

Decision Notice and Finding of No Significant Impact Blackwood Creek Phase III Restoration Project

USDA Forest Service
Lake Tahoe Basin Management Unit
Placer County, California

Background

The Blackwood Creek Watershed delivers the largest volume of fine sediment, per square mile, of any of Lake Tahoe's tributary watersheds. These conditions are the result of historic land use activities such as canalization, in-channel gravel mining, road building, and logging. The cumulative effects from these activities, combined with a series of floods in the 1960's, initiated channel and floodplain instability along the lower 3.5 miles of Blackwood Creek's main stem. Upland streams and hill slopes are recovering and are continuing on that trajectory; however, the main channel of Blackwood Creek continues to be unstable with excessive bank erosion. The result has been chronic stream bank erosion, a lower floodplain water table, sparsely vegetated unstable floodplains, and a shift from a cottonwood-willow to a conifer dominated floodplain.

We have completed two of three phases recommended in the Blackwood Creek Restoration Plan (Swanson, 2003). Activities in two earlier phases involved restoration of manmade impediments. We replaced a dilapidated fish ladder located above the Barker Pass road crossing with a naturalized step pool channel in 2003 (Phase I), and replaced the low water crossing and undersized culvert at the Barker Pass Road Crossing with a bridge and naturalized step pool channel in 2006 (Phase II).

This final phase (Phase III) would address excessive bank erosion and channel incision as well as diminished nutrient uptake capacity along Blackwood Creek's main-stem (Figure 1).

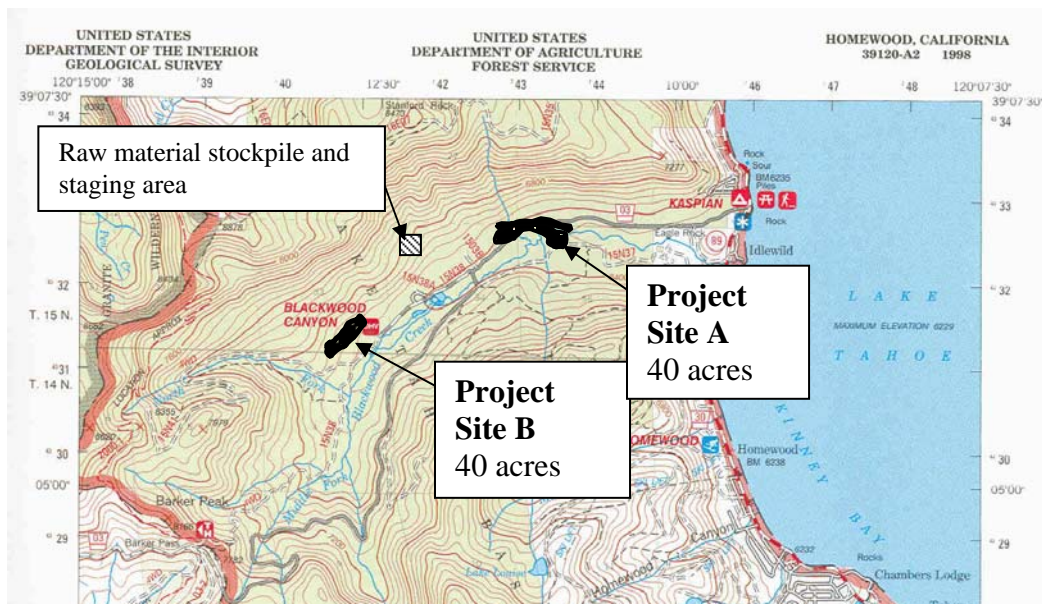


FIGURE 1 - Vicinity map, Phase III

The approach involves installation of physical structures made of boulders and logs, re-contouring of existing floodplain surfaces and channel, plug and fill of existing gully channel, and new channel construction. Riparian vegetation transplants and placement of native riparian stock (collected on site) would occur where needed.

The objective of these improvements is to increase channel sinuosity, bank stability, and riparian vegetative cover as established in the Blackwood TMDL by the Lahonton Regional Water Quality Control Board. The result will be a channel that is more resistant to excessive bank erosion and better connected to the adjacent floodplain, resulting in increased spreading of peak flows, and filtering of fine sediments and nutrients within the floodplain. The proposed action will also restore the riparian tree and shrub structure within the floodplain and channel banks, consisting of cottonwood stands with a willow and grass understory. Increased vegetation along with channel morphology improvements will provide higher quality habitat for aquatic and riparian terrestrial wildlife.

Decision

Based on the Environmental Assessment (EA) and the Finding of No Significant Impact (FONSI) contained as part of this decision document, it is my decision to implement Alternative 1 as follows:

Site A Channel (0.75 mile):

- A1. Skimming and reshaping in-channel bars to deflect flow away from vulnerable channel banks and terraces, greatly reducing the threat of wide scale bank erosion during floods, while promoting sediment storage and retention on lowered floodplain surfaces.
- A2. Strengthening the heads of the flow deflection points with a combination of imported river boulders and logs, such that they are able to withstand the forces generated by a 25 to 50-year flood.
- A3. Plant and irrigate native cottonwood, willow, and alder stock in an encapsulated soil layer on the lee side of the deflector points, as a means of reestablishing riparian vegetation to restore floodplain roughness, stability, and sediment storage – sorting characteristics.
- A4. Reshape portions of the existing channel to increase sinuosity, add roughness / stability elements, which promote in-channel sediment storage along with pool and riffle formation and frequency.
- A5. Construction of floodplain features (examples: seasonally wet depressions or large wood roughness structures) that enhance suitable habitat for key wildlife and plant species such as cottonwood, willow, alder, and herbaceous vegetation. Features would also be effective at trapping fine sediments on the floodplain.

Site A Terrace (15 acres):

- A6. Harvest of conifers in adjacent aspen stands for aspen enhancement; use the logs to provide additional flood and channel roughness to improve stream and floodplain function at Site A. We estimate that approximately 300 logs, 10-20" in diameter, could be harvested in and around these aspen stands. A qualified vegetation specialist and wildlife biologist would direct the harvest so that we can maintain desirable forest structure and increase aspen stand health and vigor, adjacent to Site A.

Site B Channel (0.5 miles):

- B1. Use a combination of coarse river substrate generated at Site A, imported river boulders, and logs, to plug off the existing dozer-built, gully channel
- B2. Use a combination of local river substrate from site A and the fill source area, boulders, and logs to fill the incised portion of the historic channel and re-grade the adjacent floodplain surfaces. Plant these surfaces with native cottonwood and willow stock. Irrigate as needed.
- B3. Reshape the historic main stem channel on the northern side of the fan; sculpt this channel as needed so and restore it as the main flow path during annual spring snowmelt floods as well as summer base flow
- B4. Construct approximately 650 feet of new channel to connect the historic channel to the boulder step pool channel (e.g. old fish ladder site)
- B5. Enhance existing floodplain depressions to increase floodplain roughness, stability, and promote sediment storage and sorting on the floodplain.

Site B Terrace (15 acres):

- B6. Harvest of conifers in adjacent aspen stands for aspen enhancement; use the logs to provide additional flood and channel roughness to improve stream and floodplain function at Site A. We estimate that 500 logs, 10-20" in diameter, could be harvested in and around these aspen stands. A qualified vegetation specialist and wildlife biologist would direct the harvest so that we can maintain desirable forest structure and increase aspen stand health and vigor, adjacent to Site B.

As part of my decision we will also implement the design features and required monitoring elements as described in the EA and included as attachment 1 to this document. We will also submit permit applications to the Tahoe Regional Planning Agency (TRPA) (Declaration of a Qualified Exempt Activity), Lahontan Regional Water Quality Control Board (Lahontan) (401 Water Quality Certification and NPDES Permit), and the Army Corp of Engineers (33 CFR 325).

My decision is based on and supported by the analysis presented in the EA and the supporting documents contained in the Project Record¹. The EA fulfills the requirements of the National Environmental Policy Act (NEPA) at the site specific level. This project is consistent with the Lake Tahoe Basin Management Unit (LTBMU) Land and Resource Management Plan (LRMP) including applicable amendments.

¹ Project Record is on file at the Lake Tahoe Basin Management Unit Supervisor's Office.

Other Alternatives Considered

In addition to the selected alternative, I considered one other alternative in detail (Alternative 2, No Action, EA pages 20; 21-37, in which no treatments would be implemented). The no action alternative would result in continued excessive cut bank erosion during floods, transporting large volumes of fine sediment and nutrients to Lake Tahoe, such as occurred during the winter floods of 2005 when 10 to 15 feet of channel bank was eroded along the project reach, releasing an estimated 1500 tons of fine sediment to Lake Tahoe (EA pg. 3). Additionally the aquatic and terrestrial riparian habitat would remain in its current degraded condition for decades (EA- pg. 2). I believe the continued degradation to Blackwood creek and Lake Tahoe from implementing no action is unacceptable.

I selected the preferred alternative because the proposed treatments are expected to result in restored channel and floodplain attributes as described previously, meeting the goals of the LRWQCB and the Forest Service as established in the Blackwood TMDL, Lake Tahoe TMDL (under development), and LTBMU Forest Plan (as amended) (EA- pg.4). There is no reliable methodology for predicting exact reductions in sediment and nutrient loading as a result of these actions, however recent hydraulic modeling analysis indicates that the proposed project design will result in an approximately 80% reduction in cutbank erosion for project Site A during a 20-year storm event. Bank erosion is a major source of fine sediment identified in previous studies of the Blackwood watershed (EA pg. 38).

Public Involvement

The LTBMU conducted pre-NEPA consultation with TRPA, Lahontan, and the League to Save Lake Tahoe. We conducted additional analysis based on recommendations received, such as groundwater measurements, floodplain soil evaluations, and SEZ access evaluations. These analyses assisted in the development of final design for the proposed action (NFMA Final Report).

The LTBMU listed the proposed action on the Internet web page's Schedule of Proposed Actions (SOPA) beginning on July 1, 2007 and every quarter since. On January 24 2008, the LTBMU issued a Press Release soliciting comments for the Proposed Action (Section C – Project Record); a copy was available for viewing on the LTBMU Internet Web page. On that same date, the LTBMU mailed copies of the proposed action and a scoping letter (Section C – Project Record) to 31 interested agencies representatives and interested publics requesting comments and issues for consideration in the project EA. On January 28 2008, three local newspapers and two web-blogs posted articles briefly describing the project and provided instructions for providing comments on the proposed action. Four comments were received, three of which expressed support for the project, and one which raised a concern not relevant to the proposed action (regarding snowmobile use in the Blackwood watershed). A scoping summary report, with comments and Forest Service response, was prepared and included as an attachment (Appendix B) (Section E – Project Record) to the EA. No changes were made to the proposed action or analysis based on these public comments.

The LTBMU posted a legal notice in the Tahoe Daily Tribune (May 29, 2008) announcing the start of the 30-day public comment period for the EA, issued a press release (May 30, 2008), and

posted the EA on the LTBMU Internet Web Page (Section F- Project Record). Six state and Federal agencies, along with two NGOs (The League to Save Lake Tahoe and the Lake Tahoe Chapter of the Sierra Club) were notified by mail of the opportunity to comment on the EA..

The LTBMU received comments on the EA from the Tahoe Regional Planning Agency, the Lahontan Regional Water Quality Control Board (LRWQCB), and the League to Save Lake Tahoe (Section G- project Record). All three letters expressed support for the project. The letters received from the LRWQCB and the League expressed concerns regarding lack of detail related to project design, BMP specifications and monitoring design. No changes were made to the EA as these details will be provided in the final project design along with other documentation contained in the Stormwater Pollution Prevention Plan (SWPPP) as part of the NPDES Permit process, which requires more specificity than that required for the environmental analysis process. The response to comments document is included as attachment 2 to this document.

Finding of No Significant Impact

After considering the environmental effects described in the EA, I have determined that these actions will not have a significant effect on the quality of the human environment considering the context and intensity of impacts (40 CFR 1508.27). Thus, an environmental impact statement will not be prepared. I base my finding on the following:

1. **Beneficial and adverse impacts.** The proposed action would not result in significant adverse impacts (EA – pg 21-37). The proposed action is designed to avoid or minimize potential short-term effects on soils and water quality, vegetation, wildlife and fisheries, and heritage resources during implementation of this project (EA – pg 15-20). Implementation of Alternative 1 is expected to result in net positive effects for soil and water quality (EA pg. 25), vegetation (EA pg. 28), wildlife (EA pg. 31,32), and fisheries (EA pg. 34) resources in the Blackwood watershed.
2. **The degree to which the proposed action affects public health or safety.** Implementation of Alternative 1 design features ensure there be little or no risk to public health and safety during implementation. Besides Barker Pass Road, the only designated recreation site or facility contained within the project area is an unimproved 4-wheel drive road typically used for mountain biking (FS15N37) located on the south side of the creek. Construction fencing and a forest closure order will be established prior to project construction to keep the public out of the construction zone during project implementaton. Other design features that reduce risk to public safety include reduced speed limits for project related vehicles, warning signs, and limiting work to weekdays from 8 to 5. After internal review, I have made amendments to the EA that clarify the design features to protect public safety (described in Recreation design features in EA-pg, 21).
3. **Unique characteristics of the geographic area.** Implementation of the preferred alternative will take place in a perennial stream channel and floodplain. Scientific

analysis (EA pages 2-4) indicates that restoration is needed to restore desired stream channel and floodplain function..

4. **The degree of controversy over environmental effects.** Public involvement efforts with interested and affected individuals and agencies throughout the environmental analysis, have not revealed any controversies over the project effects with respect to the preferred alternative and its purpose and need. Concerns were raised with regard to the level of detail (disclosure) provided in the EA regarding design features for water quality protection and monitoring design. There was also concern expressed regarding the adequacy of the environmental analysis related to the CEQA checklist. We believe the analysis of effects contained in the EA does support the impact determination documented in the checklist (EA – pgs. 21-37) and this Decision. We also believe the additional specificity provided on the project design plans, and the Blackwood Monitoring Plan which will be submitted along with other documentation required for the Lahonton NPDES permit application process will provide the project implementation level specificity identified as desired during public comment.

5. **The degree to which the possible effects on the human environment is highly uncertain or involves unique or unknown risks.** We have previously completed Phase I and II of the Blackwood Restoration Project (Fish ladder replacement) and (Barker Pass Road Crossing Upgrade), both of which included substantial in channel modifications to improve geomorphic function. Our experience and success with these and other stream restoration efforts (i.e. Cookhouse Meadow, Lonely Gulch), as well as our analysis in the EA, indicates effects from the proposed action is not uncertain, and do not involve unique or unknown risk (EA pgs 21-37).

6. **The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.**

The proposed action, in combination with the previously constructed Phase I and II projects, completes the current known in-channel restoration needs for the US Forest Service in the Blackwood watershed (EA pg. 1).

7. **Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.** The proposed action in combination with Phase I and II is expected to have a cumulative positive effect on soil and water quality, vegetation, wildlife, and fisheries.(EA pg. 21-34). All of these projects were designed to improve bank stability, floodplain function, riparian vegetation, and fisheries and riparian terrestrial habitat along the mainstem of Blackwood Creek.

8. **The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural, or historical resources.** The Heritage Resource Evaluation prepared for this project determined that the project would result in, no effects, loss or destruction of significant scientific, cultural, or historical resources (EA - Appendix D).

9. **The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.** The potential effects of this decision on listed wildlife, fish, and plant species have been analyzed and documented in a Biological Assessment (BA). No effects to threatened or endangered species will occur as these species and critical habitat are not known to occur in the project area. (Section A – Project Record).
10. **Whether the action threatens a violation of Federal, State, or local law or other requirements imposed for the protection of the environment.** Implementation of the preferred alternative would not threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment. Applicable laws and regulations were considered in the EA. Forest Service sensitive wildlife species (e.g., , Bald eagle, California spotted owl and northern goshawk) occur, or may occur, in the project area as described in the Biological Evaluation (BE) contained in the project record (Section A – project record). Project design features (EA pg. 20) are intended to minimize effects to sensitive species. Although there may be impacts to individuals, implementation of Alternative 1 would not likely result towards federal listing or loss of viability for any sensitive species. (See EA – Appendix A).

Findings Required by Other Laws and Regulations

This decision to approve the proposed action identified as Alternative 1 for restoring geomorphic function, restoring fish habitat, and reducing erosion on Blackwood Creek is consistent with the intent of the Forest Plan's long-term goals and objectives for water quality (Forest Plan, p. IV-10), fisheries (Forest Plan, pp. IV-5), and riparian areas (Forest Plan, pp. IV-5). The LTBMU designed the project in conformance with Forest Plan Forest-wide management direction and incorporated appropriate Forest Plan guidance for management actions of the Blackwood Creek watershed (Forest Plan, pp. IV-57 to IV-59).

As Forest Supervisor for the Lake Tahoe Basin Management Unit, I am required to manage the Forest in accordance with applicable laws and regulations. In reviewing the EA, I have concluded that my decision is consistent with the following key laws, regulations, and requirements:

National Environmental Policy Act (NEPA) of 1969 - The effects of the Proposed Action and alternatives have been analyzed and are disclosed in the EA, which was available for public review.

National Forest Management Act of 1976 - Review of the Forest Plan indicated that Alternative 1 is consistent with its management direction, and no amendment to the Forest Plan will be required to implement Alternative 1 (Section B - project record).

Forest Service Sensitive Species: Effects to Forest Service sensitive species were considered and a biological evaluation has been completed for the

sensitive species with habitat found within the Blackwood Creek BA. A determination was made that Implementation of Alternative 1 will not likely result in a trend toward federal listing

or a loss of viability for any Forest Service Sensitive Species (EA, pg. 31; Section K - project record).

Management Indicator Species (MIS): The MIS Project Level Assessment for the Phase I projects, which is on file in the project record, addressed management indicator species by linking Forest Plan management areas with the management indicator species representative for that management area and habitat component. This decision will not result in a change to forest-wide habitat or population trends, as applicable to each MIS (EA, pg.31; Section K – Project record).

Clean Water Act as amended in 1977 - The US Army Corps of Engineers is charged with the responsibility of ensuring compliance with Section 404 of the Clean Water Act and has permit authority over the discharge of dredged and fill material into jurisdictional waters and wetlands. Section 404 permits will be required for Blackwood Phase III restoration actions (EA, pgs. 5&6). The EA reflects that we have identified and will implement appropriate measures to avoid and minimize disturbance as well as follow all permit requirements (EA, pgs. 16-21).

National Historic Preservation Act of 1966, as amended (NHPA) - An archeological survey and cultural resources clearance report was completed for this project and concludes that the project will have no effect on cultural properties and values (EA, Appendix D). The Heritage Resource Official concluded that this project falls under Stipulations III (B) (5), III (D) (3), and IV (D) of the Pacific Southwest Region Programmatic Agreement for compliance with section 106 of the NHPA (EA, Appendix D).

My decision only applies to NFS lands as analyzed within the EA. Potential direct, indirect and cumulative effects resulting from implementation of this action on lands and activities administered by other federal, state, and local jurisdictions are also disclosed within the EA (EA pgs. 23-39).

I am not anticipating further site-specific NEPA to implement this project. The project is scheduled to be implemented over the next three years.

ADMINISTRATIVE REVIEW OR APPEAL OPPORTUNITY:

This decision is subject to administrative review (appeal) pursuant to 36 CFR Part 215. Only those individuals or organizations that provided comments or otherwise expressed interest in the proposal by the close of the comment period are eligible to appeal the decision pursuant to 36 CFR part 215 regulations. The notice of appeal must meet the appeal content requirements at 36 CFR 215.14. The appeal must be filed (regular mail, fax, email, hand-delivery, or express delivery) with the Appeal Deciding Officer at:

Randy Moore, Regional Forester

USDA Forest Service

Pacific Southwest Region

1323 Club Drive

Vallejo, CA 94592

Email: appeals-pacificsouthwest-ltbmu@fs.fed.us and appeals-pacificsouthwest-regional-office@fs.fed.us

Phone: (707) 562-8737

Fax: (707) 562-9091

The office business hours for those submitting hand-delivered appeals are: 7:30 AM to 4:00 PM Monday through Friday, excluding holidays. Electronic appeals must be submitted in a format such as an email message, plain text (.txt), rich text format (.rtf), or Word (.doc) to the email address listed above. In cases where no identifiable name is attached to an electronic message, a verification of identity will be required. A scanned signature is one way to provide verification. Appeals, including attachments, must be filed within 45 days from the publication date of this notice in the Tahoe Daily Tribune, the newspaper of record. Attachments received after the 45 day appeal period will not be considered. The publication date in the Tahoe Daily Tribune is the exclusive means for calculating the time to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframe information provided by any other source.

IMPLEMENTATION DATE:

If no appeals are filed within the 45-day time period, implementation of the decision may begin on, but not before, the 5th business day following the close of the appeal-filing period. When an appeal is filed, implementation may occur on, but not before, the 15th business day following the date of appeal disposition. In the event of multiple appeals, the implementation date is controlled by the date of the last appeal disposition.

Contact

For additional information concerning this decision or the Forest Service appeal process, contact: Craig Oehrli

Lake Tahoe Basin Management Unit

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TERRI MARCERON
Forest Supervisor
Lake Tahoe Basin Management Unit

DATE

ATTACHMENT 1 – Design Features and Required Monitoring Blackwood Creek Phase III Restoration Project

Activities associated with implementation of this alternative would have localized, short-term impacts. This alternative has design features built in to correct short-term impacts and avoid long-term impacts to soils, water, vegetation, wildlife, fisheries, heritage resources, recreational resources, and air quality (EA- pg 17-22). Site conditions may vary seasonally. The BMP approach may require adjustments depending on how site conditions vary over time. A brief description of the anticipated disturbance to each of the effected resources, and the design features developed to prevent impacts to that resource is as follows:

Soils & Water

Disturbance to soils would occur during any activity that requires excavation, placement of temporary fill, tree harvesting, or where heavy machinery is driven. Disturbance to surface and subsurface water flow may occur during any activity that requires excavation, fill, or use of heavy machinery in or near wet areas. Some short term, localized disturbance to soil and water quality would occur during these activities: construction of rock-log and floodplain roughness elements, direct channel construction or channel initiation, channel plugging and floodplain grading, installation and removal of diversions, and clearing and grading for temporary access roads. A variety of best management practices (BMPs) will be employed to prevent adverse impacts to soil and water resources. Detailed specification for these BMPs, are documented in the design plans for the project (Blackwood Project Design Plans, 2008). These design plans are available at the LTBMU offices and will also be attached to the Storm Water Pollution Prevention Plan (SWPPP), required by the Lahanton Regional Water Quality Control Board to obtain the necessary permits prior to project implementation. A summary of these BMPs are presented below as design features to protect soil and water quality:

- SW1. Generally plan surface disturbance activities to begin after August 15 and no later than Oct. 15, depending on stream flow and weather conditions.
- SW2. Place stockpile locations along access roads in the SEZ within areas of coarse (cobble-gravel) alluvial sediments.
- SW3. Scarify/till and mulch forest soils near and around aspen release sites as well as the temporary access road to and from the SEZ.
- SW4. Construct rolling dips or swales and energy dissipaters along existing dirt access road between the staging area and Barker Pass Road.
- SW5. Place drain rock within swales on SEZ access roads.
- SW6. Install drain rock at entrances of all LTBMU roads to prevent spreading of soils onto adjacent areas.
- SW7. Install soil erosion controls such as metal landing mats, silt fencing, straw wattles or other suitable means to contain material on site. BMPs of this nature would be used along areas such as temporary access roads, the stockpile area on terminal end of the SEZ access road, the staging area, and along the haul road between staging area and the existing LTBMU roads.

- SW8. Plant native willow and cotton in areas where flood sediment is deposited (post construction—if necessary).
- SW9. Operate equipment in such a way as to prevent accidental spills, and ensure proper disposal of wastes and petroleum products. Specify remediation actions in the event of an accidental spill, including a hazardous spill plan, and designate refueling and maintenance activities outside of SEZs. These requirements would be explicitly identified in equipment contracts utilized for the project
- SW10. In channel construction activities and installation of water diversions would occur after stream flow falls to 4 cfs; and would cease when storms or fall base flow increases, cause flows to exceed 8 cfs.
- SW11. Utilize, cofferdam and gravity pipeline or similar measures to re-route surface flow.
- SW12. Contain storm flow and excess fugitive ground water with a geo-textile lined sediment basin at the downstream end of the project sites.
- SW13. Pump disturbed groundwater from excavations for irrigation of stream banks and floodplains with transplanted and containerized riparian plant stock.
- SW14. Jet dislodged fine sediment (using a pump) into the interstitial space between river gravel prior to release of surface flow. Jetting would take place on constructed and historic channels, and will occur on rock-log structures and re-contoured floodplain surfaces.
- SW15. Flood irrigate newly constructed channel segments and reactivated historic watercourses, utilizing temporary dams (constructed of sand bags [Site A], and local gravel [Site B]) to back up flow. These dams would cause water to pond temporarily, causing fine sediment to fall out into the freshly constructed streambed surfaces. Site A dams would be removed once flood irrigation was complete. Site B dams would utilize flood flows the following spring. to obliterate the temporary dams and the sand/gravel/cobbles would be incorporated into streambed naturally the following spring. This BMP would reduce turbidity to near background conditions.
- SW16. Initiate surface flow into a newly constructed channels or historic watercourses after attempting to reduce turbidity to background conditions.
- SW17. Siphon water from the stream, downstream of project areas, to use as water supply for construction activities for dust abatement and construction needs; place screen over the siphon to avoid impacts to fish. Siphoning would be ceased if stream flow level falls below one cubic foot per second, or falls below a level, that would affect fisheries resources, as determined by an LTBMU fisheries biologist.

Vegetation

Disturbance to vegetation would occur because of the construction of the temporary access roads, construction of rock and deflection and floodplain roughness elements, direct channel construction or channel initiation, and channel plugging and floodplain grading. Design features include:

- V1. Cropping of riparian vegetation at the ground on access paths to protect root structures and soil integrity. Cropping would be done (if possible) when plants are dormant and clipped with clean pruning equipment to insure no introduction of disease or pests into the stems. Shoots, if viable, may be used as bioengineering materials for replanting.
- V2. Stockpiling and irrigation of displaced willow and cottonwood plants.

- V3. Replanting displaced vegetation/or cuttings and/or containerized stock in and around rock-log flow deflector structures, floodplain roughness structures, reconstructed and re-graded floodplain areas, and stream banks.
- V4. Protecting riparian vegetation with temporary construction fencing; vegetation would be cropped as described above where disturbance cannot be avoided
- V5. (ASPEN RELEASE) Creating a clearing using heavy equipment, with a radius of approximately 100 feet, around each clone to allow sunlight to penetrate the area and enhance clone recovery. Voids created by removal of conifer root balls, would be filled with native alluvial spoils from stream bank reconstruction nearby.

Vegetation (Sensitive Species)

The LTBMU conducted surveys in the summer of 2004 and 2006. No sensitive species were found in the project area although habitat is present for *upswept moonwort*, *scalloped moonwort*, *slender moonwort*, *common moonwort*, *Mingan moonwort*, *western goblin*, *Bolander's candle moss*, *subalpine fireweed*, *short-leaved hulsea*, and *veined water lichen*. Design features include:

- V6. Conduct one more year of surveys prior to construction, by qualified LTBMU Botanist, to determine if any sensitive plant species have colonized channel and floodplain surfaces within the project area.
- V7. If species are present, provide appropriate protection such as avoidance, fencing and/or transplant, if feasible.

Vegetation (Noxious and Invasive weeds)

The LTBMU established three priorities with respect to noxious weeds and they are to prevent the introduction of new invaders, conduct early treatment of new infestations, and contain and control established infestations. Surveys for noxious weeds were conducted in the project area during the summer of 2002 and 2006 by LTBMU botany staff. The Noxious Weed Risk Assessment indicates that three species of noxious weeds, *Cirsium vulgare*, *Hypericum perforatum*, and *Leucanthemum vulgare*, are present along the channel at Sites A&B. One species of invasive weed, Klamathweed – *Hypericum perforatum*, was treated at Site B in 2002 by hand removal of seedheads, and LTBMU field crews would continue to monitor and hand clip and collect seed material at this site in order to control and if possible eliminate this population. Design features include:

- V8. Wash trucks and heavy equipment being brought in from outside of the Basin to work on the project, at the Tragedy Spring rock quarry, and inspect prior to leaving the site to prevent transport of weed seed.
- V9. Haul routes and material pits must be identified as being weed free.
- V10. Any new detections during implementation would be reported to the Forest Botanist and appropriate measures to control and, where possible, measures to eradicate the populations would be taken.
- V11. Conduct a weed survey at the boulder supply area on the El Dorado National Forest. If weeds are detected, the botanist would consult with the ENF resource officer to determine the appropriate weed control measures for this site.

- V12. Prior to construction, remove all roots and above ground material for any current invasive or noxious weeds encountered in the construction area. All weed plant material would be double-bagged and properly disposed.
- V13. Any weed-contaminated soil would be stockpiled away from the construction zone, riparian areas, and staging areas and monitored for two years to determine if new weed seedlings germinate. If any germination of weeds is detected, these populations would be controlled.

Wildlife

Wildlife surveys for all Region 5 designated sensitive species with suitable habitat within the Lake Tahoe Basin have been conducted in Blackwood Canyon since 1989. Refer to the Biological Evaluation/Biological Assessment for complete management requirements during project implementation (APPENDIX C). Design features include:

- WL1. All construction related traffic are to travel no faster than 15 miles per hour along Blackwood Canyon Road to decrease the probability of individual mortality of animals crossing the road, and reduce impacts of additional noise disturbance associated with project related traffic.
- WL2. To avoid project-related disturbances to breeding activity and the habitat of the species analyzed in the BE/BA, limited operating periods (LOPs) would be implemented around nests, dens, roost sites, and other areas of concentrated use of these species. Prior to project implementation, surveys for willow flycatchers, northern goshawks, and spotted owls would be conducted to attempt to determine the locations of active nest sites. If pre-project surveys determine that a nest or protected activity center (PAC) is not active, the LOP(s) may be lifted at the LTBMU wildlife biologist's discretion.
- WL3. All non-degradation standards associated with TRPA habitat disturbance buffers would be observed.
- WL4. All trash created during construction would be properly contained in wildlife-proof containers and removed at the end of each day. No trash would be left overnight on site due to the potential of attracting wildlife.
- WL5. Riparian vegetation, expected to be displaced during construction operations, would be stockpiled and transplanted either after the bird breeding season, or after any active bird nests within plants have fledged young.
- WL6. Any detection made by LTBMU staff of threatened, endangered, management indicator species, sensitive or special interest species, or location of nest or dens of these species would be reported to the Forest Wildlife Biologist or Forest Botanist. These nests, dens, or plant locations would be protected in accordance with the Forest Plan.

Fisheries

The work would cause temporary disturbance to surface and subsurface flows. In addition to the design features previously identified in the soil and water section, additional design features to protect fisheries resources include:

- F1. Conduct salvage/recovery of fish with anticipated construction dewatering or diversion zones operations by electro-shocking or other suitable means as developed through

consultation and with the California Department of Fish and Game and LTBMU fisheries staff.

- F2. Scheduling of construction activities to avoid upstream migration periods (Spring)
- F3. Screening of pump intakes to avoid impacts to fish

Heritage Resources

There is a high probability that buried archaeological resources may be present within the proposed undertaking's Area of Potential Effect (APE); particularly pertaining to the Aspen release areas. Therefore, Standard Resource Protection Measures (SRPMs) are needed to protect the archaeological values of any site(s), which may be located within the project's APE, and which may be affected by this undertaking. The proposed project may be implemented as currently planned, provided that the recommended SPRMs would be implemented. These protective measures shall consist of monitoring ground disturbing activities within the proposed project's APE by Heritage Resources specialists. In the event cultural resources are encountered during such monitoring, the procedures as outlined in the Heritage Resource Evaluation (Appendix D) shall be initiated.

Recreation

Truck and construction equipment traffic congestion generated during this project would have short-term impacts to recreational activities and traffic in Blackwood Canyon. The project areas would be closed to the public during construction activity, from approximately August 1 thru October 15. Design features include:

- R1. Postings and public notices would be issued in advance of construction and posted at the bottom of and along Barker Pass Road and the entrance to the old mill site.
- R2. Placement of construction fencing around the construction and staging area perimeters.
- R3. Personnel with warning flags may be used at times (as necessary) to protect public safety during rock and equipment haul operations on the Barker Pass Road.
- R4. Limiting the construction window would minimize potential disruptions to public use.

Air Quality

Transport, stockpiling, staging of construction materials, and construction activities may have short-term impacts on air quality. Air quality impacts would occur from release of fugitive dust. Design features include:

- AQ1. Water exposed soil with adequate frequency to keep the soil moist on access roads, areas under construction, and the staging area; avoid over watering so as not to create surface flow down construction and SEZ access roads.
- AQ2. Water all stockpiled materials at an adequate frequency during project implementation.

Fire

Construction activities could inadvertently result in an accidental start of a wildfire. The contractor will be required to sign and follow a fire plan developed by the district fire management staff.

FR1. Fire extinguishers and tools shall be required to be kept onsite and in proper working order during project activities.

FR2. Daily monitoring of fire weather and Fire Activity Level will occur during construction. If Fire Activity Levels thresholds are reached, construction will be shut down.

Required Monitoring – The following monitoring elements are considered to be required for project implementation. These include:

- 1) Design implementation inspection and reporting. To be documented in a daily diary, and presented in a final construction report shortly after project completion. This report would document any problems encountered during project implementation, and changes that occurred between final design and on the ground implementation, including a discussion on impacts to meeting project objectives, if any.
- 2) Heritage resource monitoring. Due to the close proximity of recorded heritage resources, a heritage resource specialist would monitor ground disturbing activities associated with this project
- 3) Vegetation monitoring. Prior to project implementation, one final year of pre- project surveys would be conducted to determine if any sensitive plant species have colonized channel and floodplain surfaces within the project area, since the last survey. Also, a weed survey would be conducted prior to obtaining materials from the El Dorado Forest Boulder Supply Area.
- 4) Wildlife monitoring. Prior to project implementation one final year of pre-project, surveys for willow flycatchers, northern goshawks, and spotted owls would be conducted to attempt to determine the locations of any active nest sites.
- 4) Soil and Water best management practices monitoring. As part of the Stormwater Protection Plan (SWPPP) as required by the Lahontan Regional Water Quality Control Board, SWPPP monitoring would include Regional Best Management Practices Evaluation Program (BMPEP) monitoring as described in the Regional BMPEP Monitoring Protocols. Temporary BMP Monitoring as described in the LTBMU TBMP Monitoring Plan, and short term stream flow turbidity monitoring.
- 5) Interim TMDL Target Monitoring. Pre and post project ground based and aerial photography to evaluate whether the interim targets, as established in the Blackwood Creek TMDL, for positive (increasing) trends in vegetative cover, channel sinuosity, and stream bank stability are being achieved.

ATTACHMENT 2- REPONSE TO PUBLIC COMMENTS Blackwood Phase III Restoration Project

On May 29 2008, the LTBMU posted a legal notice in the Tahoe Daily Tribune announcing the start of the 30-Day public comment period. The following groups were notified by letter of the opportunity to comment:

US EPA Region 9, Jack Landy
California Dept of Fish and Game, Jeff Drongesen
TRPA, Mike Elam
Army Corps of Engineers, Kevin Roukey
Lahontan RWQCB, George Cella & Andrea Stanley
California Tahoe Conservancy, Adam Lewandowski
League to Save Lake Tahoe, Carl Young
Lake Tahoe Chapter of the Sierra Club, Jennifer Quashnick

The period to respond to comments was from May 30 and ended June 30 2008. The LTBMU received three comment letters during that period.

Letter - John Singlaub, Executive Director, Tahoe Regional Planning Agency

On 11 June 2008, John Singlaub, Executive Director for the Tahoe Regional Planning Agency (TRPA) sent a letter to the LTBMU expressing TRPA support fro this project;

LTBMU Response: Comment noted and the LTBMU will continue to work closely with the TRPA staff on final construction plan review and application for the Qualified Exempt Activity Declaration (QE).

Letter - George Cella, Engineering Geologist, Lahontan Water Quality Control Board

Letter expressing concerns regarding EA content and Documentation needed for a Storm Water Pollution Prevention Plan (SWPPP) associated with an application for State of California construction permit.

Comments on the EA with LTMBU response

Comment 1A

EA Section 2.1.1. Water Board staff has repeatedly asked the LTBMU to provide contingency plans in their design features, to cover any potential unforeseen mishaps. Neither the final EA nor the SWPPP provide any contingency plans whatsoever.

LTBMU response: (EA-Page 15-16). The list of design features to protect against short term impacts to soil and water identifies numerous measures to protect against reasonable expected circumstances. In particular, SW-10, SW-11, SW-12, and SW-13 identify measures that are designed as contingency measures for typical summer/early fall storm discharges. As stated in the EA (page 15), final design plans include the specifications for these design features, and are included as an attachment to the SWPPP.

Comment 1B

EA Section 2.1.1.The LTBMU did not consider contingency plans during the initial Blackwood Creek Restoration project, and encountered unexpected ground water intrusion into their excavations, causing siltation in standing water downstream.

LTBMU response: The commenter is referring to the Blackwood Phase II restoration project. The LTBMU did consider contingency plans for this project, for example water diversion structures for this project were considerably over designed for reasonably expected events during implementation. However, the Forest Service contractor did cause a release of ground water and cone of depression, while excavating for bridge foundations, that stranded the gravity fed water diversion system, and the Forest Service did not foresee or have contingencies in place for this event. Based on the groundwater data collected for the Blackwood Phase III project, we do not foresee this type of problem occurring for this project, and believe that all other reasonably foreseeable events for this project have been addressed by the soil and water design features referenced in the previous comment.

During the event described above, the Forest Service quickly worked with the contractor to install additional measures which reduced outflow turbidity significantly (from 200 to 7 NTUs). The LTBMU documented this action and presented this information in an email to the Lahonton Regional Water Quality Control Board staff.

Comment 2

Section 2.1.1., Air Quality, page 21. Water Board Staff requested details regarding the use of palliatives (chemical additives used during road watering to help minimize road dust) during review of the draft EA. Neither the final EA nor the draft SWPPP mention whether or not palliatives will be used, or how they will be stored, and how they will be kept isolated from water ways.

LTBMU Response: No palliatives will be used for dust control, airborne dust will be controlled through on site watering. A water truck is part of the heavy equipment planned for the project EA-pg 14)

Comment 3

Section 2.2.1. Monitoring Plan, Appendix A, Management Direction Summary, “Monitoring,” page A-4, and Appendix E Monitoring Strategy, page E-1. Section 2.1.1 mentions the monitoring objectives for the project, references a general description of the monitoring strategy in Appendix E, and indicates that a detailed monitoring plan will be completed prior to project implementation. Neither appendix was written to provide the requested detail, relying on stated future documents to cover those requirements. Items 4 (the second item 4 on page E-1) and 5 in Appendix E rely on the SWPPP, BMPEP, and “Interim TMDL Target Monitoring.” None of which provides the required amount of detail. In addition to the level previously requested during our mutual meetings and documentation, the TMDL had numeric targets that must be met.

LTBMU Response: Comment noted. A detailed monitoring plan is not considered necessary for the NEPA/CEQA analysis to support this Decision. What is considered necessary is to document the monitoring elements that are required to support the Decision, and enough information to identify the minimum level (scope/scale) of effort required to answer the required monitoring

questions, including identification of established protocols for implementing the desired monitoring elements. The required monitoring identified in Appendix E includes ground based and aerial photography which will allow an assessment of interim TMDL targets.

A more detailed monitoring plan will be provided with the SWPPP, as part of the NPDES permit application that will provide sufficient detail in terms of implementation and effectiveness monitoring elements required for water quality construction permitting. The additional detail provided in the monitoring plan will include information to identify where and when monitoring will occur, as well as complete descriptions or references for protocols.

In addition the monitoring plan will also provide detail regarding the scope and scale of effort that will be undertaken, dependent on available funding levels, for desired monitoring elements to better describe achievement of project objectives and long term TMDL numeric targets. Desired monitoring is not considered to be required as either part of the Decision or the permit process for this project, but is part of the internal Forest effort to assess project effectiveness and meet the intent of the Blackwood TMDL. Long term project effectiveness monitoring (15 to 20 years after project implementation) is considered outside the scope of this Decision, but will continue to be addressed through the Forest Plan Monitoring Program and the TMDL process.

SWPPP and Construction Permitting

The LRWQCB also submitted comments identifying deficiencies in the draft SWPPP as well as Required Information for Construction Permitting. There were seven comments.

LTBMU response – The SWPPP is outside the scope of NEPA, and finalized only after the NEPA analysis is complete. The project team leader will continue to dialogue with Water Board Staff to ensure that the final SWPPP will have sufficient information to support permit documents.

Letter – Carl Young, Program Director for the League to Save Lake Tahoe

Appendix E (Monitoring Strategy) references the Storm Water Pollution Prevention Plan (SWPPP) and Regional Best Management Practices Evaluation Program (BMPEP) by name, but not content.

Comment 1A -“Given the scope of the project, what elements of either SWPPP or BMPEP do you anticipate incorporating in a specific monitoring plan?”

LTBMU response: The SWPPP (Stormwater Pollution Prevention Plan) does not contain “elements” that would be incorporated in a specific monitoring plan. Rather the final SWPPP will include a monitoring plan that will provide sufficient detail in terms of implementation and effectiveness monitoring necessary for NPDES permitting. As stated in Appendix E, This monitoring plan will include appropriate BMPEP protocol (specifically E13: In Channel Construction Practices) as well as temporary BMP monitoring as described in the LTBMU TBMP Monitoring Plan. These monitoring plans and protocols can be provided to you at your request.

Comment 1B – “This lack of specific information does not provide the degree of confidence necessary to demonstrate that sufficient analysis has been done. Are interested parties supposed

to take, at face value, the inclusion of a monitoring document as assurance of proper monitoring considerations.”

LTBMU response: The LTBMU’s intent in the EA was to identify the monitoring elements required to support the Decision. We believe sufficient analysis and disclosure was provided to identify the required monitoring elements, as well as sufficient information provided regarding the scope and scale of required monitoring elements. We do not believe that detailed monitoring design plans are essential to support the Decision to proceed with the project.

In addition to providing the level of detail needed for project permitting, project monitoring design plans will be developed and refined as part of the internal Forest monitoring program, and will be made available upon request. All monitoring reports related to the project will be posted on the LTMBU website.

Comment 2 – “Disclosure is lacking in Appendix F. A CEQA-NEPA checklist by itself, with inclusion of discussion as to how the level of impact determination was reached provides nothing in the way of analysis and documentation. Assuming this was an oversight please be advised that future need to include a complete CEQA / NEPA checklist that analyzes and documents impacts.”

LTBMU response – The “checklist” is not a requirement of NEPA. We believe the environmental analysis contains sufficient analysis and documentation to support the level of impact determination provided in the CEQA checklist, and the NEPA environmental effects determination.