DECISION MEMO

BEAR CREEK LOWER MEADOW AND STREAM RESTORATION PROJECT

USDA Forest Service, Tahoe National Forest, Truckee Ranger District, Placer County, California

I. BACKGROUND

The Bear Creek Lower Meadow and Stream Restoration Project originates from the Bear Creek Watershed Assessment conducted in partnership with the Truckee River Watershed Council (Balance Hydrologics Inc et al. 2018) (FIGURE 1). The assessment (included in the project record and available upon request) identified disturbed areas with impaired functions and values, detailed the root causes of these disturbances and presented a list of possible management actions and restoration opportunities. Restoration in Bear Creek Lower Meadow to address hydromodification, channel incision/widening and loss of floodplain/meadow function was one of five key management actions recommended.

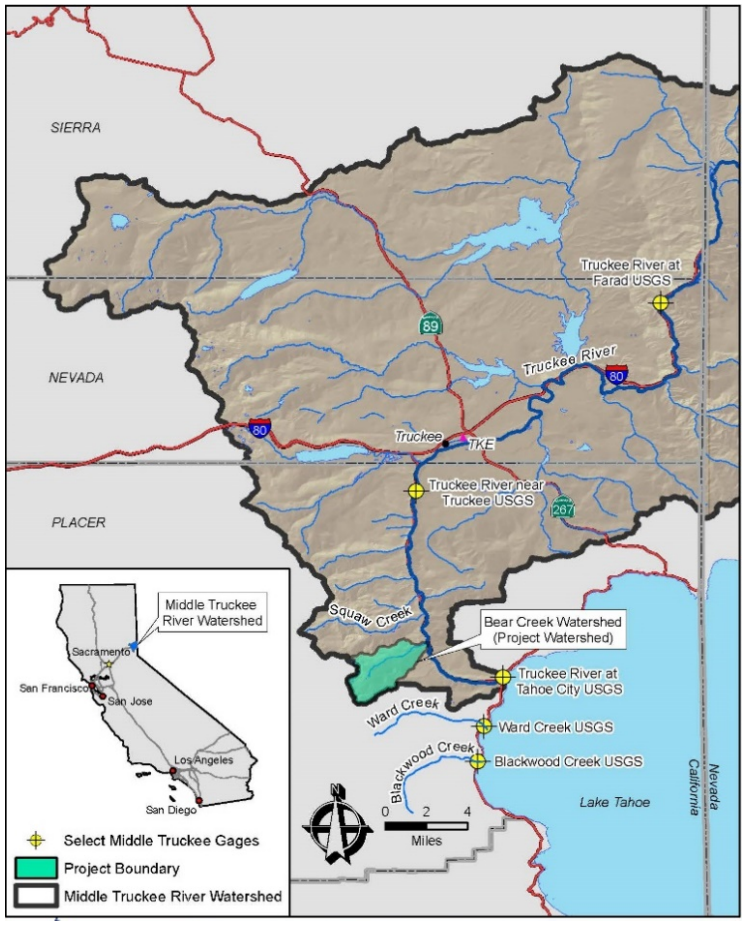

Figure 1. Bear Creek Watershed vicinity map

Meadows are characterized by the presence of water at or near the surface for most of the growing season and dominated by graminoid (grass-like) and forb plant species (Weixelman et al. 2011). Meadows have been identified among the most vulnerable and impacted habitat types

of the Sierra Nevada (Kattelmann and Embury 1996). Desired conditions for meadows on the Tahoe National Forest are described in the Sierra Nevada Forest Plan Amendment as: 1) stream energy from high flows is dissipated, reducing erosion and improving water quality; 2) streams filter sediment and capture bedload, aiding floodplain development; 3) meadow conditions enhance floodwater retention and groundwater recharge; and 4) root masses stabilize stream banks against cutting action (USDA Forest Service 2004)

Lower Bear Creek has experienced substantial hydrological alteration such that desired conditions for meadows are not met and ecosystem function is at risk. The Bear Creek Watershed Assessment showed that hydrologic conditions on Forest Service lands within the Lower Bear Creek reach have converted from a multi-thread lacustrine outwash to a single-thread channel with active incision and eroding banks. FIGURE 2 displays a time series of aerial photographs of the project area from 1939 to 2014. Based upon these photos, in 1939, it appears that Bear Creek Lower Meadow had both surface water supply and an active groundwater component. Overbank flooding from the stream channel is one key process in recharging and maintaining meadow groundwater (USDA Forest Service et al. 2015). By 1966, there is evidence of stream channel erosion and incision—likely associated with road development, as logging and grazing were relatively minimal historically and recently in the project area. After 1966, adjacent forested areas were developed for commercial and residence uses and the hydrological regime was modified by piping water from the stream. These land use changes likely reduced the amount of groundwater in the meadow system—a critical component to supporting meadow vegetation. Currently, there are various proposals for additional development in the Bear Creek watershed (e.g. Base to Base Gondola Project, Alpine Sierra Subdivision, White Wolf Subdivision) that may further alter hydrological regime of Lower Bear Creek.

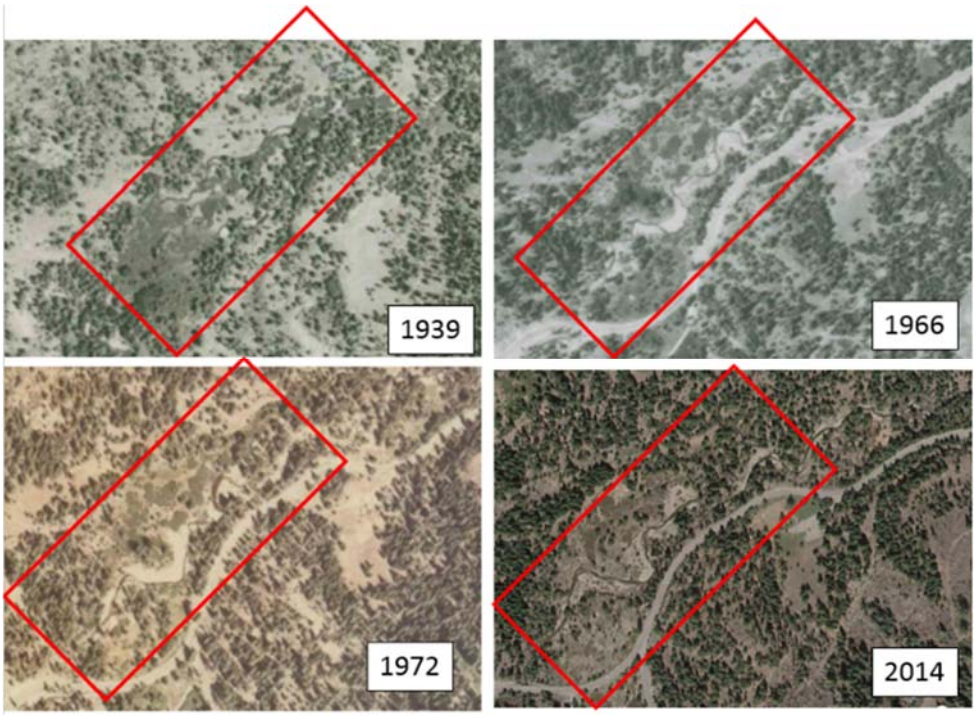

Figure 2. Aerial photographs of Bear Creek, 1939-2014, showing gradual conversion of the braided hydrologically connected system to an incised single-channel system

To address the hydrological alteration and improve ecosystem function, the goals of proposed restoration activities are:

- Restore channel and meadow functions;
- Enhance meadow hydrology and habitat;
- Reduce sources of instream sediment from bank erosion; and
- Protect existing spring-fed tributaries that provide hydrologic support to the meadow.

II. PROPOSED ACTION

The Bear Creek Lower Meadow and Stream Restoration Project is located in Placer County, California, upstream of the confluence with the Middle Truckee River near Truckee, CA and downstream of the primary bridge that spans Bear Creek along Alpine Meadows Road in T16N. R16E S33 (FIGURE 1).

Restoration activities are proposed along a 3,000-foot long reach of Bear Creek within an approximately 30 acres meadow (FIGURE 3); total area of ground disturbance totals less than five acres. The project will utilize natural features in the system to encourage the spread of flows and channel aggradation, provide bank stability, and re-establish multiple secondary flow paths across the meadow surface. Proposed activities are listed in TABLE 1; activities include augmenting instream wood and cobble in the channel and riffle structures, enhancing existing secondary channels, harvesting willows to activate the remnant channels, constructing riffles, construction of temporary water diversions, installing log structures and developing temporary access routes, staging locations, and borrow areas (FIGURE 4).

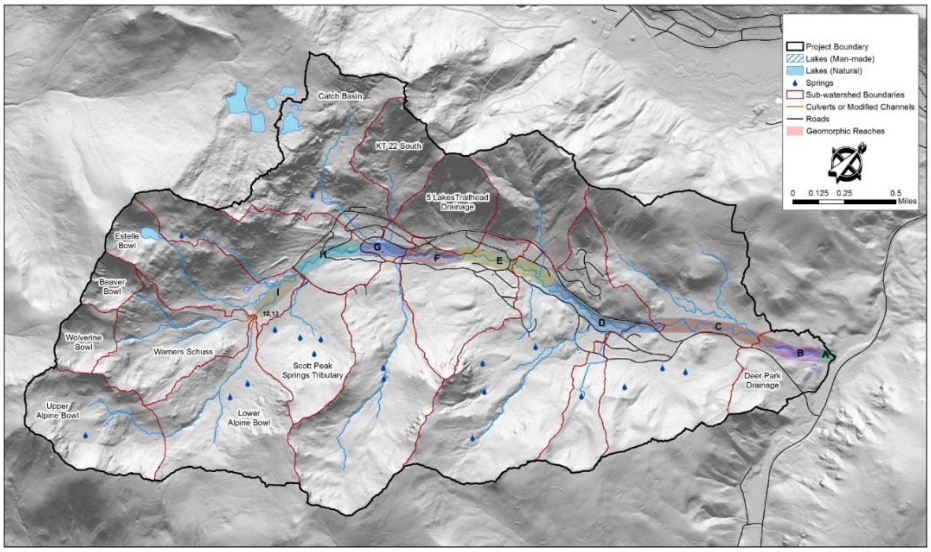

Figure 3. Bear Creek watershed and stream reaches. Proposed action is in Reach C.

Table 1. Proposed activities. Item numbers correspond with Figure 4.

Item	Action Type	Description	Associated Actions	Area of disturbance (acres)
A	Staging Area	Provides staging for items 1, 2-a, 2-b and 3.	Determine if private land owner is agreeable to use or avoid access in this location.	0.63
B	Staging Area	Provides staging for riffles 9, 10, 11 and trail improvement 12.	This site overlaps with Alpine Stables horse trail and needs to be restored to trail width. Heightened weed prevention measures/monitoring are needed here.	0.35
C	Staging Area (optional)	Part of Alpine Stables SUP operations. Existing disturbed area. Use limits based on SUP (use is approximately April through October).	Site drainage can create muddy conditions during rain events. Stop operations based on operability. Also need heightened weed prevention.	0.64
D	Staging Area	Staging area is existing parking lot and would not require new disturbance. (use is approximately November-April and April 15 through mid-September)	Logistics for use needs to be coordinated with the Boat Inspection and other users	NA
E	Access Route	Provides access to items 2-a and 3		0.08
F	Access Route	Provides access to item 2-a		0.01
G	Access Route	Provides access to item 4		0.03
H	Access Route	Provides access to items 5 and 6		0.09
I	Access Route	Provides access to item 7		0.02
J	Access Route	Provides access to item 8		0.01
K	Access Route	Provides access to Staging Area C		0.01
L	Access Route	Provides access to items 9, 10, 11 and 12.		0.12
1	Instream Logs	Create aquatic habitat and roughness diversity		0.03
2-a	Remnant channel	Engage abandoned channel, open topographic high points to re-engage flows and rewet meadow.	Maximum disturbed area is 0.21 acres with low impact access with minimal vegetation removal.	0.21
2-b	Riffle	Increase elevation of main channel, control grade. Match approximate grade of remnant channel 2-a.	Maximum potential disturbed area is 0.45 acres. Minimum disturbed area is 0.26 acres.	0.45
3	Bank logs with Riffle	Stabilize bank and deflect flow and energy away from Alpine Meadows Road.		0.09
4	Riffle	Increase elevation of main channel, control grade and slow flows.		0.06
5	Riffle	Increase elevation of main channel, control grade and slow flows.		0.05
6	Log Jam	In-channel log jam anchored to bedrock outcropping to increase		0.04

Item	Action Type	Description	Associated Actions	Area of disturbance (acres)
		aggradation and access to floodplain.		
7	Instream wood	Protect bank and encouraging minor aggradation		0.01
8	Instream wood	Add pool and aquatic diversity.		0.02
9	Riffle	Stabilize bed and increase access to floodplain.		0.04
10	Riffle	Stabilize bed and increase access to floodplain.	Construction will be coordinated with Alpine Stables permitted operations	0.09
11	Riffle	Stabilize bed and increase access to floodplain.	Construction will be coordinated with Alpine Stables permitted operations	0.13
12	Trail improvement	Increase trail stability and decrease erosion.		0.04
13	Aspen Enhancement	Hand fall and leave to abate conifer encroachment		0.6
Total Acres				3.85

Riffles (Items 2-a, 3, 4, 5, 9, 10, and 11):

In general, the riffles will support adjacent riparian habitat, increasing the frequency of access to more meadow surface while muting head cutting pressure along the spring channel interface with the main channel through a raised grade. In addition, riffles are placed to aggrade bedload transported through the system.

The proposed action will utilize cobbles and boulders, which are natural features in the system, to increase the elevation of the channel at existing riffles. Augmenting existing riffles with coarse material provides a natural feature that increases the bed and surface water elevations, while maintaining its ability to adjust or move if necessary. The riffles bring the water surface up to an elevation where meadow soils and vegetation can take advantage of capillary action to increase the vigor of vegetative root systems on the meadow surface. Furthermore, the engineered riffle is designed to decrease flow velocities upstream of the riffle and encourage sedimentation, further raising bed elevations along a reach.

Remnant Channel and Riffle (Items 2-a, and 2-b):

Riffle construction will promote engaging the remnant channel. Willow harvest in the remnant channel will be carefully coordinated to ensure activation and dispersal of water into the meadow, while the riffle design encourages use of up-gradient abandoned channels during flood flows. There will be no excavation within the pilot channel. Rather, we will selectively harvest willow clumps for re-planting, leveling topographic high points to promote use of the abandoned channel flow paths. If necessary, willow fascines will stabilize the remnant channel.

Together, the riffle and remnant channel will reduce stream energy from high flows, reconnect abandoned channels, and increase access to the meadow, which is supporting adjacent riparian habitat. It also supports the spring-fed tributaries by reducing active head cutting in adjacent meadow channels that drain the meadow system.

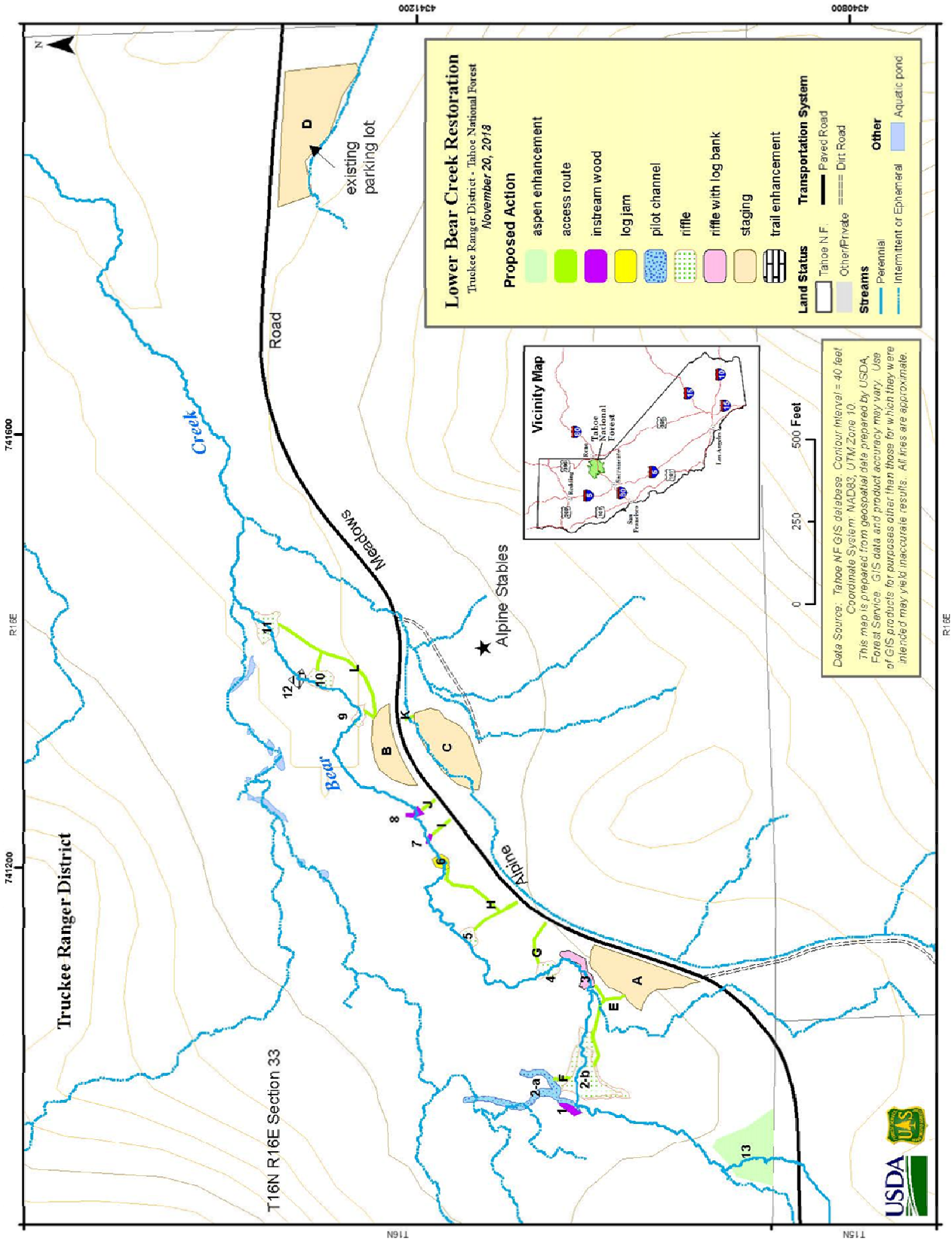

Figure 4. Type and location of proposed activities

Bank Logs (Items 1 and 3):

Installing bank logs will stabilize an eroding portion of bank, dissipate energy from flow, and provide aquatic habitat. Materials include logs with rootwads attached and boulders. They will be installed by excavating a trench so the top of the cut end of the log is 3 feet below the finished grade, placing interlinking logs with rootwads facing the channel and anchored with boulders, then backfill the lower portion of the log trench with riverbed material and upper portion with fine material excavated from the upper bank. No manufactured anchoring or cabling will be used.

Log Jam and Instream Wood (Items 6, 7 and 8):

Log jams and instream wood will enhance habitat, encourage sedimentation and provide bank protection. In general, these structures are designed to enhance aggradation, protect banks, and/or decrease incision. Materials include logs (with root wads attached when feasible) and boulders. Log jams will use from 2 to up to 5 logs per structure if needed. Logs will be obtained locally in areas adjacent to the channebed where accessible. They will be placed in narrow channel segments to mimic natural constrictions, or to take advantage of adjacent abandoned features. They will be built to allow flow to pass through the logs during low to moderate flow levels, and through and into abandoned channels and to increase overbank floodplain access during high flow levels. In the long-run, increased aggradation in the selected locations allow for channel processes to occur and the design locations are intended to aid in natural migration patterns that have increased stability compared to existing conditions.

Trail Improvement (Item 12)

The current horse trail crosses the creek at deep soils and trail is entrenched. Materials (local logs/rock/soil) will be re-situated within the entrenched embankment to support trail activities and reduce erosion. The trail surface will be designed to direct traffic across the stream over the reconstructed cobble bed in Riffle 10. Vegetation will be transplanted to improve conditions of the bank maximizing existing vegetation.

Aspen Enhancement (Item 13)

Conifers are encroaching into existing aspen stands. Selected trees would be hand felled and left to promote sunlight to aid in aspen regeneration.

Future potential adaptive management actions

Post-project monitoring will determine adaptive management actions to determine whether the actions implemented have the desired effect. Monitoring plan is under development. Assessment will be made as to the need for further action. Adaptive management actions may include small log structures at select locations to aid restorative actions. They would be placed strategically to enhance flood flow adjustments. Specifically, they would be located within side channels to encourage expanded wetting of meadow features or supporting sediment aggradation. Monitoring would inform location necessity, and appropriateness to site stability.

Project implementation stream diversion needs

Restoration design plans include a Dewatering and Diversion Plan in three phases. The purpose of the stream diversions are to redirect all the flow around the work area. In general, cofferdams and stream diversions will be installed as needed at all treatment areas.

For Phase 1 work on the upper riffle (Item 2-b), remnant channel (2-a), and bank logs (1), temporary cofferdams will be constructed up and downstream of the work area. Then a temporary diversion channel will be constructed along the right bank and around the work area, using existing side channels whenever possible to minimize disturbance. After work is completed, the diversion channels will restored to match the design plans.

For Phase 2 work on bank logs with riffle (Item 3) through riffle 10 and the trail improvement (Item 12), a single temporary gravel bag cofferdam will be constructed upstream of the work area on Riffle 2-a. Then a pipe or visqueen lined channel will be installed through the left bank upstream of the cofferdam to divert flows along the remnant channel. At the end of the remnant channel, flow will be allowed to disperse into the meadow. After work is completed all pipe or visqueen will be removed, and returned to existing conditions.

Phase 3 dewatering and diversion will be for work on the final downstream riffle (Item 11). Similar to Phase 1, this phase will utilize temporary cofferdams and a diversion channel on the left bank.

Construction is likely to last up to 10 weeks and will avoid scheduling instream work during the spawning or migration seasons of resident or migratory fish. Surveys for fish and other aquatic organisms will be conducted prior to diversion and subsequently removed from the area to be dewatered in accordance with a CDFW approved dewatering plan. Any localized water re-routing would be minimized in both time and space to the greatest extent possible. Temporary diversion construction activities would minimize downstream turbidity according to the Storm Water Pollution Protection Plan (SWPPP). A post-project erosion control plan would be developed and implemented. Where necessary a downstream siltation structures and sump stations would be placed to control sediment and provide for clear discharge out of the project area.

Equipment Use, Access and Staging Area Actions

Equipment used to implement the project actions would be chosen to minimize resource impacts. Equipment preferably could include tractors, excavators, and dump trucks.

Access route and staging areas for construction equipment were designated with the consideration given to reducing the distance equipment would need to travel, and to avoid known sensitive resources as much as possible. All access routes and staging areas take advantage of natural routes that minimize the effect of the disturbance and follow pre-existing used routes only in cases where low impact would result. Equipment would access the project area on designated access routes. Designated temporary access route covers approximately 0.4 acres.

Items such as logs and boulders may need to be stored in staging areas for a short period before construction. Materials and equipment may be temporarily staged within the existing parking area (D) if there is a need for storage before construction. Items such as logs and boulders may need to be stored there for a short period before construction. Before any use would be agreed upon with the affected parties a meeting to assess feasibility and determine coordination needs between other users must occur. Other use and protection measure agreements will be determined prior to use including determining a defined extent of use as agreed upon between affected parties. Other new staging areas would be used in a practical manner, minimizing the

period of use as is practicable and restoring areas when no longer needed. The existing 1.62 acre areas are identified to allow flexibility.

In all areas, movement onto wetter sites would follow designated routes and crossings and will follow the BMPs, SMRs and SWPPP (Storm Water Pollution Prevention Plan) that emphasize the minimization of soil and drainage disturbance, minimize the potential for erosion, and enhance restoration success.

Post-project area rehabilitation

All access routes and staging areas utilized would be blended with the natural topography and treated through restorative actions after project implementation. The designated temporary access routes and staging areas would be designed to minimize effects to resources in the area (plants, wildlife, etc.). Mitigating measures such as designed access routes that retain existing vegetation and that limit equipment movement into sensitive areas will be the primary means of reducing impact. In areas where more impact may be required to attain stated goals, steps to reduce compaction and restore complementary topography will be employed along with active revegetation. Other methods employed to minimize and mitigate effects to resources on these routes and staging areas will be detailed in permitting and erosion control plans required in association with this action.

III. DECISION

As the Truckee District Ranger, it is my decision to implement the proposed action and associated resource protection measures. My decision is based on a review of the project record that shows a thorough evaluation of relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information, scientific uncertainty, and risk. The following factors were critical in my decision:

- The proposed action directly addresses the root causes of disturbance in Bear Creek Lower Meadow (hydromodification, channel incision/widening and loss of floodplain/meadow function). The design is the product of extensive fieldwork and professional recommendations that were developed in partnership with TRWC as part of the Bear Creek Watershed Assessment. The assessment specifically recommends restoration actions in Lower Bear Creek similar to those proposed.
- Adjacent to the proposed action are primary residences, secondary residences, recreational facilities, a county road, water supply infrastructure, cultural resources and wildlife / plant habitat that will benefit from reduced sediment load and channel incision/widening that would otherwise continue to threaten these resources without the proposed restoration activities.
- Our interdisciplinary team and TRWC worked collaboratively to design the proposed action. Based on a site specific review of the proposed action, resource specialists developed resource protection measures to protect natural and cultural resources that may be impacted. These resource protection measures will be implemented as part of the project and are listed in full in APPENDIX A.

IV. APPLICABLE CATEGORICAL EXCLUSION

This action is categorically excluded from documentation in an environmental impact statement (EIS) or an environmental assessment (EA). The applicable category of actions is identified in

agency procedures Forest Service Handbook 1909.15, Chapter 30, Section 32.2, Categories of actions for which a project or case file and decision memo are required.

This proposed action falls within the following CE categories:

36 CFR 220.6(e)(1):

(1) Construction and reconstruction of trails. Examples include but are not limited to:
(i) Constructing or reconstructing a trail to a scenic overlook and
(ii) Reconstructing an existing trail to allow use by handicapped individuals.

36 CFR 220.6(e)(6):

(6) Timber stand and/or wildlife habitat improvement activities that do not include the use of herbicides or do not require more than 1 mile of low standard road construction. Examples include but are not limited to:

(i) Girdling trees to create snags;
(ii) Thinning or brush control to improve growth or to reduce fire hazard including the opening of an existing road to a dense timber stand;
(iii) Prescribed burning to control understory hardwoods in stands of southern pine; and
(iv) Prescribed burning to reduce natural fuel build-up and improve plant vigor.

36 CFR 220.6(e)(7):

(7) Modification or maintenance of stream or lake aquatic habitat improvement structures using native materials or normal practices. Examples include but are not limited to:

(i) Reconstructing a gabion with stone from a nearby source;
(ii) Adding brush to lake fish beds; and
(iii) Cleaning and resurfacing a fish ladder at a hydroelectric dam.

36 CFR 220.6(e)(18):

(18) Restoring wetlands, streams, riparian areas or other water bodies by removing, replacing, or modifying water control structures such as, but not limited to, dams, levees, dikes, ditches, culverts, pipes, drainage tiles, valves, gates, and fencing, to allow waters to flow into natural channels and floodplains and restore natural flow regimes to the extent practicable where valid existing rights or special use authorizations are not unilaterally altered or canceled. Examples include but are not limited to:

(i) Repairing an existing water control structure that is no longer functioning properly with minimal dredging, excavation, or placement of fill , and does not involve releasing hazardous substances;
(ii) Installing a newly-designed structure that replaces an existing culvert to improve aquatic organism passage and prevent resource and property damage where the road or trail maintenance level does not change;
(iii) Removing a culvert and installing a bridge to improve aquatic and/or terrestrial organism passage or prevent resource or property damage where the road or trail maintenance level does not change; and.
(iv) Removing a small earthen and rock fill dam with a low hazard potential classification that is no longer needed.

All of the proposed activities—including trail improvements and aspen enhancement—are targeted at restoring wetlands, streams, riparian areas or other water bodies. Road and development have channelized the stream and constrained the floodplain, resulting in channel entrenchment and a narrowed floodplain area. Riffle augmentation and construction, along with placement of wood in and along the stream channel, would raise the level of the streambed, allowing the stream to flow across the floodplain and into the remnant natural stream channel. Trail improvements are targeted at addressing entrenchment and erosion. Conifers have encroached into the aspen stands due to the existing lowered water table. Removal of conifers (i.s. aspen enhancement) is targeted at increasing groundwater levels by reducing completion for meadow graminoid and forb vegetation and would also improve habitat for wildlife.

V. Finding of No Extraordinary Circumstances

I find that there are no extraordinary circumstances that would warrant further analysis and documentation in an EA or EIS. I took into account resource conditions identified in agency

procedures that should be considered in determining whether extraordinary circumstances might exist:

1) Federally listed threatened or endangered species or designated critical habitat, species proposed for federal listing or proposed critical habitat, or Forest Service sensitive species

Biological Assessments/Evaluations were prepared for terrestrial and aquatic wildlife species, botanical species and critical habitat (included in project record and available upon request). Additional project-specific effects on aquatic wildlife, terrestrial wildlife and botanical species are described in the project's biological reports (included in project record and available upon request).

Aquatic Wildlife

For Sierra Nevada Yellow Legged Frog (SNYLF), the proposed action will not affect the species or its critical habitat. The determination is based upon: the lack of suitable breeding and overwintering habitat in the project action area; negative survey findings across multiple survey dates during the species active period; and the lack of known populations within documented dispersal distances for SNYLF. If an occasional individual were to disperse downstream into the action area from more suitable occupied areas in the upper portion of Bear Creek Watershed the avoidance and minimization measures would prevent adverse effects.
The proposed action will not affect any other TES aquatic species or critical habitat based on the lack of critical habitat, suitable habitat or known occurrences in the project area.

Terrestrial Wildlife

The Bear Creek Lower Meadow and Stream Restoration Project will not affect any federally-listed endangered or threatened wildlife species due to a lack of critical habitat, suitable habitat and known occurrences in the project area.

For Forest Service Sensitive (FSS) Northern goshawk, the Bear Creek Lower Meadow and Stream Restoration Project may affect individuals but is not likely to result in a trend toward Federal listing or loss of viability. There is a known northern goshawk protected activity center (Bear Creek) adjacent to the project area, but no detections of northern goshawk nests were documented in the past three years. If birds return, there may slightly negative and short term direct effects during construction (potential avoidance by individual birds during implementation). The proposed activities are not expected to affect the availability of habitat or result in ground disturbance that would preclude the continued viability of populations. The proposed restoration actions will result in moderately positive and long term indirect effects to suitable habitat by reduced erosion and sedimentation and enhancing riparian vegetation.

For all other Forest Service Sensitive wildlife species, the project will not affect any other Forest Service Sensitive wildlife species due to a lack of suitable habitat or known occurrences. While the project area is near various habitats, known territories and populations, the project area is closer to commonly used roads and trails and have been used repeatedly in the past. The proposed restoration will be beneficial to multiple species and no adverse effects to terrestrial wildlife resources are expected.

Botanical species

The Bear Creek Lower Meadow and Stream Restoration Project will not impact any federally threatened and endangered or Forest Service Sensitive botanical species known to occur or have suitable habitat on TNF. There was suitable habitat for the following TES species: upswept moonwort (*Botrychium ascendens)* scalloped moonwort (*Botrychium crenulatum),* common moonwort (*Botrychium lunaria),* Mingan's moonwort (*Botrychium minganense),* western goblin (*Botrychium montanum),*and Bolander's bruchia (*Bruchia bolanderi).* However, surveys are considered adequate and no TES occurrences are known in the project area. Due to a lack of occurrences, no direct effects to TES botanical species individuals are anticipated. Only negligible short-term negative impacts to suitable habitat for the species listed above are anticipated during construction and the resultant improvements to wet habitat (e.g. riparian areas, meadows) is anticipated to improve suitable habitat long-term.

2) Flood plains, wetlands, or municipal watersheds

Due to the nature of the proposed action, some impact will occur within the 100 year flood plain, within waters of the state (main channel ordinary high water mark) and waters of the United States.

These actions will go through the standard Federal Emergency Management Agency (FEMA) Conditional Letter of Map Revision (CLOMR); this states that the project will not threaten the special flood zone, any structures or infrastructure. After the project is implemented, the final Letter of Map Revision (LOMR) will be submitted to FEMA with data based on the final constructed parameters. These actions are completed in conjunction with permitting requirements that are emplaced to ensure no significant impact would result from this proposed action.

The resource protection measures and water quality Best Management Practices (BMP) incorporated into project design will improve conditions along the stream, recover riparian vegetation, and improve water quality and function of the associated flood plains, riparian wetlands, and municipal watershed. The Proposed Action will meet the Lahontan Water Quality Board Basin Plan objectives.

3) Congressionally designated areas, such as wilderness, wilderness study areas, or national recreation areas

This project is not within or adjacent to a wilderness. And, there are no wilderness study areas or national recreation areas on the Tahoe National Forest.

4) Inventoried roadless areas

This project is not within any inventoried roadless area.

5) Research natural areas

This project is not within a Research Natural Area.

6) American Indians and Alaska Native religious or cultural sites

The federally recognized Washoe Tribe of Nevada and California were consulted with regarding this project. Browing Cultural Resources on behalf of the Truckee River Watershed Council submitted a letter to the Washoe Tribe on June 8, 2018 seeking information regarding several

project areas they were preparing to survey for (see cultural resource report R2018051700090 Appendix F; included in the project record). The Washoe Tribe responded via letter of July 3, 2018 stating they did not have any knowledge of religious or cultural sites in the project areas including along Bear Creek. The Truckee Ranger District submitted a consultation letter to the Washoe Tribe on 4/8/2019 along with a follow up email. As the two adjacent historic properties are being completely avoided by project implementation, the Tribal Historic Preservation Officer, Mr. Darrel Cruz, did not have any issues or concerns with the project. He expressed the Washoe Tribe supports watershed restoration and protection of their cultural heritage.

7) Archaeological sites, or historic properties or areas

The cultural resource report (Cultural Resource Report R2018051700090; included in project record,) documents the results of the archaeological inventory. Two historic properties are located near the project area. Both properties are to be completely avoided by all implementation activities. All historic properties will be managed consistent with the provisions of *Amendment 1 to the Programmatic Agreement* between the Forest Service, the State Historic Preservation Officer, and the National Advisory Council on Historic Preservation. Resource protection measures are sufficient to protect adjacent cultural resources.

VI. FINDINGS REQUIRED BY OTHER LAWS

National Forest Management Act

NFMA requires that projects and activities be consistent with the governing Forest Plan (16 USC 1604(i), 36 CFR 219.10(e)). All management practices and activities of the proposed action are consistent with management direction provided in the Tahoe National Forest Land and Resource Management Plan ((USDA Forest Service 1990), as amended by the Sierra Nevada Forest Plan Amendment (SNFPA) (USDA Forest Service 2004).

The Proposed Action is designed to meet the Riparian Conservation Objectives (RCO) outlined in the SNFPA. Project design and protection measures are tailored to the site to protect and/or restore water quality, aquatic habitat, and riparian habitat.

National Historic Preservation Act

The cultural resource inventory has been completed in accordance with Stipulations 7.4(a) and 7.8(a) *of Amendment 1 to the Programmatic Agreement Among the U.S.D.A. Forest Service, Pacific Southwest Region (Region 5), California, State Historic Preservation Officer, Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Process for Compliance With Section 106 of the National Historic Preservation Act for Management of Historic Properties by the National Forests of the Pacific Southwest Region* (Regional PA 2018). Two adjacent historic properties near the project area will be avoided by all project implementation. .

Endangered Species Act

A Biological Assessment was prepared in accordance with Forest Service Manual (FSM) direction 2672.24 and meets legal requirements set forth under Section 7 of the Endangered Species Act of 1973, as amended, and implementing regulations [19 U.S.C. 1536 (c), 50 CFR 402.12 (f) and 402.14 (c)].

Migratory Bird Treaty Act

Effects to migratory birds were considered in the design of the proposed action and are described in the Migratory Landbird Conservation Report (included in the project record and available upon request). Specific effects to sensitive bird species and species associated with particular habitat types were also described in a Biological Evaluation and the Management Indicator Species report. No species-specific resource protection measures were deemed necessary.

Clean Water Act and California State Water Quality Standards

The proposed project has incorporated resource protection measures and monitoring to meet the water quality objectives for beneficial use as established by the Lahontan Regional Water Quality Control Board in the Water Quality Control Plan for the Truckee River Basin, and the Federal Clean Water Act. It would comply with the Water Quality Objectives and Prohibitions contained in the Basin Plan. Applicable permits for the project that will be obtained include the 401 Water Quality Certification (Lahontan Regional Water Quality Control Board), Streambed Alteration Agreement (California Department of Fish and Game), Applicable wetland 404 permitting requirements (U.S. Army Corps of Engineers), and CEQA Notice of Determination, Letter of Map Revision (LOMR) submitted to according to the Federal Emergence Management Agency.

Clean Air Act

Implementation of this decision will generate nominal amounts of air pollutants as a result of equipment operation and does not threaten a violation of the Clean Air Act.

VII. Scoping and Public Involvement

Engagement with community members, the Fish and Wildlife Service, the Lahontan Water Quality Control Board and interested parties around this project area are critical to the planning and implementation of this project. On August 29, 2017, Forest Service staff along with our project planning partner—the Truckee River Watershed Council—held a public meeting to present the need for restoration in Bear Creek and solicit initial input. The project was internally scoped by the Truckee Ranger District hydrologist/soil scientist, biologist, botanist, special use coordinator, recreation specialist and archeologist. On October 30, 2017, FS and TRWC held a public meeting to present initial project design and solicit design input. On November 2, 2018, FS and TRWC met with cooperators, including the Lahontan Water Quality Control Board, Alpine Springs County Water District and Fish and Wildlife Service, to discuss design and potential impacts.

The project was published in the Tahoe National Forest's quarterly Schedule of Proposed Actions (SOPA) in April 2019. On April 8, 2019, the project entered a 30-day scoping period; the project proposal and public meeting date were mailed/emailed to 32 stakeholders, adjacent land owners and cooperators as well as posted to the TNF website. Two separate parties inquired about aspects of the project during the scoping period. On April 17, 2019, FS and TRWC hosted a public meeting at the Alpine Meadows Ski Resort to present draft-final design and solicit additional stakeholder input, which was attended by 13 community members.

VIII. Administrative Review and Implementation Date

Decisions that are categorically excluded from documentation in an Environmental Assessment (EA) or Environmental Impact Statement (EIS) are not subject to an administrative review process (pre-decisional objection process) (Agriculture Act of 2014, Subtitle A, Sec. 8006). This

decision may be implemented immediately upon approval by the District Ranger; implementation is anticipated for Fall 2019.

IX. CONTACT INFORMATION

Additional information concerning this project can be found on the project webpage at: http://www.fs.usda.gov/projects/tahoe/landmanagement/projects.

For additional information concerning this decision, please contact: Sharon Falvey, District Hydrologist, Truckee Ranger District, 530-567-3558, sfalvey@usda.gov.

7/2/19

Scott Conway
District Ranger (Acting)

Date

APPENDIX A: RESOURCE PROTECTION MEASURES

Forest Service resource specialists developed resource protection measures to protect natural and cultural resources that may be impacted by the proposed action based on a site specific review of the proposed action. These resource protection measures will be implemented as part of the project. They were designed to meet the Standards and Guidelines from the 1990 Tahoe National Forest Lands and Resource Management Plan (LRMP), as amended by the 2004 Sierra Nevada Forest Plan Amendment (SNFPA) FSEIS Record of Decision (ROD) as well as state and federal regulatory requirements.

Watershed and Soil

WSS-1: Best Management Practices (BMP) are essentially equivalent to the elements of the Storm Water Pollution Protection Plan (SWPPP). These are developed to serve as mitigation measures to avoid or reduce potential impacts to less than significant levels to the satisfaction of the regulating agencies. Many of these elements are developed during permitting. All regulatory permits will be acquired and satisfy cooperative agreements between affected state, local and federal agencies. SWPPP/BMPs and permitting protection measures will be designed to incorporate the following elements to the satisfaction of the regulatory agencies:

a) Limit timing of activities
b) Stabilize construction spoils and topsoil
c) Control operations
d) Implement erosion and sediment control BMPs on temporarily delayed project elements
e) Provide practices to be used to retain sediment onsite and prevent sediment from reaching waterways
f) Control concentrated runoff from modified access road surfaces to reduce erosion
g) Control concentrated runoff from work sites
h) Achieve zero-discharge during in channel work
i) Minimize ground and vegetation disturbance
j) Remediate contaminated soil
k) Limit staging of materials and equipment to previously used disturbed areas.
l) Decommission abandoned staging areas
m) Mulch and revegetate disturbed areas
n) Rehabilitate all access routes
o) Properly dispose of wastes and petroleum products.
p) Control fueling sites
q) Prevent discharges of hazardous substances from refueling and maintenance.
r) Contain spills
s) Incorporate specific plans for all products and chemicals used on the project sites
t) Provide method and criteria to implement a Spill Notification procedure.
u) Monitor project effectiveness regularly and identify and correct any problems immediately.
v) Maintain and monitor permanent BMPs
w) Keep the erosion control plan on site.
x) Other actions if required in the permitting process.

Heritage and Cultural Resources

HCR-1: Plan review—The Forest Service cultural resource specialist will review all plans prior to staging to ensure access routes and all implementation activities fully avoid the two adjacent historic properties. Plans may be modified if concerns are identified.

HCR-2: Route flagging—the treatment area access route and short boulder area route will be flagged prior to implementation. The cultural resource specialist will approve any alterations to the routes prior to use.
HCR-3: Unrecorded resources—If any previously unrecorded cultural resources are discovered during implementation, or an inadvertent effect occurs, all project-related activities must cease immediately and the consultation process as outlined in Section 7.13 of the Region 5 Programmatic Agreement will be followed. The Forest Service cultural resource specialist must be notified and will assess and advise based on the nature of the find and steps required by the PA.
HCR-4: Changes in site design—if the design of the proposed project is altered or changed, additional review by the Truckee RD Heritage Resources staff will be required.

Botanical Resources

BR-1: Undetected Occurrences—Any additional TES or TNF Watch list botanical species or other botanical resources discovered prior to or during implementation should be flagged and avoided completely until it can be assessed for impacts by District Botanist.

Invasive Plants

IP-1: Equipment Cleaning—All equipment and vehicles (Forest Service and contracted) operating off-road must be free of invasive plant material before moving into the project area. Equipment will be considered clean when visual inspection does not reveal soil, seeds, plant material or other such debris. Cleaning shall occur at a vehicle washing station or steam-cleaning facility before the equipment and vehicles enter the project area.
IP-2: Weed-free construction materials—When possible, use onsite materials, unless contaminated with invasive species. All gravel, aggregate, fill, mulch, topsoil, erosion control materials and other construction materials are required to be weed-free.
IP-3: Revegetation—Seed and plant mixes must be approved the District Botanist. Neither invasive species nor persistent non-natives will not be used in revegetation. Seed lots will be tested for weed seed and test results will be provided to District Botanist. Seed and plant material should be collected from as close to the project area as possible, preferably from within the same watershed or at similar elevation.
IP-4: Early Detection—Any infestations discovered prior to or during project implementation should be flagged and avoided. Report new infestations to District Botanist.
IP-5: Post Project Monitoring–For projects involving ground disturbance or use of imported materials, notify the District Botanist after the project is completed, so that the project area can be monitored for invasive plants subsequent to project implementation (as funding allows).

Wildlife, Terrestrial

WLT-1: If any TES species (Federally threatened, endangered, proposed, or Forest Service sensitive species) previously unknown in the project area are detected or found nesting/roosting within 0.25 miles of project activities, appropriate mitigation measures would be implemented based on input from the District Biologist. Measures can include, but are not limited to, flagging and avoiding a plant site, implementing a species specific LOP, or designating a protected activity center.

Wildlife, Aquatic

WLA-1: Prior to ground disturbance, environmental awareness training will be given to all construction personnel by the project biologist to brief them on how to recognize Sierra Nevada Yellow Legged Frog (SNYLF) and other sensitive aquatic species with potential to occur within the project area. Construction personnel will be made aware of the measures that will avoid potential impacts to the SNYLF and what to do if a SNYLF is encountered.

WLA-2: If a federally-listed aquatic species is detected during construction, all work that has potential to adversely affect the species will be stopped and the Truckee Ranger District Biologist will contact the U.S. Fish and Wildlife Service as soon as practicable to initiate Endangered Species Act Section 7 consultation. Work that may affect the federally-listed species will not be resumed until Section 7 consultation is completed.

WLA-3: To minimize effects to SNYLF during and after project implementation the following measures will be applied:

a) Tightly woven fiber netting or similar material shall not be used for erosion control or other purposes within suitable habitat.
b) Measures will be in place to protect streamflows and avoid disturbance and impact to the hydrology of wetlands and meadows. Access routes are designed to minimize impacts and will be restored following use.
c) Design criteria will include measures to minimize the risk of activity related sediment from entering aquatic habitats.
d) Areas disturbed in suitable habitat will be re-stored to pre-existing conditions within one breeding season. This restoration project is designed to enhance existing conditions.
e) Requirements designed to satisfy the US Fish and Wildlife Service or federal, state or local agencies will be incorporated to the proposed action as deemed necessary.

APPENDIX B. REFERENCES

Balance Hydrologics Inc, H.T. Harvey & Associates, and P. Susan Lindstrom. 2018. Bear Creek Watershed Assessment. Truckee River Watershed Council. 316.
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USDA Forest Service, National Fish and Wildlife Foundation, and California Department of Water Resources. 2015. Effects on Meadow Erosion and Restoration on Groundwater Storage and Baseflow in National Forests in the Sierra Nevada, California. Region, P.S. (ed.). USDA Forest Service Pacific Southwest Region, Vallejo, CA.
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