Proposed Action Description
for
Incline Lake Dam Project

USDA Forest Service Pacific Southwest Region
Lake Tahoe Basin Management Unit
Washoe County, NV

LOCATION:

This project is located off of State Route 431 in Washoe County, Nevada near Tahoe Meadows. The reservoir and dams (See attachment C for location of the major dam and minor dam) are situated on Assessor Parcel Number 048-041-15, at an elevation of approximately 8,300 feet. The total project area is approximately 43 acres and includes the roadway into the dam and the human influenced disturbance footprint of the dam (approximately 30 acres) (See Project Analysis Area (Attachment B) and Project Area Context maps (Attachment A)).

BACKGROUND:

Incline Lake Dam was purchased as part of a larger land acquisition (777 acres) on July 29, 2008. All buildings were removed from the property prior to the acquisition. As a part of the larger acquisition, a site investigation and assessment of the major dam and spillway were commissioned. The results of the site investigation and assessment indicated that the existing major dam and spillway do not meet Federal, State or local standards for a high hazard dam. Before long term planning can begin for the remainder of the property, the dam needs to be addressed.

EXISTING CONDITION:

The results of the site assessment indicated that the existing dam and spillway (see Former Condition (Attachment C) and Existing Condition (Attachment D) maps) do not meet Federal, State or local standards for a high hazard dam. Subsequently, the lake was drained and the outflow pipe was disabled so that it would not refill.

DESIRED CONDITION:

The desired condition for the project area is to remedy the existing condition of a high hazard dam that does not meet Federal, State or local standards. Additionally, the desired condition for the project area is to provide a sustainable hydrological system which supports groundwater dependent ecosystems and other riparian ecosystems that characterized the site prior to when the dams were created.

PURPOSE AND NEED:

There is a need from a public safety and water quality protection standpoint to remove the existing dams and spillway and to replace them with a system that meets current standards. There is also a need to address the dams before long term planning can begin for the remainder of the property. In addition, there is a need to stabilize and restore the area impacted by the dam and reservoir to protect water quality and riparian/aquatic habitat by

maintaining or improving the condition of wetland, fen and other riparian systems in the project area.

PROPOSED ACTION:

Under this Proposed Action the Incline Lake Dams would be completely removed and the topography around the dams and the historic disturbance footprint would be recontoured to match adjacent contours and grades. This would likely involve fill of part of the disturbance footprint. The goal of this Proposed Action would be to restore the human influenced disturbance footprint of the dams (approximately 30 acres) within the Incline Lake Dam project area, such that surface and groundwater hydrologic function are restored to a point where natural processes would restore the groundwater dependent ecosystems that characterized this site prior to when the dam was created (See Attachment E). Additional restoration actions may be required outside of the Incline Dam project boundary and/or scope, to fully achieve restoration of hydrologic function supporting groundwater dependent ecosystems in this Incline Dam project area. Actions outside of this project area or project scope will be addressed in the future through a full analysis of proposed management of the entire Incline Lake Acquisition Area.

The Forest Service expects the restored ground water dependent ecosystem over the long term (15-20 years) to be characterized by a system of small to medium sized ponds, fens, and marsh, connected by undefined surface flow channels of low velocity during wet periods. One of the objectives of this Proposed Action would be to maintain or improve the condition of wetland, fen and other riparian systems in the project area. There would be poorly defined surface flow channels within this system, and during dry periods the ecosystem would be hydrologically connected through subsurface and groundwater flows, with little to no surface flow. Attachment F depicts what the Forest Service expects the area to look like in the long term.

In the short term, restoration actions would ensure that the site is stable in terms of soil stability and geomorphic processes, and would establish a trajectory that actively promotes natural processes of ground water dependent ecosystem recovery.

The specific proposed actions would consist of:

- Removal of the main dam structure and spillway and re-contouring to match adjacent contours and grades. All concrete and metal materials associated with spillway structure would be hauled away to an appropriate solid waste disposal facility. This action would also include removal of trees from these structures. Historical evaluation of the spillway structure would need to be completed prior to making a decision on this project.

- Use of the existing access road into the dam. The access road may need to be widened in order to provide an appropriate turning radius for equipment. Widening may involve tree removal and replacement of existing roadway drainage features.

This road would be returned to its original use level and width and stabilized after work is completed on the dam.

- The current minor dam would be converted into a low water crossing.

- Regrading earthen material from the major dam into areas that appear to have been excavated during the creation of the dam. The Forest Service does not plan on importing any fill material (see Attachment E for approximate area that would be reshaped through regrading). Slope stabilization measures (examples: coir logs, hydromulch, wood chips) would be installed on regraded areas that have potential for detrimental soil erosion and transport until vegetation is established.

- Installing log/boulder grade control structures as needed to re-establish connectivity of drainage upstream of the dam into drainage downstream of the dam.

- Regrading existing incised channels through the reservoir footprint and actively eroding section of diversion ditch so that surface flow paths are dispersed and widely spread through low gradient swales into existing depressions.

- Installation of willow stakes and wetland species sod plugs and plantings sufficient to stabilize and prevent erosion of the area influenced by the dam re-contouring and channel regrading.

Resource Protection Measures

This section lists the features that have been incorporated into the Proposed Project's design, construction, and operation in order to protect sensitive resources and to avoid and minimize impacts on those resources.

Botany

1. Areas around sensitive species and associated sensitive habitats (e.g., fens) are to be avoided completely during project activities with an appropriate buffer as determined by a staff botanist (in coordination with project leader).
    a. Individual trees of Whitebark pine (*Pinus albicaulis)* may be removed if disease or insect infestations are present and after inspection by staff botanist and silviculturist.
    b. Project activities may occur in Three-ranked humpmoss (*Meesia triquetra)* populations if they are designed for ecological restoration and approved by staff botanist.

2. Project design and operations will improve or maintain the hydrologic processes that sustain water flow, water quality, water temperature, and hydrological connectivity that is critical to sustaining fen, wetland and riparian ecosystems within the vicinity of the project area (upstream and downstream of the dam) and plant species that depend on these ecosystems.

3. Plant native wetland-associated species where needed to assist in channel stabilization, maintain the water table, and prevent erosion in the project area.

Invasive Plants

4. Infestations of invasive plants will be treated prior to project implementation in accordance with the Terrestrial Invasive Plant Species Treatment Project, Environmental Assessment (TIPS EA). If an infestation is not treatable, it will be "flagged and avoided" according to the species present, project constraints, and feasibility.

5. All vehicles and equipment must be cleaned before moving into the project area in order to ensure that they are free of non-native invasive species. Equipment will be considered clean when visual inspection does not reveal soil, seeds, plant material, or other debris that could contain or hold seeds of non-native invasive species. It is recommended that all vehicles, especially large, off-road and/or earthmoving vehicles are cleaned when they come into the Lake Tahoe Basin or come from an area known to contain non-native invasive species.

6. When working in areas known to harbor non-native invasive species, equipment shall then be cleaned at a washing station before moving off the project site. If this mitigation isn't possible, then coordination with the botanist on the project should take place.

7. Staging areas for equipment, materials, or crews will not be situated in areas infested by non-native invasive species. Areas containing non-native invasive species should be avoided during project activities.

8. All gravel, fill, or other materials are required to be "weed-free". Use on-site sand, gravel, rock, or organic matter when possible. Otherwise, obtain "weed-free" materials from gravel pits and fill sources that have been surveyed and approved by the Nevada Department of Agriculture or by the noxious weed coordinator. See the annual report of "Material Pit Surveys for Noxious Weeds" for suitable sources of gravel & fill; available upon request of the Forest Botany staff.

9. Use "weed-free" mulches, hay, and seed sources. To the extent feasible, salvage topsoil from project area for use in onsite revegetation, unless contaminated with non-native invasive species. Do not use soil or materials from area contaminated by cheatgrass.

10. Minimize the amount of ground and vegetation disturbance in construction areas. Reestablish vegetation where feasible on disturbed bare ground to minimize non-native invasive species establishment and infestation. Revegetation is especially important in staging areas. Utilize locally collected native seed sources when possible. Plant and seed material should be collected from or near the project area, from within the same watershed and at a similar elevation when possible. Persistent non-natives such as *Phleum pratense* (cultivated timothy), *Dactylis glomerata* (orchard grass), or *Lolium* spp. (ryegrass) will not be used. Seed mixes must be approved by a staff botanist.

11. The invasive plant coordinator should be notified after project completion so that the project area can be monitored for three years (as funding allows) to ensure additional non-native invasive species do not spread or become established in the areas affected by the project.

12. The disturbed areas created during project activities will be covered until appropriate revegetation or soil conditioning can occur, in order to abate potential weed infestations. Cover options include, but are not limited to, up to 6" of wood chips, landscape fabric, or erosion control fiber.

Aquatic

13. Retain/add downed wood in the open meadow areas where feasible for native amphibian species. Density should be approximately three logs of > 12 inches (30 cm) diameter at midpoint per acre (0.4 ha).
14. If water drafting is needed for project implementation activities, water levels at drafting locations would be maintained to support the needs of aquatic dependent species and associated habitat. Contract administrator and/or watershed specialist will periodically check to ensure water levels are sufficient and appropriate drafting procedures (i.e. proper screening device, maintaining proper flows, etc.) are being followed. If visual monitoring (such as water level on staff plate) indicates flows are not adequate, contract administrator would consult with a hydrologist and/or aquatic biologist (see FSH 2509.22; 12.21 - Exhibit 05).
15. If drafting water, use screening devices for water drafting pumps (Fire suppression activities are exempt during initial attack). Use pumps with low entry velocity to minimize removal of aquatic species, including juvenile fish, amphibian egg masses and tadpoles, from aquatic habitats (see FSH 2509.22; 12.21 - Exhibit 05).
16. Mussels are not known to occur in the project area but if they are identified, they will be removed prior to any water diversion from channels where feasible. Feasibility will be determined in the field by Forest Service aquatic biologist and will take into consideration mussel population within and outside of the project area.
17. Salvage/recovery of fish will be conducted within anticipated construction dewatering or diversion zones operations by electro-shocking or other suitable means as developed through consultation with the Nevada Division of Wildlife and LTBMU fisheries staff. Fish will be moved approximately 500 -700 feet upstream or downstream of project activities. Block nets will be installed to ensure fish do not move back into the project area during project activities. Nets will be cleaned one to two times daily to ensure the nets are functioning.
18. When equipment or vehicles are used at sites known or thought to be contaminated with Aquatic Invasive Species (AIS), measures will be employed following formal decontamination procedure. The Contractor shall be solely responsible for ensuring that all equipment, boats, and other aquatic equipment meet the Lake Tahoe Aquatic Invasive Species (AIS) Watercraft Inspection Program. Further information is found at www.tahoeboatinspection.com

Terrestrial Wildlife

19. Retain snags, preferably larger than 15 inches diameter at breast height (dbh), for wildlife unless the snag would be hazardous to operations and/or human safety. Minimize tree removal; retain some mid- and large diameter live trees that are currently in decline, have substantial wood defect, or that have desirable characteristics (teakettle branches, large diameter broken top, large cavities in the bole) to serve as future replacement snags and to provide nesting structure.

20. Existing logs (coarse woody debris) greater than 20 inches dbh would be retained where they exist, or moved and replaces following project activities. Where snags are felled for safety and/or operations, keep as coarse woody debris; preference would be given to the largest logs available in a variety of decay stages for wildlife habitat.

21. During the nesting season, conduct nest surveys of trees or other vegetation to be removed immediately prior to project activities (e.g., two weeks before any habitat disturbance) to identify nests of sensitive species . Based upon the survey results, the Responsible Official may implement a Limited Operating Period (LOP), adapt construction timelines or facility locations as determined necessary to provide adequate protection.

22. At this time the project area is not located inside or within 0.25 mile of a Protected Activity Center (PAC). If northern goshawk and/or California spotted owl are detected within the project area and determined to be nesting, a PAC will be delineated in accordance with the Sierra Nevada Forest Plan Amendment Record of Decision (SNFPA ROD). If a PAC is delineated within 0.25 mile of a project area prior to construction, an LOP would be implemented which would limit construction activities and vegetation treatments during the breeding season (March 1 through August 31 for California spotted owl; and February 15 through September 15 for northern goshawk). The LOP may be waived if surveys confirm nesting is not occurring or if the activity is of such scale and duration that impacts to breeding California spotted owls or northern goshawks will not occur.

23. Inform implementation crew members of sensitive resources known to occur in the project area, their locations, and resource protection measures prior to implementation.

24. Any sightings of threatened, endangered, candidate, proposed, or sensitive species would be reported to the project biologist and construction would be stopped immediately if the species is found within any disturbance footprint. If construction is stopped, the project biologist will be consulted within 24 hours. Based upon this consultation, the Responsible Official may adapt construction timelines or facility locations as determined necessary to provide adequate protection.

25. No LOPs currently apply to this project. If special status wildlife species are detected in the project vicinity, the Responsible Official may implement an LOP.

Hydrology/Soils

26. Implement temporary and permanent Best Management Practices (BMP) to meet water quality objectives and maintain and improve the quality of surface water on the forest. Insure that temporary erosion control measures will be in place prior to commencing any soil disturbing activities. Methods and techniques for applying the BMPs incorporated into the associated project plan and implementation documents. Erosion control measures may include but will not be limited to: silt fences, straw wattles, coir logs, water filled berms, mulching, gravel/sand bags, construction limit fencing, and revegetation.

27. The US Forest Service has recently developed technical guidance to provide uniform direction for BMP implementation on all USFS lands to protect water quality (FS-990a, 2012). The following National BMPs will be considered during project planning and analysis to develop site-specific BMP prescriptions/practices to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resource: AqEco-2 Operations in Aquatic Ecosystems; Road-5 Temporary Roads;

Road-7 Stream Crossings; Road-9 Parking and Staging Areas; Road-10 Equipment Refueling and Servicing; WatUses-6 Dam Removal.

28. Soil disturbing activities will not occur from October 15 to May 1 of each year unless a waiver is applied for and approved from TRPA. Assure that permanent or temporary erosion control measures are in place for the winter season.

29. Temporary roads may be constructed for use during this project and will be designed with the least amount of cut and fill and the fewest stream or water channel crossings. Any temporary roads will be obliterated when the one-time need is fulfilled.

Cultural Resources

30. All known cultural resource sites within the Project Area will either be avoided, protected in place, or mitigation will be developed. Known sites near access or staging areas will be fenced off and the Contractor and/or LTBMU construction crew staff will be notified to prevent disturbance during construction activities.

31. If unrecorded/new cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features) are discovered during project implementation, then work shall be halted immediately within 50 feet of the discovery and the LTBMU shall be notified, and a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards and Guidelines ([Code of Federal Regulations, 36 CFR Part 61]) in archaeology and/or history shall be retained to determine the significance of the discovery.

Recreation

32. Postings and public notices would be issued in advance of construction and posted at public access points and trails as well as on the LTBMU website.

33. During project implementation, construction fencing would be placed at public access points in order to deter users from continued use of the construction area during implementation.

DECISION TO BE MADE:

The LTBMU Forest Supervisor would decide:

1. Whether or not to implement the project activities as described in the Proposed Action or develop an alternative to the Proposed Action.
2. Whether or not a Finding of No Significant Impact (FONSI) can be supported by the environmental analysis contained in this Environmental Assessment (EA).

IMPLEMENTATION DATE:

Implementation of this project is proposed for Summer 2015.

HOW TO COMMENT AND TIMEFRAME:

Comments would be most helpful if received by **July 19, 2013**. Provide comments by mail, fax, email, or in-person to the responsible official, Nancy J. Gibson, Forest Supervisor, c/o Incline Lake Dam Project at the contact information below. Acceptable formats for electronic

submissions include email message, plain text (.txt), rich text format (.rtf), Word (.doc or .docx) or portable document file (.pdf). Submit hand-delivered comments during business hours Office Business Hours from 8:00 a.m. to 4:30 p.m. Monday through Friday, excluding holidays.

This project will follow the new objection procedures as directed by 36 CFR 218. The objection process provides an opportunity for members of the public who have participated in opportunities for public participation provided throughout the planning process to have any unresolved concerns receive an independent review by the Forest Service prior to a final decision being made by the responsible official. Only those who provided substantive formal comments during opportunities for public comment are eligible to file an objection.

CONTACT PERSON:

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Attachments:
A – Project Area Context Map
B – Project Analysis Area Map
C – Incline Lake Former Condition Map
D – Existing Condition Map
E – Desired Condition Map
F – Proposed Action Rending Watercolor