mitigation measures to:

- Increase or establish minimum instream flows in Project bypass reaches to support aquatic habitat and maintain stream temperatures.
- Provide CRMF to enhance geomorphic processes and address sediment issues in select bypass reaches.
- Implement the Mono Creek CRMF Plan and the Camp 61 Creek CRMF regime (associated with the Portal Project, FERC Project No. 2174) to maintain reduced accumulations of fine sediments.

- Implement CRMF for the South Fork San Joaquin River below Florence Reservoir to increase instream flow and inundation of Jackass Meadows during spring run-off to enhance or maintain riparian resources.
- Implement the Small Diversion Decommissioning Plan to remove four backcountry hydroelectric generation diversions and two domestic water diversions from operation.
- Implement large woody debris program at the Bear Creek Diversion Dam to return wood to the downstream bypass reach.
- Control and monitor instream temperatures during the first three to five years that minimum instream flows are released under the Project licenses to document compliance with water temperature targets, obtain information about potential Project controllable factors, and establish long-term operating regimes for water temperatures.
- Monitor fish community composition and abundance to assess the effects of newly required minimum stream flow releases.
- Implement sediment management prescriptions to reduce sediment accumulation behind Project impoundments and transport sediments through the downstream channels.
- Monitor riparian vegetation at Jackass Meadows, Mono Creek, and Camp 61 Creek to assess the effects of new CRMF releases on the composition, structure, and health of riparian resources.
- Implement the Flow Monitoring and Reservoir Water Level Measurement Plan to document compliance with MIF requirements and record reservoir water surface levels.

### Cultural

- Complete and implement the Draft Historic Properties Management Plan in consultation with the SNF, Native Americans, and other stakeholders.
- Coordinate the HPMP with the Vegetation Management Plan, Recreation Management Plan, Riparian Monitoring Plan, and Transportation System Management Plan.
- Establish a Big Creek Heritage Advisory Committee to consult on the development of management and monitoring of cultural resources, review and evaluate cultural resource data, implementation of protection measures, and address specific issues or concerns arising during the implementation of the HPMP.
- Manage National Resource Heritage Program eligible and ineligible sites as important sites.

## Land Management

- Implement the Visual Resources Plan, addressing visual effects on the surrounding landscape of Project facilities through the use of visual screening or color scheme selection.
- Implement the Transportation System Management Plan, addressing road, and trail issues related to access, repair and maintenance activities, rehabilitation needs, road use, and traffic control measures.

## Recreation

- Implement the Recreation Management Plan, including measures for facility rehabilitation, recreation facility enhancements, interpretive enhancements, reservoir recreation, whitewater boating, fish stocking, trails, and winter recreation.
- Perform maintenance measures at Camp Edison, and the day-use area recreational facilities at Shaver Lake and Balsam Meadow Forebay
- SCE will be responsible for the full cost of major rehabilitation of select existing developed recreation facilities.
- Provide new recreation facilities, including a day-use area adjacent to Dam No. 3 at Huntington Lake, universally accessible fishing platforms at Huntington Lake and near Jackass Meadows, and a universally accessible boat loading facility at Florence Lake.
- Design and install up to 13 interpretive display exhibits at various locations in the vicinity of the Big Creek ALP Projects.
- When feasible, maintain reservoir water surface elevations at levels supporting recreation.
- Inform the public regarding reservoir water surface elevation and real-time stream flow information at certain locations.
- Provide whitewater flow releases from Mammoth Pool Dam in Wet and Above Normal Water Years prior to anticipated spills over the dam, and coordinate down-ramping of CRMF releases from Florence Lake to provide whitewater boating opportunities, if within SCE's control.
- Support fish stocking in Project reservoirs and stream reaches by equally matching the CDFG stocking up to agreed upon amounts.
- Maintain a section of the San Joaquin river trail that is co-aligned with the Mammoth Pool Transmission Line Project road.
- Avoid occasional winter recreation impacts by only snow plowing one lane of the Kaiser Pass Road, if necessary.

## Terrestrial

- Implement the proposed Special-Status Bat Species License Article by consulting with CDFG and the USDA-FS prior to conducting any non-routine maintenance activities with potential to harm special-status bat species or their habitat.
- Implement the proposed Mule Deer License Article by maintaining fences around the Mammoth Pool Dam spillway and Daulton Creek Bridge, discourage deer from crossing Mammoth Pool near the spillway, and continue road closures in the vicinity of Balsam Meadows.
- Implement the Special-Status Species License Article requiring a biological evaluation (BE) to describe the potential impact of new project-related construction on Forest Service land that may affect Forest Service special-status species and their habitat.
- Implement the Bald Eagle Management Plan, which addresses ongoing maintenance and operations and potential impacts to Bald Eagles in the projects' vicinity.
- Implement the Valley Elderberry Longhorn Beetle Plan to address VELB management during operations and maintenance of facilities, roads, trails, and recreation features of the projects.
- Implement the Vegetation and Integrated Pest Management Plan with measures to avoid and protect terrestrial and cultural resources.
- Install and maintain bear proof dumpsters at the Big Creek No. 1 administrative offices, company housing and other project facilities where food waste may be disposed of or stored and educate SCE personnel about reducing bear/human incidents.

## **Summary of Settlement Agreement Appendix B Provisions**

### Aquatic

- Monitor macroinvertebrates in Mono Creek below Vermilion Valley Dam (associated with the Vermilion Valley Project, FERC Project 2086) to assess the effect of water quality from the Vermilion Valley Dam leakage channel on stream biota.
- Provide additional spawning gravel below Mammoth Pool Dam, if feasible, to improve trout recruitment, and monitor gravel transport and distribution.

### Cultural

- Create a Native American Advisory Group that will oversee certain authorized tribal use of SCE lands within the Project area.

- Designate a portion of SCE-owned land for local Native American people for use as a cultural use area, including interpretive trails and native plant restoration and harvesting.
- Identify a potential location for ceremonial use, in which activities such as sweats and Bear Dance ceremonies could take place.
- Provide re-interment on SCE lands, if prehistoric remains discovered on SCE lands cannot be left in place.
- Create a Native American Scholarship Fund.
- Assist with improving pedestrian access and protection of cultural resources at Mono Hot Springs.
- Provide the Sierra Mono Museum with a donation toward bringing the Museum and its curation program up to current federal standards.
- Provide training for Native Americans to participate as monitors for archaeological field work.
- Conduct periodic cultural resource training of Northern Hydro Division field personnel.
- Prepare annotated listings of ethnographic, historical, and archaeological reports prepared in conjunction with hydroelectric projects in the Big Creek area.
- Provide Native Americans access to SCE-owned lands for plant gathering and tending purposes.
- Reconstruct the fence protecting the sedge bed in the Tombstone Creek channel and augment with sand and/or gravel.

### Land Management

- Sign a road use permit for SCE's use of Forest Service roads located outside of the FERC Project boundary.
- Perform road maintenance activities on select Forest Service roads outside of the FERC Project boundary.
- Obtain separate road use permits from the Forest Service for any significant projects utilizing Forest Service roads outside of the FERC Project boundary.
- Establish a Transportation Signage Fund account for road sign repair and/or replacement.
- Implement road rehabilitation measures and bridge repair projects based on condition surveys conducted within one year of license issuance.

### Recreation

- Provide the Forest Service annual funding for asset management and concentrated use management.

- Provide the Forest Service with annual funding for a boat and trailer to access dispersed recreation areas at Project reservoirs.
- Provide the Forest Service annual funding for minor rehabilitation around recreational facilities.
- Provide the Forest Service with annual funding for administration, development, and distribution of interpretive programs, brochures, and publications.
- Provide the Shaver Crossing Railroad Station Group a donation toward the development of interpretive brochures and a panel/kiosk providing information on the San Joaquin and Eastern Railroad, and the Shaver Crossing Railroad Station Museum.
- Provide the Huntington Lake Big Creek Historical Conservancy a donation toward educational and interpretive programs and repairs and improvements to the Billy Creek Museum and grounds, and provide permanent outdoor housing for the historic Bull Dog Mack Truck and a section of the original outlet of Ward Tunnel.
- Assist the Huntington Lake Association in improving existing docks and related permitting.
- Provide the Huntington Lake Volunteer Fire Department with funding toward a new water tender.
- Provide the Fresno County Sheriff Department with funding toward a new snow cat.
- Provide the San Joaquin River Trail Council a donation for improving the multi-use San Joaquin River Trail.
- Reimburse the Forest Service for reasonable costs for the development and implementation of a water system at Portal campground.
- SCE, in cooperation with the CDFG, will rehabilitate and operate the Big Creek fish hatchery, if feasible.
- SCE will consult with the CDFG and other interested stakeholders during the development of the SCE's Land Management Plan for SCE private owned lands surrounding Shaver Lake.