INITIAL STUDY AND
MITIGATED NEGATIVE DECLARATION
FOR THE

TRUCKEE RIVER LEGACY TRAIL – PHASE 4

TRUCKEE AND PLACER COUNTY, CA

MAY 15, 2019

Prepared for:

Town of Truckee
Engineering Division
10183 Truckee Airport Road
Truckee, CA 96161
Tel: 530-582-7700
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Prepared by:

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(916) 580-9818

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

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Proposed Mitigated Negative Declaration for the Truckee River Legacy Trail Phase 4 Project

Lead Agency: Town of Truckee
10183 Truckee Airport Road
Truckee, CA 96161

Project Title: Truckee River Legacy Trail Phase 4

Project Location: The project is located between Truckee Regional Park (at the intersection of Brockway Road and Palisades Drive) and SR 89 South, in the Town of Truckee and portions of eastern Placer County. More specifically, the proposed action would develop Phase 4 of the the Truckee River Legacy Trail from Palisades Drive/Brockway Road to the SR89 South/West River Street intersection.

The western portion of the project is located within the Tahoe National Forest. The project traverses lands owned by the Truckee-Donner Public Utilities District, Town of Truckee, the United States of America (Forest Service), the State of California (Department of Fish and Wildlife, Department of Transportation), Truckee Springs LLC, Redbank Properties LLC, Don & Nancy Davis Trust, Jonathan Shantz Trust, Thomas Young Trust, Gregg Henrikson Trust, Truckee Senior Neighborhood, LLC, Foothill Air-Conditioning and Heating/Davies/Fitch Partners, Jar-Hilltop, Mina Mostoufi, Henry Klehn Jr. and Brenda Willson Klehn Trust, Reynolds Family Partners, and the Truckee Donner Recreation and Park District.

The proposed action generally follows the path of the Truckee River along its south bank, in an area that is largely flat to rolling, with hilly terrain located within the southern portion of the trail planning area. The trail planning area correlates fully with the Area of Potential Effect. The trail planning area includes all or part of the Town of Truckee Assessor's Parcel Numbers (APNs) 19-450-42, 19-300-75, 19-300-74, 19-300-31, 19-300-23, 19-300-21, 19-300-20, 19-300-18, 19-300-17, 19-300-16, 19-300-12, 19-300-05, 19-152-44, 19-140-17, 19-140-09, 19-140-08, 19-130-30, 19-130-29, 19-130-28, 19-130-27, 19-130-26, 18-660-43, 18-660-42, and all or part of Placer County APNs 080-020-015, 080-010-015, 080-020-008, 080-020-010, 080-020-003, and 080-320-032. The project's regional location is shown in Figure 1 and the project vicinity is shown in Figure 2 of the Initial Study.

Project Description: The Town of Truckee is continuing with its implementation of the Truckee Trails and Bikeways Master Plan, originally adopted by the Town Council in April 2002. The Truckee Trails and Bikeways Master Plan was updated in 2007, 2012, and most recently in 2015. Within the most recent version of the Plan, the Truckee River Legacy Trail, which includes the proposed action, was given the highest priority rating, based on community benefit scores and the level of public support received through public workshops and online surveys.

The Truckee River Legacy Trail is the culmination of nearly 20 years of planning and collaboration between the Town and the community. The Truckee River Legacy Trail has been a public/private partnership between federal, state, and local agencies, non-profits organizations, and volunteers. The focal point of the trail is the Truckee River. The trail is designed to provide cyclists and pedestrians with views of the river without encroaching on the fragile wetlands and riparian areas along its banks. The proposed trail is an essential transportation facility. It provides a missing segment in a regional alternative transportation network which when complete will eventually connect to Squaw Valley, Tahoe City and Kings Beach in addition to providing the missing link of the Truckee River Legacy Trail across the Town of Truckee.

The proposed action would develop Phase 4 of the Truckee River Legacy Trail from Palisades Drive/Brockway Road to the SR89/West River Street intersection. When completed, the proposed action would feature approximately 1.9 miles of Class 1 (paved) bikeway and recreation trail between the Truckee Regional Park (Brockway Road and Palisades Drive intersection) and SR 89 South (by West River Street). This section of the Truckee River Legacy Trail will cross both public and private property and would include an approximate 400-foot bridge across the Truckee River. Drainage crossings will have open bottom culverts or similar structures to avoid impacts to the seasonal drainage channels. The preferred trail alignment is shown in Conceptual Plan Figure 5a of the Initial Study. The preferred alignment of the bridge includes the western alignment located on the USFS parcel.

The proposed action would connect to Truckee River Legacy Trail Phases 1-3B in the east, the Mousehole Project to the northwest (providing a connection to planned Phase 5 of the Truckee River Legacy Trail in the west), and nearby soft surface trails.

The project will provide a trailhead parking area adjacent to SR89 (with a restroom) and the option for a small kiosk or concession structure, and amenities such as benches/trash cans/interpretive signage along the trail alignment. The signage will include wayfinding/signage that informs trail users, and encourages them to stay on the designated trail (i.e. minimize dispersed recreation). Soft surface trails are also planned that will connect to an existing trail network located off of Silver Fir Drive and Aspenwood Drive and to an existing dirt road in Truckee Springs. The paved and soft surface trails will be limited to non-motorized use, with an exception for regular maintenance, utility, and emergency vehicle access. The project will also include a boardwalk across the spring above ice pond. The proposed action may require relocation of power poles that are located on the site.

The enhanced pedestrian access to the Truckee River on the Town of Truckee property will include paved parking spaces, improved walking surfaces, erosion prevention, trail amenities, and/or similar improvements. It is also anticipated that there will be a launch/take out established along the river in an area that has a short existing trail or dirt road to the river. The existing vehicle access to the river will be decommissioned and sensitive disturbed areas will be restored.

The proposed bridge crossing(s) will include aesthetic features such as decorative railings or pilasters on the approaches. The addition of a "bulb-out" on the bridge to provide for an overlook of the Truckee River will also be considered. The trail alignment also accommodates a future roundabout at the entrance to the Hilltop Development at Brockway Road for future development in that area. The trail will then be re-aligned through the roundabout once it is constructed. Impacts for both of these scenarios have been included within this document.

The proposed action would be engineered to ensure that the existing Tahoe-Truckee Sanitation Agency (TTSA) pipelines that run near/adjacent to the proposed trail are not impacted by additional loading due to the trail and that maintenance access by TTSA can continue. Details for this loading would be developed during final project design. These TTSA pipelines would also be protected from damage by construction activities. A connection to a TSD service line will also be required for the proposed restroom, although the existing service lateral may be able to be re-used.

Utilities are located along the trail alignment and utility providers utilize the existing dirt roads within the project area to maintain the utility infrastructure. The proposed trail uses some of the dirt access roads to reduce disturbing additional area. To continue to provide utility access across the property and across the bridge, short dirt access roads are provided from the existing dirt roads on and off the proposed trail to maintain access as needed on and off the proposed trail.

Construction of the project would disturb between approximately 11.4 and 12.6 acres, depending on the exact alignment and bridge that is constructed. This would include between approximately 5.0 and 5.9 acres of permanent impact and between 6.6 and 6.7 acres of temporary disturbance.

The trail segments were designed to minimize impacts to riparian and wetlands to the extent feasible by either avoiding through design or constructing a boardwalk or bridge that spans these areas. The boardwalk would still result in some loss of natural light on the underside of the boardwalk and vegetated areas would become largely barren. Also, the bridge will include piles to support the bridge, which will have very little impact to the wetland. As such the boardwalk/bridge areas are classified as permanent impact within this study.

The trail segments portion of the project, which excludes the bridge and boardwalk portions of the project, would include approximately 0.0073 acres of impacts to wetlands (0.0035 permanent impact and 0.0038 temporary impact). These impacts are irrespective of the bridge that is selected. The bridge and boardwalk portion of the project would include impacts that range from approximately 0.0425 to 0.0680 acres of impacts to wetlands, depending on the bridge that is selected. The total wetland impact (inclusive of the impact to the trail segments, bridges, and boardwalk) is anticipated to range between approximately 0.0498 to 0.0753 acres.

The proposed alignment includes trail segments that traverse through the 100-year floodplain. There were several alternative trail alignments that were considered, each varying to the extent that they are located within the 100-year floodplain. The preferred alignment is located within the 100-year floodplain between approximate stations 112 and 119 and most of this trail would be constructed at grade. At the base of the talus slope, culverts would be installed to allow seasonal snowmelt to pass below the trail, resulting in fill in the floodplain in the low point. Otherwise, the trail would be designed to allow the 100-year flood to pass over the trail in this area. A small amount of fill would occur within the floodplain from the bridge piers and from trail sections that would be located with the floodplain. The proposed project preferred alignment would have approximately 0.233 acres of permanent area and 0.269 acres of temporary area within the 100-year floodplain. The preferred alignment does not include utility access roads. However, the Middle Bridge and the Donner Creek Bridge alternatives do have access roads that provide dirt roads off and on the paved trail for utilities to access their infrastructure. Portions of these new access points would be located in the floodplain in order to access the existing dirt road which crosses the flood plain in many areas.

Project sponsors reviewed an alternative alignment (shown in Figure 5a) between the Middle Bridge and Donner Creek Bridge alignments, taking advantage of the island within the flood plain by utilizing existing dirt roads and disturbed areas and would result in the shortest bridge over the Truckee River (B1). This alignment is less impactful as compared to the proposed alignment as some of it follows an existing dirt road; it is relatively level; it does not cross eligible cultural resources, or wetlands; and it results in the shortest bridge over the Truckee River. This alternative alignment is contingent on a private property owner granting an easement that would bifurcate the parcel, resulting in the loss of buildable area. For purposes of the environmental analysis, the least intrusive crossing of this private parcel was evaluated. The alternative alignment is incorporated into the project environmental analysis as an option that is considered to have the same or less environmental impact.

Figure 5c provides a Potential Phasing Plan for constructing the trail in parts. This may be necessary to accommodate funding resources and opportunities, as well as property ownership challenges. The phases will most likely be constructed from the east to the west, but may also be constructed from the west to east, provided they are connected to a previous segment. Also, multiple segments could be constructed at the same time. The phasing plan provides breakpoints for the segments that can provide an independent utility for the trail, such as river access, views, or connection to an existing trail, road, or public property.

A detailed description of the project components (trailhead parking area, trail segments, river crossing alternatives, equipment access routes, and user management/education/wayfinding) is provided in the attached Initial Study.

Findings:

In accordance with the California Environmental Quality Act, the Town of Truckee has prepared an Initial Study to determine whether the Truckee River Legacy Trail Phase 4 Project may have a significant adverse effect on the environment. The Initial Study and Proposed Mitigated Negative Declaration reflect the independent judgment of Town of Truckee staff. On the basis of the Initial Study, the Town of Truckee hereby finds:

> *Although the proposed project could have a significant adverse effect on the environment, there will not be a significant adverse effect in this case because the project has incorporated specific provisions to reduce impacts to a less than significant level and/or the mitigation measures described herein have been added to the project. A Mitigated Negative Declaration has thus been prepared.*

The Initial Study, which provides the basis and reasons for this determination, is attached and/or referenced herein and is hereby made a part of this document.

_____ _____

Date

Proposed Mitigation Measures:

The following Mitigation Measures are extracted from the Initial Study. These measures are designed to avoid or minimize potentially significant impacts, and thereby reduce them to an insignificant level. A Mitigation Monitoring and Reporting Program (MMRP) is an integral part of project implementation to ensure that mitigation is properly implemented by the Town of Truckee and the implementing agencies. The MMRP will describe actions required to implement the appropriate mitigation for each CEQA category including identifying the responsible agency, program timing, and program monitoring requirements. Based on the analysis and conclusions of the Initial Study, the impacts of proposed project would be mitigated to less-than-significant levels with the implementation of the mitigation measures presented below. It is noted that these mitigation measures also serve as Resource Protection Measures for the US Forest Service NEPA document.

Mitigation Measure AES-1: *The project applicant shall incorporate the following design and construction guidelines to ensure limited impact to the natural scenic qualities of the area:*

- *Grading shall be designed to conserve natural topographic features and appearances by minimizing the amount of cut and fill and by means of landform grading to blend graded slopes and benches within the natural topography (as applicable); and retain major natural topographic features.*
- *Grading plans shall identify slopes that are to be landform graded ("Landform grading" refers to a contour grading method that creates artificial slopes and varying slope ratios in the horizontal plane designed to simulate the appearance of the surrounding natural terrain). Cut and fill slope shall be designed not to exceed a vertical height of 10 feet, unless the review authority (i.e. the Town of Truckee Engineer) approves slopes of greater height with benching, terracing, and/or use of retaining walls. Slopes created by grading shall not exceed a ratio of 2:1 (vertical:horizontal), except where the Town Engineer determines that a greater slope is appropriate, based on a geotechnical report and stabilization study.*
- *All graded areas shall be revegetated with native vegetation as soon as possible following grading and shall be of substantial density so that resultant vegetation is consistent with surrounding vegetation.*
- *The primary purpose of the restoration identified within this project is to reduce sediment, revegetate and restore temporary impact areas and areas with existing dispersed recreation impacts. These actions would stabilize and normalize the sediment transport regime in areas with existing impacts from dispersed recreation along the Truckee River banks, restore natural bank and riparian function, resulting in areas of reduced instream and bank scour and rates of sediment transport.*
- *All retaining walls, edge protection (guard rails or fencing), the bridge, and other structures, as appropriate, shall be simple in design and compatible with and complementary to the surrounding natural vegetation and landscape.*

Mitigation Measure AIR-1: *Prior to any surface disturbance activities, the project applicant shall develop and implement a Dust Control Plan in accordance with NSAQMD Rule 226. The Dust Control Plan shall be submitted for approval by the NSAQMD. The Dust Control Plan shall comply with all applicable requirements as provided in the NSAQMD Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects (2009), including identifying project phases and construction schedules. The Dust Control Plan is required to include, but is not limited to, the following NSAQMD-recommended measures for the control of fugitive dust emissions:*

- *The project applicant shall be responsible for ensuring that all adequate dust control measures are implemented in a timely manner during all phases of project development and construction.*
- *All material excavated, stockpiled, or graded shall be sufficiently watered, treated, or covered to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering should occur at least twice daily, with complete site coverage.*
- *All areas with vehicle traffic shall be watered or have dust palliative applied as necessary for regular stabilization of dust emissions.*
- *All on-site vehicle traffic shall be limited to a speed of 15 mph on unpaved roads.*
- *All land clearing, grading, earth moving, or excavation activities on a project shall be suspended as*

necessary to prevent excessive windblown dust when winds are expected to exceed 20 mph.

- *All inactive portions of the development site shall be covered, seeded, or watered until a suitable cover is established. Alternatively, the applicant may apply County-approved nontoxic soil stabilizers (according to manufacturers' specifications) to all inactive construction areas (previously graded areas which remain inactive for 96 hours) in accordance with the local grading ordinance.*
- *All material transported off-site shall be either sufficiently watered or securely covered to prevent public nuisance, and there must be a minimum of 6 inches of freeboard in the bed of the transport vehicle.*

Mitigation Measure BIO-1*: If any federal or state threatened, endangered, proposed, or Forest Service sensitive species previously unknown in the project area are detected or found within 250 feet of project activities, appropriate mitigation measures will be implemented based on input from the aquatics biologist, botanist, and/or wildlife biologist. Measures can include, but are not limited to, flagging and avoiding an area, implementing a species specific LOP, or designating a protected activity center.*

Mitigation Measure BIO-2*: The project proponent shall implement the following avoidance and minimization measures for Sierra Nevada yellow-legged frog (Rana sierra) for any work around Donner Creek (i.e. Donner Creek Bridge and/or restoration): Pre-construction surveys for the Sierra Nevada yellow-legged frog shall be conducted in all potential habitat by a qualified biologist prior to construction in the project area around Donner Creek Should the Sierra Nevada yellow-legged frog be identified, the impact will be mitigated through avoidance or relocation by a permitted biologist, as approved by the California Department of Fish and Game. To minimize effects to SNYLF during and after project implementation, tightly woven fiber netting or similar material shall not be used for erosion control or other purposes within 30 meters of Donner Creek. The Truckee River access shall not disturb additional area other than for restoration/revegetation within identified SNYLF habitat.*

Mitigation Measure BIO-3*: Pre-construction surveys for yellow warbler, tree-nesting raptors and migratory birds shall be conducted within 30 days prior to any construction that will occur between March 15 and August 31 of any given year. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction survey, the site shall be resurveyed. Preconstruction surveys shall be conducted within 250 feet of the proposed project impact area by a qualified biologist. Should active nests be identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged, unless consultation with the regulatory agency(s) has occurred.*

Mitigation Measure BIO-4*: Any snags measuring at least 20 inches diameter at breast height, and any rocky crevices (i.e. talus slopes) shall be inspected by a qualified biologist for potential bat use not more than 15 days prior to removal. Should a bat roost be discovered in a snag or crevice, the regulatory agencies shall be notified to develop appropriate mitigation measures (such as exclusionary nets). No construction shall take place after sunset or before sunrise.*

Mitigation Measure BIO-5*: If construction activities are proposed to occur during the jackrabbit breeding, gestation, or rearing season (February through August), a qualified biologist shall conduct a preconstruction survey for active white-tailed jackrabbit forms within the work area no more than 48 hours prior to construction. Should breeding or juvenile white-tailed jackrabbits be discovered, CDFW shall be notified to develop appropriate mitigation measures, which may include erecting temporary exclusionary fencing and/or the creation of a buffer zone to protect the form and individual white-tailed jackrabbits from construction activities.*

Mitigation Measure BIO-6*: If construction activities are proposed to occur during the pika breeding, gestation, or rearing season (April to July), a qualified biologist shall conduct a preconstruction survey for active pika within the work area no more than 48 hours prior to construction. Should breeding or juvenile pika be discovered, CDFW shall be notified to develop appropriate mitigation measures, which may include erecting temporary exclusionary fencing and/or the creation of a buffer zone to protect the adult and young from construction activities.*

Mitigation Measure BIO-7*: Prior to any activities that would result in removal, fill, or hydrologic interruption of the jurisdictional areas, the project proponent shall consult with the regulatory agencies (USACE, RWQCB, and CDFW) to*

secure an authorization for any fill activities associated with the alternative selected. This shall include obtaining a 404 permit, 401 certification, and 1600 Streambed Alteration Agreement, unless alternative permits are deemed necessary by the permitting agencies. The permits may require compensation for the fill, and implementation of all minimization and conservation measures recommended by the regulatory agencies.

Mitigation Measure BIO-8*: Prior to construction, the project proponent shall install orange construction barrier fencing to identify environmentally sensitive areas around all delineated and verified wetland(s). This requirement shall only apply to delineated areas that are within 100 feet of the construction zone.*

Mitigation Measure BIO-9*: Based on the potential for impacts to riparian and wetland habitat, the Town shall prepare and implement an onsite revegetation and restoration plan for the riparian and wetland habitat temporarily impacted by construction activities. Restoration and revegetation shall take place onsite if possible and will directly restore those areas temporarily impacted. The plan shall be prepared in consultation with a qualified restoration ecologist. Restoration activities shall be monitored in accordance with the restoration plan or permit requirements. The revegetation/restoration of the temporarily impacted areas shall also include an additional acreage for onsite created/restored habitat to account for the permanent loss of riparian and wetland habitat based on the trail placement (anticipated at a rate of 1.5 to 1), in compliance with Town of Truckee Development Code Section 8.46.040 (C.2.), or in lieu fees for the loss of wetland in accordance with the permitting agency. The additional acreage will be located in the vicinity of the project and adjacent to existing or restored riparian and wetland habitat.*

Mitigation Measure BIO-10*: Prior to the issuance of a grading permit, the project proponent shall incorporate the following measures into project plans and specifications:*

- *Construction supervisors and managers will be educated about noxious weed identification and the importance of controlling and preventing their spread.*
- *Any equipment that is brought on site should be washed. Cleaning shall include the undercarriage of any mobile equipment. Clean equipment inspection should be performed before the heavy equipment arrives on site and when equipment moves from heavily infested to lightly infested areas. Use C-clause for cleaning of heavy equipment as applicable.*
- *Any materials used for erosion control or revegetation should be from a native source and come from adjacent areas. It is recommended that conifer needles and chipped branches be used for mulch and native seeds be raked in from the side to revegetate and cover disturbed ground. As a last resort, weed free materials could be brought from approved gravel pits or other weed-free certified sources.*
- *Re-compaction of trail is recommended to prevent weed establishment in these disturbed areas.*
- *Known musk thistle infestations occur nearby, so this site should be periodically checked after completion.*

Mitigation Measure CLT-1*: The project construction plans shall indicate that if historic, cultural, archaeological and/or paleontological resources are encountered during site grading or other site work, all such work shall be halted immediately within 200 feet of discovery and the project applicant shall immediately notify the relevant Town of Truckee Community Development Department and/or Placer County Community Development Resources Agency (as applicable) of the discovery. In such case, the applicant will retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the Town of Truckee Community Development Department and/or Placer County Community Development Resources Agency (as applicable) for review and approval a report of the findings and method of curation or protection of the resources. The archaeologist shall consult the Native American monitors or other appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in nature. In considering any suggested mitigation proposed by the archaeologist in order to mitigate impacts to cultural resources, the Town and/or Placer County (as applicable) will determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. Further grading or site work within the area of discovery would not be allowed until the preceding work has occurred. Work may proceed on other parts of the trail planning area while mitigation for cultural resources is being carried out.*

Mitigation Measure CLT-2*: Due to the presence of historic and prehistoric resources in the vicinity of the Legacy trail, trailheads will contain signage consistent with the Archaeological Resources Protection Act (ARPA) language to notify trail users that cultural resources are not to be disturbed.*

The potential dirt trail alignment (between the Legacy Trail and the dirt road extension of South River Street) is intended to connect to the proposed trail network in the Truckee Springs project, if and when this property is developed. If the soft surface trail is constructed, the following performance standards are required:

1. Consultation is required to occur with the property owner and Washoe Tribe to determine the final soft surface trail alignment

2. If the final alignment is determined to impact the features, the following performance standards are required:

a) Install signage consistent with ARPA language to alert trail users to the historic importance of the area.

b) Fencing consistent with the Town of Truckee fencing standards for trails, such as two-rail, split rail fencing, or similar design.

c) Provide construction monitors where portions of the soft surface trail are within 200 feet of features.

Mitigation Measure CLT-3*: If human skeletal remains are uncovered during project construction, the Town will immediately halt work, contact the Nevada County and/or Placer County Coroner (as applicable) to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines.*

If the County Coroner determines that the remains are Native American, the project proponent will contact the Native American Heritage Commission (NAHC) within 24 hours, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

Mitigation Measure CLT-4*: Prior to construction, the project proponent shall install orange construction barrier fencing to identify culturally sensitive areas around all delineated and verified resource(s). This requirement shall only apply to culturally sensitive areas that are within 100 feet of the construction zone.*

Mitigation Measure GEO-1*: Install signage to warn trail users of the potential for rock slides or avalanches as they travel through the area. Signs should be placed at the following locations:*

- *Trail Head Parking Area: Install sign at the trailhead entrance.*
- *Trail segments that traverse steep slopes:*
    - *West bound trail lane located approximately 100 feet prior to entering the rock and avalanche hazard zones.*
    - *East bound trail lane approximately 100 feet prior to entering the rock and avalanche hazard zones.*

Mitigation Measure GEO-2*: The project applicant shall implement the following measures:*

- *Grading conducted within the trail planning area shall comply with the standards and requirements of the Town of Truckee and Placer County, and with these measures and other agency requirements. Grading shall incorporate best management practices for erosion and sediment control. The SWPPP prepared for the*

proposed project shall address temporary measures and facilities to control erosion and sediment during construction. Permanent Low Impact Development (LID) erosion and sediment control measures and facilities will be integrated into project design and will be part of the final construction plans, in accordance with the State Water Resources Board Storm Water Construction General Permit and subject to approval by the Town of Truckee and Placer County, as applicable.

Mitigation Measure HYD-1*: All construction activity within the 100-year floodplain zone and/or jurisdictional wetlands shall be restricted to May 1st to October 15th in order to avoid water quality impacts and disturbance to riparian habitat adjacent with the Truckee River. Restricting work to this timeframe shall limit work to the driest period of the year, thereby avoiding excessive runoff and erosion. Any construction activity outside of this time frame shall be subject to Town of Truckee and LRWQCB approval.*

Mitigation Measure HYD-2*: Proposed project construction activities shall avoid contact with the ordinary high-water mark of the Truckee River and nearby wetland habitat to the extent feasible. The ordinary high-water mark shall be defined by the "…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [Federal regulations (33 CFR 328.3(e))], equivalent to a biological vegetation mark. Any encroachment into these areas must be authorized through a regulatory permit issued by the applicable regulatory bodies (e.g. the USACE, LRWQCB, and CDFW) prior to implementation.*

Mitigation Measure HYD-3*: The proposed project applicant shall require issuance of an exemption to discharge prohibitions, as outlined in the Lahontan Basin Plan for essential transportation facilities.*

Mitigation Measure NOISE-1*: Motorized vehicles, as defined in the Town of Truckee Municipal Code, shall be prohibited from both the paved and soft surface trails except for maintenance activities, emergency vehicles, and access for utility vehicles.*

Mitigation Measure NOISE-2*: The contractor shall implement the following:*

- *Limit construction activities to between the hours of 7:00 am and 9:00 pm on any day except Sundays, and between 9:00 am and 6:00 pm on Sundays.*
- *Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.*
- *Utilize "quiet" air compressors and other stationary noise generating equipment where appropriate technology exists.*

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INITIAL STUDY

PROJECT TITLE

Truckee River Legacy Trail Phase 4

LEAD AGENCY NAME AND ADDRESS

Town of Truckee
c/o Truckee Community Development Department
10183 Truckee Airport Road
Truckee, CA 96161

CONTACT PERSON AND PHONE NUMBER

Jessica Thompson, Senior Engineer
Town of Truckee
Engineering Division
10183 Truckee Airport Road
Truckee, CA 96161

PROJECT SPONSOR'S NAME AND ADDRESS

Town of Truckee
Engineering Division
10183 Truckee Airport Road
Truckee, CA 96161
(530) 582-7700

PURPOSE OF THE INITIAL STUDY

An Initial Study (IS) is a preliminary analysis which is prepared to determine the relative environmental impacts associated with a proposed project. It is designed as a measuring mechanism to determine if a project will have a significant adverse effect on the environment, thereby triggering the need to prepare an Environmental Impact Report (EIR). It also functions as an evidentiary document containing information which supports conclusions that the project will not have a significant environmental impact or that the impacts can be mitigated to a "Less Than Significant" or "No Impact" level. If there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment, the lead agency shall prepare a Negative Declaration (ND). If the IS identifies potentially significant effects, but: (1) revisions in the project plans or proposals would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and (2) there is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment, then a Mitigated Negative Declaration (MND) shall be prepared.

This Initial Study has been prepared consistent with CEQA Guidelines Section 15063, to determine if the proposed Trucker River Legacy Trail Phase 4 Project (project) may have a significant effect upon the environment. Based upon the findings and mitigation measures contained within this report, a Mitigated Negative Declaration (MND) will be prepared.

PROJECT OVERVIEW

Background

The proposed project (Truckee Legacy Trail Phase 4) travels through the Town of Truckee (Town) and unincorporated Placer County; the Town is acting as the Lead Agency. In April 2002, the Town adopted the original *Truckee Trails and Bikeways Master Plan*. The *Truckee Trails and Bikeways Master Plan* was updated most recently in 2015. *The Town of Truckee 2025 General Plan* provides a framework for the *Truckee Trails and Bikeways Master Plan*. Many land use, circulation, and conservation and open space policies contained within the Town of Truckee General Plan encourage the implementation of a non-motorized network that creates recreation and transportation opportunities in Truckee and neighboring jurisdictions. Furthermore, the *Placer County General Plan* identifies several goals and policies that encourage the development of properly-designed parks and recreational facilities and the development of a system of interconnected hiking, riding, and bicycling trails and paths, and the protection of the County's important historical, archaeological, paleontological, and cultural sites.

The *Truckee Trails and Bikeways Master Plan* set out a vision for the Truckee River Legacy Trail project, which upon completion, would link together Donner Lake area in the west of town to the Glenshire neighborhood in the east. Since 2002, phases 1, 2, 3A, and 3B of the Truckee River Legacy Trail have been completed, which connect to the proposed Phase 4 at the eastern end. In addition, a short section of trail along State Route (SR) 89 (the Mousehole Project) is completed. The Mousehole Project provides a tunnel under the Union Pacific Railroad tracks and a 10-foot wide multi-use path along State Route (SR) 89 between Deerfield Drive to West River Street providing a northwest connection to the proposed Phase 4 trail segment. The proposed Legacy Trail Phase 4 provides the missing link between these existing segments of trail. In addition, Phase 4 provides a connection to the future Placer County trail connection to Squaw Valley. For these reasons, the trail is an essential alternative transportation network between Truckee and Tahoe City.

When completed, the proposed project would feature approximately 1.9 miles of Class 1 (paved) bikeway and recreation trail between the Truckee River Regional Park (Brockway Road and Palisades Drive intersection) and West River Street near the intersection of SR 89 South. This section of the Legacy Trail would cross both public and private property and would also include an approximately 400-foot bridge across the Truckee River.

The proposed project would include improved public access to the Truckee River, a paved trailhead parking area adjacent to West River Street with a restroom facility, possibly a small concession stand, and amenities such as benches/trash cans/interpretive signage along the trail alignment. The proposed project may require relocation of power poles that are located on the site. Access roads are provided off of the main trail for utility providers to access their existing infrastructure via the existing dirt roads on site. The parking lot, restrooms, river access area, and paved multi-use trail would be consistent the American Disabilities Act (ADA) Standards for Accessible Design (i.e. it would be ADA accessible).

Soft surface (i.e. unpaved) trails are also planned that would connect to an existing trail network located off of Silver Fir Circle, Thelin Court, and Aspenwood Road adjacent to USFS property and the Sawtooth trail system/06 Road, and to an existing dirt road on the Truckee Springs property. The paved and soft surface trails would be limited to non-motorized use, with an exception for regular maintenance and utility vehicle access.

Phase 4 of the Truckee River Legacy Trail is expected to be the second to last portion of the Truckee River Legacy Trail to be constructed. When complete, the entirety of the Truckee River Legacy Trail system would include an approximate 10-foot wide paved trail from Donner Memorial State Park in the west to the Glenshire neighborhood in the east. Most of the route would parallel the Truckee River.

PROJECT LOCATION AND SETTING

PROJECT LOCATION

The project is located between Truckee Regional Park (at the intersection of Brockway Road and Palisades Drive) and SR 89 South (at the intersection of West River Street), in the Town of Truckee and portions of eastern Placer County.

The western portion of the project is located within the Tahoe National Forest. The project traverses lands owned by the Truckee-Donner Public Utilities District, Town of Truckee, the United States of America (Forest Service), the State of California (Department of Fish and Wildlife, Department of Transportation), Truckee Springs LLC, Redbank Properties LLC, Don & Nancy Davis Trust, Jonathan Shantz Trust, Thomas Young Trust, Gregg Henrikson Trust, Truckee Senior Neighborhood, LLC, Foothill Air-Conditioning and Heating/Davies/Fitch Partners, Jar-Hilltop, Mina Mostoufi, Henry Klehn Jr. and Brenda Willson Klehn Trust, Reynolds Family Partners, and the Truckee Donner Recreation and Park District.

The proposed project (also called the proposed action within this Initial Study) generally follows the path of the Truckee River along its south bank, in an area that is largely flat to rolling, with hilly terrain located within the southern portion of the trail planning area. The trail planning area correlates fully with the Area of Potential Effect (APE). The trail planning area includes all or part of the Town of Truckee Assessor's Parcel Numbers (APNs) 19-450-42, 19-300-75, 19-300-74, 19-300-31, 19-300-23, 19-300-21, 19-300-20, 19-300-18, 19-300-17, 19-300-16, 19-300-12, 19-300-05, 19-152-44, 19-140-17, 19-140-09, 19-140-08, 19-130-30, 19-130-29, 19-130-28, 19-130-27, 19-130-26, 18-660-43, 18-660-42, and all or part of Placer County APNs 080-020-015, 080-010-015, 080-020-008, 080-020-010, 080-020-003, and 080-320-032. The project's regional location is shown in Figure 1 and the project vicinity is shown in Figure 2.

Hilltop Master Plan

The Hilltop Master Plan Area is a planning sub-area of the Downtown Specific Plan generally located south of Brockway Road and west of Palisades Drive. A portion of the Hilltop Master Plan Area overlaps the northeastern portion of the proposed project. The Hilltop Master Plan and Design Guidelines were adopted in August 2008 and provide policies and implementation measures to guide future development of the area. The Hilltop Master Plan and Design Guidelines

includes multiple guidelines for bicyclists and pedestrians, including for the portion of the proposed project within the boundaries of the Hilltop Master Plan, located to the south and west of Brockway Road.

Truckee Springs Master Plan

The Truckee Springs property consists of approximately 25.5 acres of undeveloped land at the western end of South River Street, adjacent to the Truckee River. A portion of the proposed project trail would traverse a portion of this area, towards the eastern end of the trail. The Truckee Springs project may develop this property for residential and/or hotel/lodging units.

EXISTING SITE USES

The proposed project trail planning area is currently on mostly vacant/undeveloped land, abutting the Truckee River. Depending on the proposed project's final alignment, portions of the trail planning area may run through or adjacent to residential land uses. There are existing soft surface trails that currently run through much of the proposed trail planning area. There are also existing access roads located sporadically throughout the trail planning area.

SURROUNDING LAND USES

The surrounding land uses consist primarily of vacant and/or undeveloped land. Additionally, the Truckee River runs along the north of the trail planning area, except where the trail would cross the Truckee River (via a bridge) at the western portion of the trail. Commercial developments and residential developments are currently located near the eastern edge of the trail planning area, and commercial developments exist, near the central and western portions of the trail planning area on the north side of the Truckee River. A small residential community also exists just north of the western edge of the trail planning area, east of SR 89 and north of West River Street. The eastern end of the trail would intersect with Truckee River Regional Park.

Furthermore, as described above, the trail planning area crosses the Hilltop Master Plan area. The Hilltop Master Plan area contains the following proposed uses: Downtown Commercial, Downtown Mixed Use, Downtown High Density Residential, Downtown Medium Density Residential, and Downtown Mixed Use. As described previously, the trail planning area crosses some of these land uses in the northeastern part of the trail planning area (near Brockway Road).

GENERAL PLAN AND ZONING DESIGNATIONS

The trail planning area includes the following Town of Truckee General Plan land uses: Residential Cluster Average Density 1 du/5 acres (RC-5) (in the south-central portion of the trail planning area) and a small amount of Commercial (in the far eastern portion of the trail planning area). The trail planning area also includes the following Plan Area: Downtown Specific Plan Area (along the alignment of the Truckee River). Additionally, the southwestern portion of the trail planning area is in unincorporated Placer County, and is currently primarily designated Agriculture/Timberland (AG/T) by the Placer County General Plan Land Use Map, with a small

portion of this area designated Low Density Residential 1 – 5 du/acre (LDR). See Figure 3 for the respective General Plan land uses for the trail planning area.

The trail planning area traverses the following Town of Truckee zoning districts: Downtown Master Plan (DMP), Downtown Mixed Use (DMU), Public Facilities (PF), Downtown Single Family Residential (DRS), Rural Residential (RR), and General Commercial (CG). The trail planning area also traverses the following Placer County zoning districts (in the portion of the trail planning area located outside of the Town of Truckee): Forestry (FOR), Water Influence (W), and Residential Single Family (RS). See Figure 4 for the respective zoning for the trail planning area.

PROJECT DESCRIPTION

The Town of Truckee is continuing with its implementation of the Truckee *Trails and Bikeways Master Plan*, originally adopted by the Town Council in April 2002. The *Truckee Trails and Bikeways Master Plan* was updated in 2007, 2012, and most recently in 2015. Within the most recent version of the Plan, the Truckee River Legacy Trail, which includes the proposed action, was given the highest priority rating, based on community benefit scores and the level of public support received through public workshops and online surveys.

The Truckee River Legacy Trail is the culmination of nearly 20 years of planning and collaboration between the Town and the community. The Truckee River Legacy Trail has been a public/private partnership between federal, state, and local agencies, non-profits organizations, and volunteers. The focal point of the trail is the Truckee River. The trail is designed to provide cyclists and pedestrians an essential alternative transportation facility with views of the river without encroaching on the fragile riparian areas along its banks.

The proposed action would develop Phase 4 of the Truckee River Legacy Trail from Palisades Drive/Brockway Road to the SR89/West River Street intersection. When completed, the proposed action would feature approximately 1.9 miles of Class 1 (paved) bikeway and multi-use trail between the Truckee River Regional Park (Brockway Road and Palisades Drive intersection) and SR 89 South (by West River Street). This section of the Truckee River Legacy Trail would cross both public and private property and would include an approximately 400-foot bridge across the Truckee River. Drainage crossings would have open bottom culverts or similar structures to avoid impacts to the seasonal drainage channels. The preferred trail alignment (West Bridge) is shown in Figure 5a (Proposed Trail Alignment).[1] The preferred alignment of the bridge is the western alignment located on the USFS parcel. Separately, Figure 5b provides a conceptual map of the entire APE, inclusive of the temporary impact areas that are associated with both the proposed alignment and the alternative alignments (including a truck turn-around area and a potential construction vehicle/equipment staging area), as well as the location of a (non-project) future soft surface trail connection.

The proposed action would connect to Truckee River Legacy Trail Phases 1-3B in the east, the Mousehole Project to the northwest (providing a connection to planned Phase 5 of the Truckee

[1] The preferred alignment is also called the "Proposed Project - West Bridge" within this Initial Study.

River Legacy Trail in the west), and nearby soft surface trails. Placer County is also planning a trail connection from the proposed bridge to Squaw Valley.

Figure 5c provides a Potential Phasing Plan for constructing the trail in shorter segments. This may be necessary to accommodate funding resources and opportunities, as well as property ownership challenges. If the project is phased, segments will likely be constructed from the east to the west, but may also be constructed from the west to east, provided they are connected to a previous segment. Multiple segments may be constructed at the same time. The phasing plan provides breakpoints for the segments that can provide an independent utility for the trail, such as river access, views, or connection to an existing trail, road, or public property.

The proposed project would provide a trailhead parking area adjacent to West River Street (with a restroom) and the option for a small kiosk or concession structure, and amenities such as benches/trash cans/interpretive signage along the trail alignment. The signage will include wayfinding/signage that informs trail users, and encourages them to stay on the designated trail (i.e. minimize dispersed recreation). Soft surface trails are also planned that will connect to an existing trail network located off of Silver Fir Drive and Aspenwood Drive and to an existing dirt road in Truckee Springs. The paved and soft surface trails will be limited to non-motorized use, with an exception for regular maintenance, utility, and emergency vehicle access. The project will also include a boardwalk across the spring above ice pond. The proposed action may require relocation of power poles that are located on the site.

The enhanced pedestrian access to the Truckee River on the Town of Truckee property will include paved parking spaces, improved walking surfaces, erosion prevention, trail amenities, and/or similar improvements. It is also anticipated that there will be a launch/take out established along the river in an area that has a short existing trail to the river. The existing vehicle access to the river will be decommissioned and sensitive disturbed areas will be restored.

The proposed bridge crossing(s) will include aesthetic features such as decorative railings or pilasters on the approaches. The addition of a "bulb-out" on the bridge to provide for an overlook of the Truckee River will also be considered. The trail alignment also accommodates a future roundabout at the entrance to the Hilltop Development at Brockway Road for future development in that area. The trail will then be re-aligned through the roundabout once it is constructed. Impacts for both of these scenarios have been included within this document.

The proposed action would be engineered to ensure that the existing Tahoe-Truckee Sanitation Agency (TTSA) pipelines that run near/adjacent to the proposed trail are not impacted by additional loading due to the trail and that maintenance access by TTSA can continue. Details for this loading would be developed during final project design. These TTSA pipelines would also be protected from damage by construction activities. A connection to a TSD service line will also be required for the proposed restroom.

Utilities are located along the trail alignment and utility providers utilize the existing dirt roads within the project area to maintain the utility infrastructure. To continue to provide utility access

across the property and across the bridge, short dirt access roads are provided from the existing dirt roads to the proposed trail to maintain access on either side of the proposed bridge.

ALTERNATIVES

The preferred trail alignment (West Bridge) is shown in Figure 5a (Proposed Trail Alignment). The two primary alternatives to the preferred trail alignment are the Middle Bridge Alternative and Donner Creek Bridge Alternative. The proposed project would construct only one of the bridge crossings over the Truckee River (e.g. the West Bridge under the proposed project, or either the Middle Bridge under the Middle Bridge Alternative or the Donner Bridge under the Donner Creek Bridge Alternative)[2], and one continuous trail alignment. It is noted that if the Donner Creek Bridge alternative was selected, there would be a need for a second bridge crossing across Donner Creek. This second bridge across Donner Creek would not be needed under the proposed project, or Middle Bridge alternative. Separately, there is an additional alignment alternative near the eastern edge of the proposed project (shown as "K3" in Figure 5a).

Project sponsors reviewed an alternative alignment (shown in Figure 5a) between the Middle Bridge and Donner Creek Bridge alignments, taking advantage of existing disturbance on the island within the floodplain that would result in the shortest bridge (bridge span B1) over the Truckee River. This alignment is less impactful as compared to the proposed alignment, as some of this alignment would follow an existing dirt road; it is relatively level; it does not cross eligible cultural resources, or wetlands; and it results in the shortest bridge over the Truckee River. This alternative alignment is contingent on a private property owner granting an easement that would bifurcate the parcel, resulting in the loss of buildable area. For purposes of the environmental analysis, the least intrusive crossing of this private parcel was evaluated. This alternative alignment is incorporated into the project environmental analysis as an option that is considered to have the same or less environmental impact.

AREA OF DISTURBANCE

Construction of the proposed project would impact between approximately 11.4 and 12.6 acres, depending on the exact alignment and bridge that is constructed. This would include between approximately 5.0 and 5.9 acres of permanent impact and between 6.6 and 6.7 acres of temporary disturbance, as provided in Tables PD-1 through PD-3 (note: depending on the alternative selected). These areas of disturbance were estimated based on the alignments developed by the proposed project engineer (Mark Thomas, 2019). The following tables (Tables PD-1 through PD-3) provide a breakdown of the estimated area of disturbance associated with the proposed project (i.e. "Proposed Project – West Bridge) and the two alternatives (i.e. the Middle Bridge Alternative and the Donner Creek Bridge Alternative), respectively.

[2] See "Figure 5a: Proposed Trail Alignment" for further detail.

TABLE PD-1: PROPOSED PROJECT - WEST BRIDGE - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
Bridge Facilities			
Bridge Span (A1)	0.12	0.00	0.12
Subtotal	***0.12***	***0.00***	***0.12***
At-grade Facilities			
At-Grade Segments	1.92	4.74	6.66
Parking Area	1.68	0.19	1.87
Soft Surface Trail	0.98	0.00	0.98
Boardwalk (K2)	0.03	0.00	0.03
Trail Modification (near Brockway) (i.e. Future Roundabout)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97
Subtotal	***4.87***	***6.43***	***11.30***
Total	***4.99***	***6.55***	***11.42***

Notes: 1) The area of disturbance calculations for bridges include the bridge area, however, it is noted that the bridge does not have an on-ground physical impact (permanent or temporary) given that they are spans with limited piles. Abutment areas are included in the at-grade area calculations.

2) Segments D1, D2, and D3 are shown within the Parking Area.

3) Numbers may not add up due to rounding.

Source: Mark Thomas, 2019.

TABLE PD-2: MIDDLE BRIDGE ALTERNATIVE - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
Bridge Facilities			
Bridge Span (B1)	0.07	0.00	0.07
Bridge Span (C1)	0.66	0.00	0.66
Subtotal	*0.73*	*0.00*	*0.73*
At-grade Facilities			
At-Grade Segments	1.93	4.47	6.40
Parking Area	1.68	0.19	1.87
Soft Surface Trail	0.98	0.00	0.98
Boardwalk (K2)	0.03	0.00	0.03
New TTSA access	0.05	0.10	0.16
Trail Modification (near Brockway) (i.e. Future Roundabout Connection)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97
Bridge access road	0.06	0.02	0.07
Subtotal	*4.99*	*6.28*	*11.27*
Subtotal (Bridge and at-grade Facilities)	***5.72***	***6.28***	***12.00***
At-grade Options			
At-grade Segment (A3)	0.19	0.37	0.56
At-grade Segment (E1)	0.18	0.42	0.60
Total w/ A3	***5.91***	***6.65***	***12.56***
Total w/ E1	***5.90***	***6.70***	***12.60***

Notes: 1) The area of disturbance calculations for bridges include the bridge area, however, it is noted that the bridge does not have an on-ground physical impact (permanent or temporary) given that they are spans with limited

piles. Abutment areas are included in the at-grade area calculations.

2) Segments D1, D2, and D3 are shown within the Parking Area.

3) Numbers may not add up due to rounding.

Source: Mark Thomas, 2019.

TABLE PD-3: DONNER CREEK BRIDGE ALTERNATIVE - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
Bridge Facilities			
Bridge Spans (F1) – Donner Creek and Truckee River	0.15	0.00	0.15
Bridge Span (G1)	0.05	0.00	0.05
Subtotal	*0.20*	*0.00*	*1.20*
At-grade Facilities			
At-Grade Segments	1.93	4.45	6.38
Parking Area	1.68	0.19	1.87
Soft Surface Trail	0.98	0.00	0.98
Boardwalk (K2)	0.03	0.00	0.03
New TTSA access	0.05	0.10	0.16
Trail Modification (near Brockway) (i.e. Future Roundabout Connection)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97
Bridge access road	0.07	0.01	0.08
Subtotal	*5.00*	*6.25*	*11.26*
Subtotal (Bridge and at-grade Facilities)	***5.20***	***6.25***	***11.46***
At-grade Options			
At-grade Segment (A3)	0.19	0.37	0.56
At-grade Segment (E1)	0.18	0.42	0.60
Total w/ A3	***5.39***	***6.62***	***12.02***
Total w/ E1	***5.38***	***6.67***	***12.06***

Notes: 1) The area of disturbance calculations for bridges include the bridge area, however, it is noted that the bridge does not have an on-ground physical impact (permanent or temporary) given that they are spans with limited piles. Abutment areas are included in the at-grade area calculations.

2) Segments D1, D2, and D3 are shown within the Parking Area.

3) Numbers may not add up due to rounding.

Source: Mark Thomas, 2019.

The plan and profiles for the trail segments, which includes the cut and fill, are included in Appendix A. The area disturbed includes the footprint of the trail facility and an approximately 10-foot buffer on each side of the full length of the segment to account for construction equipment disturbance. In some more sensitive areas (i.e. near wetlands), the buffer is reduced to avoid and minimize impacts to the wetlands. Table PD-4 provides a breakdown of the estimated area of disturbance for the facilities that would be on-ground.

TABLE PD-4: ON-GROUND FACILITIES - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
At-Grade Segments			
A1	0.02	0.33	0.35
A2	0.03	0.06	0.08
A3	0.19	0.37	0.56
A4	0.01	0.01	0.02
A5	0.35	0.74	1.10
C1 (only for Middle Bridge Alternative)	0.03	0.06	0.09
E1 (option)	0.18	0.42	0.60
F1 (for Donner Creek or Middle Bridge Alternatives)	0.02	0.03	0.05
G1 (only for Donner Creek Bridge)	0.01	0.01	0.02
H1	0.18	0.36	0.55
K1	0.38	0.99	1.37
I1	0.23	0.47	0.70
K2 (includes sidewalks)	0.36	0.98	1.34
K3 (option)	0.09	0.16	0.25
K4	0.18	0.43	0.61
L1 (only for Middle Bridge/Donner Creek Bridge Alternative)	0.08	0.15	0.23
Bridge			
A1 (Proposed Project – West Bridge)	0.12	0.00	0.59
B1 (Middle Bridge Alternative)	0.07	0. 00	0.35
C1 (Middle Bridge Alternative)	0.66	00	3.30
F1 (Donner Creek Bridge Alternative – Donner Creek Bridge)	0.03	00	0.14
F1 (Donner Creek Bridge Alternative – Truckee River Bridge)	0.12	00	0.62
G1 (Donner Creek Bridge Alternative)	0.05	00	0.26
Boardwalks			
K2	0.03	0.00	0.03
Parking Area			
Trailhead Parking Lot	1.66	0.00	1.66
D1 (w/in parking lot)	0.00	0.03	0.03
D2 (w/in parking lot)	0.00	0.08	0.08
D3 (w/in parking lot)	0.02	0.09	0.11
Subtotal	***1.68***	***0.19***	***1.87***
Other Segments			
Soft Surface Trails (all)	0.98	0.00	0.98
West Bridge access road (under proposed project)	0.03	0.00	0.03
Middle Bridge access road (under Middle Bridge Alt.)	0.06	0.02	0.07
Donner Creek Bridge access road (Under Donner Creek Bridge Alt.)	0.07	0.01	0.08
New TTSA access road (only under Alternatives)	0.05	0.10	0.16
Trail Modification (near Brockway Rd.) (i.e. Future Roundabout Connection)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97

Notes: 1) Segments D1, D2, and D3 are shown within the Parking Area.

2) Numbers may not add up due to rounding. Source: Mark Thomas, 2019.

The trail segments were designed to minimize impacts to riparian and wetlands to the extent feasible by either avoiding through design or constructing a boardwalk or bridge that spans these areas. The boardwalk/bridge would still result in some loss of natural light on the underside of the boardwalk and vegetated areas would become largely barren. Also, the bridge would include piles to support the bridge, which will have very little impact to the wetland. As such, portions of the boardwalk/bridge areas are classified as permanent impact within this study. However, in general, although the boardwalk is expected to generate a permanent impact (due to shading and being close to grade), the bridge span would not have a permanent impact to riparian and wetlands.

The trail segments portion of the project, which excludes the bridge and boardwalk portions of the project, would include approximately 0.0073 acres of impacts to wetlands (0.0035 permanent impact and 0.0038 temporary impact). These impacts are irrespective of the bridge that is selected. The bridge and boardwalk portion of the project would include impacts that range from approximately 0.0425 to 0.0680 acres of impacts to wetlands, depending on the bridge that is selected. Therefore, the total wetland impact (inclusive of the impact to the trail segments, bridges, and boardwalk) is anticipated to range between approximately 0.0498 to 0.0753 acres. Table PD-5, below, provides a summary of area of impact to wetlands (by wetland type) from the trail segments (excluding bridges and boardwalk segments). Table PD-6 provides a summary of the area of impact to wetlands (by wetland type) from the bridge and boardwalk segments.

TABLE PD-5: SUMMARY OF TRAIL SEGMENT WETLAND IMPACTS (PERMANENT AND TEMPORARY) (ACRES)

Facility	*Wetland Type*			*Grand Total*
	Riparian	*Waters of the U.S.*	*Seasonal Drainage*	
Trail Segments(A5/H1)				
A5				
Paved Trail Permanent	0	0	0.0020	0.0020
Paved Trail Temporary	0	0	0.0009	0.0009
H1				
Paved Trail Permanent	0	0	0.0015	0.0015
Paved Trail Temporary	0	0	0.0029	0.0029
Permanent Subtotal	***0***	***0.0000***	***0.0035***	***0.0035***
Temporary Subtotal	***0***	***0.0000***	***0.0038***	***0.0038***
Grand Total	**0**	**0.0000**	**0.0073**	**0.0073**

Source: Mark Thomas GIS, 2019.

TABLE PD-6: SUMMARY OF BRIDGE & BOARDWALK WETLAND IMPACTS (PERMANENT AND TEMPORARY) (ACRES)

Facility	*Wetland Type*			*Grand Total*
	Riparian	*Waters of the U.S.*	*Seasonal Drainage*	
Proposed Project – West Bridge Alternative				
West Bridge (A1)				
A1 Bridge Permanent	0.0139	0.0181	0	0.0320
Paved Trail Permanent	0	0	0.0002	0.0002
Paved Trail Temporary	0	0	0.0005	0.0005
Access Road - A1	0	0	0.0002	0.0002
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0139***	***0.0276***	***0.0005***	***0.0420***
Temporary Subtotal	***0.0000***	***0.0000***	***0.0005***	***0.0005***
Grand Total	**0.0139**	**0.0276**	**0.001**	**0.0425**
Middle Bridge Alternative				
Middle Bridge (B1/C1)				
B1 Bridge Permanent	0.0221	0.0238	0	0.0459
C1 Bridge Permanent	0	0	0.0006	0.0006
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0221***	***0.0333***	***0.0006***	***0.0560***
Grand Total	**0.0221**	**0.0333**	**0.0006**	**0.0560**
Donner Bridge Alternative				
Donner Bridge (F1/G1)				
F1 Bridge (Donner Creek) Permanent	0.0028	0.0099	0	0.0127
F1 Bridge (Truckee River) Permanent	0.0086	0.0369	0	0.0455
G1 Bridge Permanent	0	0	0.0003	0.0003
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0114***	***0.0563***	***0.0003***	***0.0680***
Grand Total	**0.0114**	**0.0563**	**0.0003**	**0.0680**

Source: Mark Thomas GIS, 2019.

TRUCKEE RIVER LEGACY TRAIL SEGMENTS

Trail Head Parking Area: The proposed action (i.e. the proposed project, also called the "Proposed Project – West Bridge" within this Initial Study) includes a trailhead parking area, a portion of which is located on USFS land (with the remaining portion owned by Placer County). The parking area is bounded by SR 89, West River Street, Donner Creek and the upper bank of the Truckee River. The final parking area design is estimated to range between 90-100 parking spaces. A permanent rest room facility is also planned for this area. There is also the option for a small kiosk for a vendor or trail information, along with a signage and wayfinding plan to ensure users stay on the trail system and out of sensitive environmental areas. Portions of the parking area may be used for snow storage in the winter and will require adequate stormwater conveyance and treatment infrastructure.

The parking area will have a trail segment D (shown as D1-D3 in Figure 5a) located along the southern perimeter of the parking area which would function to move trail users from the parking area to the main trail. This trail segment located in the parking area would be 10-foot wide, paved with asphalt concrete, with 2-foot graded shoulders on each side. The parking lot

will affect approximately 1.68 acres. The effects of constructing segments D1-D3 along the southern boundary of the parking lot will have additional temporary impacts of approximately 0.19 acres. The USFS land affected for the parking lot is estimated to be approximately 0.59 acres (out of a total of approximately 1.87 acres).

Main Trail Segments: The proposed action includes the construction of a trail system that is approximately 1.9 miles long and generally traverses from east to west. The trails within the main trail system would be 10-foot wide, paved with either asphalt or concrete, with 2-foot graded shoulders on each side. The main trail begins near the intersection of Palisades Drive and Brockway Road where it provides connectivity to an existing trail system (i.e. Phases 1-3B of the Truckee River Legacy Trail System). Only a portion of the trail system is located on USFS land.

- **K4:** The first segment of the main trail (shown as K4 in Figure 5a) travels approximately 1200 feet to intersect with segment K2 on top of the bluff, west along Brockway Road where it connects with trail segment K2.
- **K3 (Alternative Scenario):** Segment K3 makes use of the existing Old Brockway Road and travels to the south for approximately 200 feet where it connects to segment K2. This is not considered the permanent trail location, but provides an alternative to the private property owner.
- **K2:** Segment K2 would be a new trail that extends approximately 1500 feet to the west where it connects to segment K1 just south of the existing residential homes on South River Street. Segment K2 crosses a perennial stream/seep (spring) just east of the intersection with segments K1. The crossing will be a boardwalk and will be engineered such that the water flow is maintained.
- **Soft surface Trail:** There is a soft-surface spur trail that will drop in elevation at a maximum of approximately 10% grades with switch-backs to ultimately provide connectivity to the existing dirt road/trail located in the Truckee Springs property that connects to South River Road.
- **K1:** Segment K1 traverses approximately 1700 feet to the west along the grade of an abandoned railroad grade where it gradually loses elevation before it reaches a sage flat near an existing dirt road. This segment crosses a mapped avalanche zone to avoid a steep switchback alignment.
- **I1:** Segment I1 traverses approximately 975 feet to the west along the sage flat generally following an existing dirt road. The beginning of this segment crosses a mapped avalanche zone.
- **H1:** This segment traverses approximately 800 feet to the west along the sage flat near an existing dirt road. This segment will require a crossing at three seasonal drainages. The crossings will be engineered such that the seasonal water flow is maintained. A soft surface trail connection occurs within this segment.
- **Soft Surface Trail**: This soft surface graded trail would connect the Truckee River Legacy Trail Phase 4 to Silver Fir Circle and/or Thelin Court and existing trail networks (shown as the Proposed Soft Trail in Figure 5a). Beginning at the main trail, it would follow alongside the west side of an unnamed swale, using switchbacks to gain over 250 feet in elevation to Silver Fir Drive.

- **A5:** Segment A5 generally follows existing dirt roads to the west for approximately 1550 feet along the base of the talus slope where it intersects with two trail segment variations (segments A3 and E1), as well as the first river crossing segment (Donner Creek Bridge crossing alternative).
- **L1 (Alternative Scenario):** Segment L1 would be built to access the Donner Creek Bridge or the Middle Bridge crossing alternative. This may also be an option to crossing the floodplain bypass area. This option is less environmentally impactful than the preferred alternative due to using portions of an existing dirt road located above the floodplain. However, in this scenario the trail traverses the only buildable area on the underlying private property and bifurcates the property. This segment would cutoff of the A5 segment and traverse to the west along the top of the 'island' in the floodplain.
- **A4**: Segment A4 is a short segment that connects Segment A5 to A3. Under the Donner Creek Bridge Alternative, this segment would also act as the terminus for optional segment G1.
- **G1 (Alternative Scenario)**: Segment G1 is an optional bridge connector segment that would only be developed under the Donner Creek Bridge Alternative. Segment G1 is one option that would connect Segment F1 (a section containing bridges over the Truckee River and Donner Creek) to the main trail.
- **F1 (Alternative Scenario)**: Segment F1 is a bridge segment that would only be developed under the Donner Creek Bridge Alternative. It would contain two bridges – one over the Truckee River and a prefabricated bridge over Donner Creek. It would connect either to segment G1 or segment L1 on its eastern end, and the parking area (at segment D3) on its western end.
- **A3:** Segment A3 traverses approximately 800 feet to the west on the base of the talus slope on a more northern route.
- **E1 (Alternative Scenario):** Segment E1 traverses approximately 850 feet to the west on the base of the talus slope on a more southern route. This would replace Segment A3
- **A2:** At the western end of segment variations A3 and E1 is a connection with segment A2. Segment A2 traverses to the west for approximately 250 feet along the base of the talus slope where it intersects with segment A1, as well as the second river crossing segment (the Middle Bridge crossing alternative).
- **C1 (Alternative Scenario):** Segment C1 would develop a bridge crossing connecting segment that would only be developed under the Middle Bridge Alternative. It would connect to Segment B1 (Optional), which would cross the Truckee River before crossing into the trailhead parking area.
- **B1 (Alternative Scenario):** Segment B1 would only be developed under the Middle Bridge Alternative. It would develop a bridge crossing over the Truckee River that would connect to the trailhead parking area.
- **A1:** Segment A1 traverses approximately 700 feet to the west where it intersects with the third river crossing segment (West Bridge). Each of the river crossing segments connect to segment D, which provides direct access to the trailhead parking lot.
- **D1, D2, D3:** Segment D connects to the existing Mousehole Project 10-foot wide multi-use path, which would ultimately provide direct bicycle and pedestrian access to planned

Phase 5 of the Truckee River Legacy Trail System. Segment D1 would connect to the West Bridge crossing alternative; segments D1 and D2 would connect to the Middle Bridge crossing alternative; and segments D1, D2, and D3 would connect to the Donner Creek Bridge crossing alternative. Additionally, in the case that the Donner Creek bridge crossing alternative is selected as the bridge alternative, a pre-manufactured bridge over Donner Creek would be constructed to connect segment D1 to the proposed Donner Creek bridge crossing.

The trail system will include wayfinding and educational signage to ensure users stay on the trail system and out of sensitive environmental areas. This new trail would be constructed using sustainable construction techniques and would utilize grade reversals and rolling dips to minimize erosion and long-term trail degradation. Full bench construction will be minimized. The trail segments would be placed out of the drainage and wetland areas that have been mapped within the APE. Trail construction would follow guidelines and protocols described in detail in the complete set of National Quality Standards for Trails (Forest Service Handbook 2353.15).

River Crossing Segment Alternatives: The proposed action includes the construction of a river crossing. Three bridge locations (the West, Middle, and Donner Creek bridge crossings) (see Appendix A for each bridge crossing alternative's Plan/Profile) were evaluated and the West Bridge location is the preferred alternative. It is noted that all three bridge crossing alternatives span the Truckee River with very limited piles to support the structure. The actual area physically disturbed is much less than the bridge area calculation. In addition to the preferred alternative (West Bridge), there is a Middle Bridge crossing alternative, a portion of which is located on USFS land, and third alternative (Donner Creek Bridge) crossing, which is not on USFS land.

The West Bridge crossing alternative has abutments on the north side of the river and on the south side of the river outside of the floodplain. The Middle bridge crossing alternative has abutments on a high spot (island) above the Truckee River floodplain on the south side of the river and has abutments on the north side of the river (outside of the floodplain). This design was specifically tailored to avoid and minimize adverse effects to biological resources and water quality.

The bridge crossing for each of the alternatives would be 12-foot wide between railings. Trail segments along the river crossings would have grades of 5% or less. The bridge crossing alignments may have pop-outs that jut over the river to allow fishing and standing outside of the travel corridor. The aesthetics of the bridge crossings would be developing during final design and would be appropriate for the visual context of the corridor and in accordance with the guidelines in the U.S. Department of Agriculture (USDA) Built Environment Image Guide. The potential aesthetic considerations would include railings, truss configuration/type, railing finishes, and considerations of railing height. Finishes would be earth tones, non-shiny, and durable, which would blend with the surrounding environment.

The river crossing segments connect to the main trail segment to the south along the base of the talus hillside. The main trail segment generally traverses east to west along the base of the talus

hillside and in the sage and eastside pine flats. Graded access roads for utility access to the existing dirt road will be required across the trail alignment.

The Middle bridge crossing alternative has abutments on a high spot (island) above the Truckee River floodplain on the south side of the river and has abutments on the north side of the river (outside of the floodplain). The Middle bridge crossing alternative has a second bridge to cross the floodplain/riparian area that is separated by an island from the main channel of the Truckee River. The West Bridge crossing alternative has abutments on the north side of the river and on the south side of the river outside of the floodplain.

The bridges would be constructed on concrete footings excavated into native soil and depth would be determined based on scour equations and/or bedrock depth. The proposed locations were determined using the narrowest channel locations found onsite where the bridge will span the Truckee River and floodplain area with limited piles to support the structure. The West Bridge and Middle Bridge alternatives provide the best trail alignments, requiring the least of out-of-way travel for Placer County trail users that need to cross the bridge.

Construction Equipment Access Route. Equipment used to construct the bridge, trail segments, and parking area, as well as to implement the restorative actions would use the equipment access routes. Most equipment access routes are confined to a 30-foot swath of land that will contain the 10-foot paved trail with 2-foot wide shoulders (14 feet wide total) and 10 feet buffered on both sides of the paved trail as a temporary impact area. In addition, there are existing dirt roads through the area that will be used for equipment access. The 10 feet on both sides of the equipment access routes act as a temporary impact area (20 feet of temporary impact area) that would be rehabilitated to their desired condition after construction is completed following the requirements of the resource protection measures, and per the complete set of National Quality Standards for Trails (Forest Service Handbook 2353.15).

In addition, construction access or staging areas outside of the trail footprint may also be required. This would take the form of expanded disturbance areas near bridges and bridge piers, and room for large construction equipment such as cranes. As shown in Figure 5b, a truck turn-around area of approximately 0.02 acres is assumed to be located along A1, outside of any riparian or wetland areas. In addition, as also shown in Figure 5b, a potential staging area for construction vehicles/equipment was assumed to be located adjacent to trail segment K4 (approximately 0.97 acres in size). The impact analysis throughout this Initial Study/Mitigated Negative Declaration takes into account the truck turn-around area and the potential staging area, as well as all other temporary impact areas.

The temporary impact area would be rehabilitated by sub-soiling, removing temporary berms and re-contouring where overland flows can be reestablished. Other drainage would be provided as needed, and disturbed areas would be mulched. Native seed would be used as needed to aid in quick re-vegetation of the disturbed areas and to control erosion. Certain areas could be covered with weed-free certified natural material as needed such as pine needles, mulch, slash and debris to prevent erosion and to cover the former area no deeper than 4-inches of depth. The area two feet off of the pavement on either side of the trail will be decomposed granite. Where construction

equipment crosses the sewer line, metal plates or temporary bridges will be used. Construction staging and storage will be limited to previously disturbed areas and will be restored at the completion of the project.

User Management/Education/Wayfinding: The trail will have indirect permanent impacts on aquatic resources, riparian habitat, water quality, etc. because the trail (and more particularly the parking lot) will draw more users to the site for boat launch, swimming, and picnicking activities. It is expected that there will be high use of the trail (similar to the use at the East River Street bridge, which increased when the parking lot was improved). To minimize use and disturbance to sensitive areas in proximity to the parking lot and trail system, the Town would install railings and signs along the parking lot edge closest to the river to keep people out of the riparian areas, and provide wayfinding signage that directs users to the river access area on Town of Truckee property to the east of Donner Creek. The parking lot railings will connect to the bridge railings. This is intended to prevent people from accessing the river area near the parking lot. The parking lot will also include trash containers, pet waste stations, and a restroom facility.

The Town will provide a river access point on the Town property located just east of Donner Creek and the trailhead parking lot. The Town would install a 10-foot wide paved road shoulder on the east side of the West River Street Bridge to accommodate parallel parking spaces at the river access point. This would accommodate 4 to 5 parallel spaces directly adjacent to the river access area located on Town land. Amenities at the river access may include picnic tables, benches, trash cans, pet waste stations, and signage.

Small informational signs will be erected at strategic locations along the trail, parking lot, and river access to facilitate use of the trail and discourage use in sensitive environmental areas.

SOFT SURFACE GRADED TRAILS

The proposed project includes a soft-surface spur trail, located north of (and connecting to) segment K1 that will drop in elevation at a maximum of approximately 10% grade with switch-backs to ultimately provide connectivity to the existing dirt road/trail located in the Truckee Springs property that connects to South River Road. In addition, a separate soft surface graded trail would connect the Truckee River Legacy Trail Phase 4 to Silver Fir Circle and/or Thelin Court and existing trail networks, including the Sawtooth trail system. This graded trail would be a minimum of 4-feet wide and slopes would have a maximum grade of 10%. The soft surface graded trail locations shown are approximate and will be field fit and approved by the underlying property owner prior to construction. The permanent impact width of this trail would be approximately 10-feet, to accommodate grading. Beginning at the main trail, it would follow alongside the west side of an unnamed swale, using switchbacks to gain over 250 feet in elevation to Silver Fir Drive. One option is to remain on the west side of the swale and connect to Silver Fir Circle. A second option is to cross this swale, either at grade or on a drainage structure approximately 400 feet south of Silver Fir Circle, and connect to Thelin Court. A separate segment of the existing soft surface trail may be re-routed to provide more privacy to nearby property owners. This connects to an existing dirt trail system and the proposed Hilltop Master Plan Area.

NEARBY MASTER PLAN AREAS

Portions of the northeastern section of the trail planning area would overlap with the Hilltop Master Plan area and the Truckee Springs Master Plan area. The Hilltop Master Plan area extends to the south of the northeastern portion of the trail planning area. The Hilltop Master Plan directly accommodates the proposed project along the frontage of the Hilltop Master Plan area. The proposed Truckee Springs Master Plan area is located to the northwest of the Hilltop Master Plan area, also in the eastern portion of the trail planning area. The proposed Truckee Springs Master Plan is not adopted yet and is therefore subject to change. The trail has been designed to avoid potential buildable areas in the Truckee Springs and Hilltop Master Plan area. A future modification to the trail alignment in the northeast corner of the trail planning area, near segment K4 and (optional) segment K3, would accommodate a roundabout planned for Brockway Road, as provided by the Hilltop Master Plan (shown as Roundabout in Figure 5a).

FUTURE TRAILS

The Truckee River Legacy Trail Phase 4 could serve as a hub or intersection, given that it will include parking. Placer County proposes a trail connection between Squaw Valley and the Legacy Trail Phase 4 bridge. However, the Truckee River Legacy Trail Phase 4 has independent utility, and is not dependent on any future potential trail connections. In addition, past proposals made by the Truckee Springs development have included additional on-site trails. These are not included within the current project but have been considered within the alignments to ensure connectivity.

MAINTENANCE ACTIVITIES

As described by the 2015 update to the *Truckee Trails and Bikeways Master Plan*, the proposed project would require maintenance strategies (and the Truckee River Legacy Trail system as a whole). In June 2014, Truckee residents voted in favor of Measure R, a sales tax increase dedicated specifically to dirt and paved trails construction and maintenance. On October 14, 2014, the Town Council adopted a proposal to use a portion of Measure R funds for winter maintenance of paved trails. The portions of the proposed project located within Truckee would be eligible for these funds. Areas of the trail in Placer County will be maintained by Placer County or established through an agreement between Placer County, the Town of Truckee and the USFS for maintenance responsibilities.

REQUESTED ENTITLEMENTS AND OTHER APPROVALS

The Town of Truckee is the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of the California Environmental Quality Act (CEQA), Section 15050. This document will be used by the Town of Truckee to take the following actions (including, but not limited to):

- Adoption of the Mitigated Negative Declaration (MND)
- Adoption of the Mitigation Monitoring and Reporting Program (MMRP)
- Minor Use Permit (MUP)

OTHER AGENCIES WHOSE APPROVAL MAY BE REQUIRED

- Placer County will be a Responsible Agency for the portion of the trail within their jurisdiction. The County Board of Supervisors will utilize this CEQA document for their discretionary approvals including adoption of the MMRP and subsequent Operations and Maintenance agreements.
- California Department of Fish and Game
- California Department of Transportation (Caltrans)
- Northern Sierra Air Quality Management District (NSAQMD)
- Regional Water Quality Control Board, Lahontan Region
- Tahoe-Truckee Sanitation Agency
- Truckee-Donner Public Utilities District
- U.S. Department of Interior, Fish & Wildlife Service
- U.S. Army Corps of Engineers
- U.S. Forest Service

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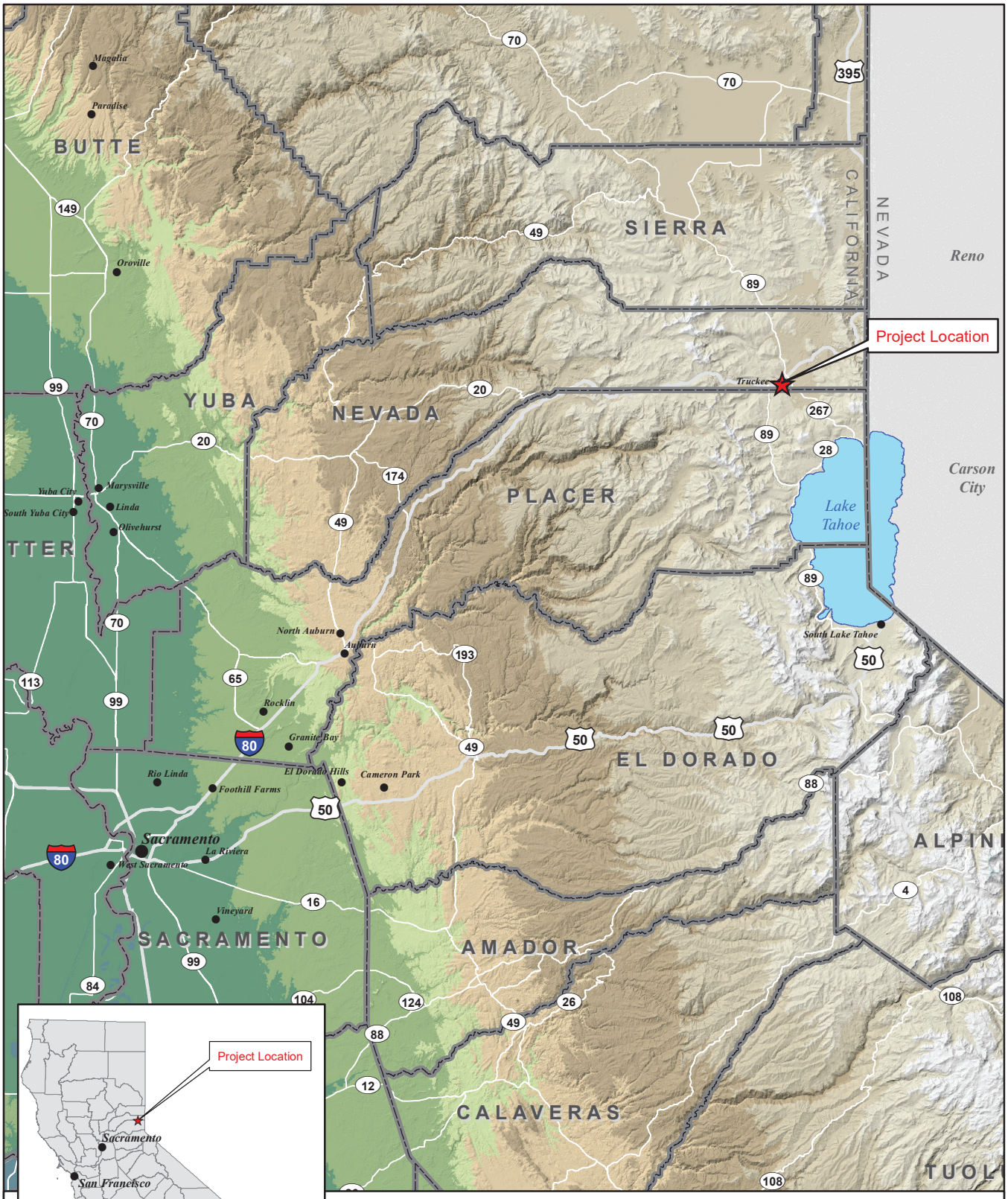

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 1: Regional Location Map

Sources: CalAtlas. Map date: June 14, 2016.

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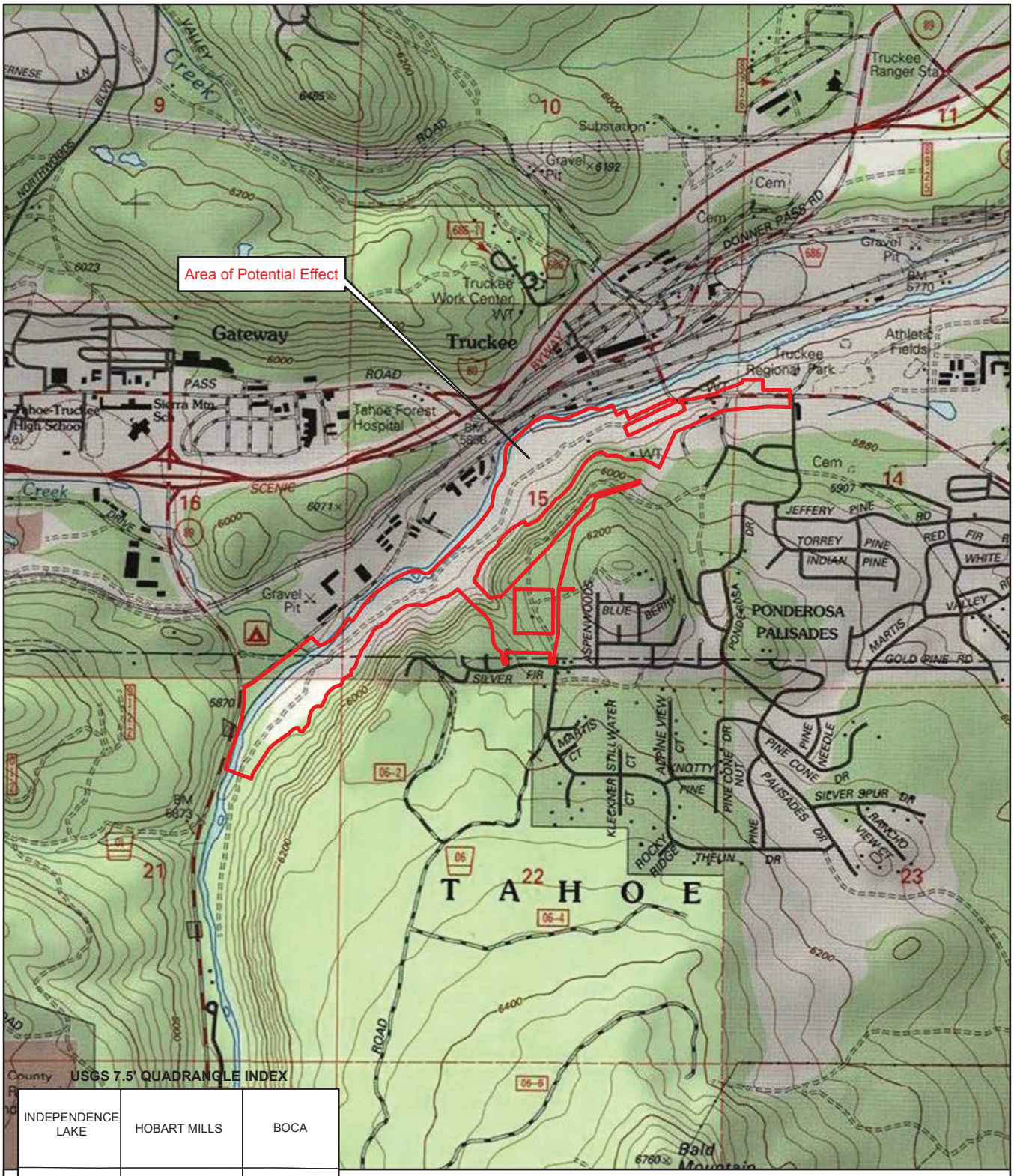

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 2: Project Vicinity

Truckee Quadrangle

Data sources: Mark Thomas and Company, "Cultural Resources Inventory of the Truckee Legacy Trail Phase 4 Project," August 2017; ArcGIS Online USGS Topographic Map Service. Map date:October 24, 2017.

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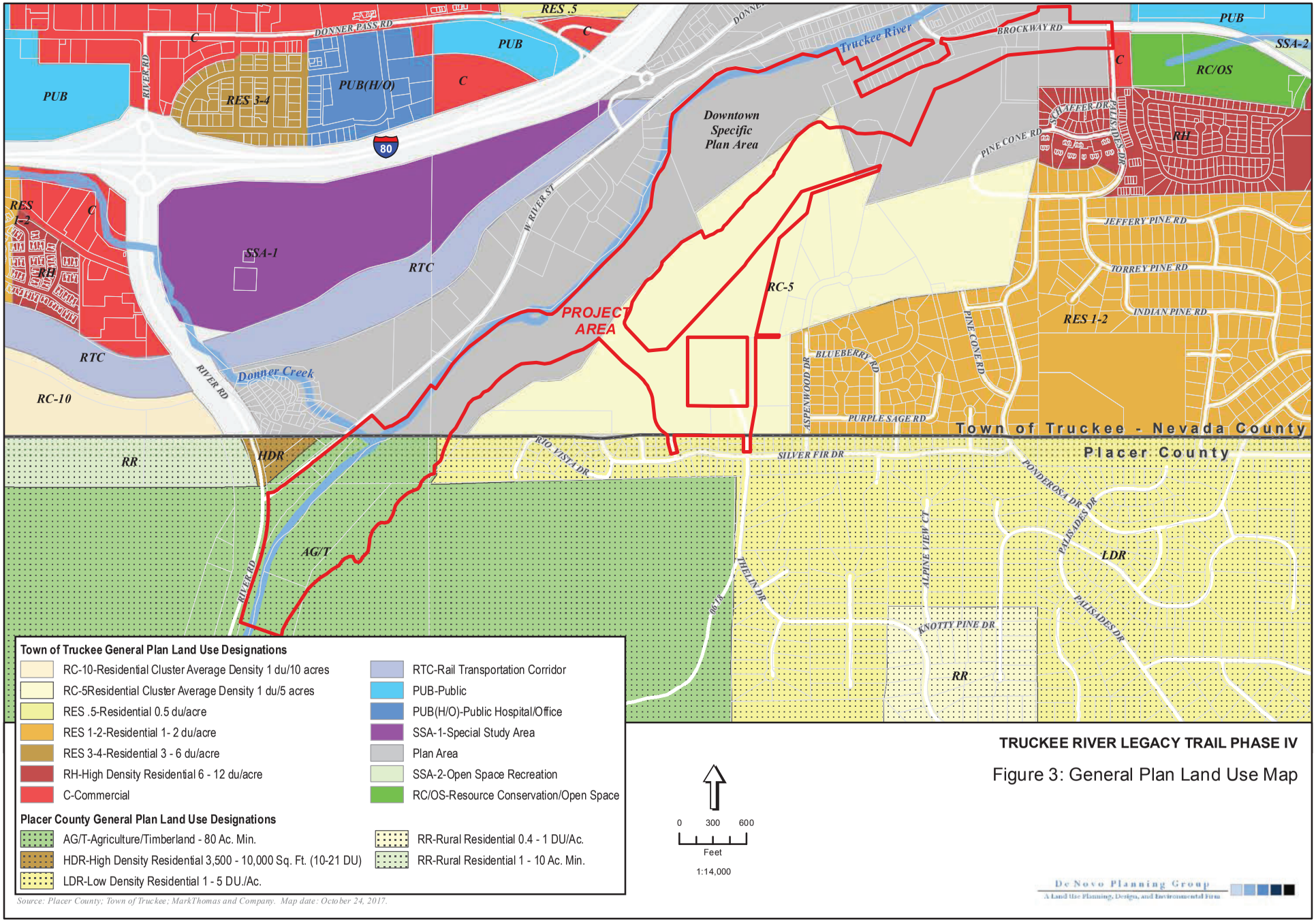

Source: Placer County; Town of Truckee; MarkThomas and Company. Map date: October 24, 2017.

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 3: General Plan Land Use Map

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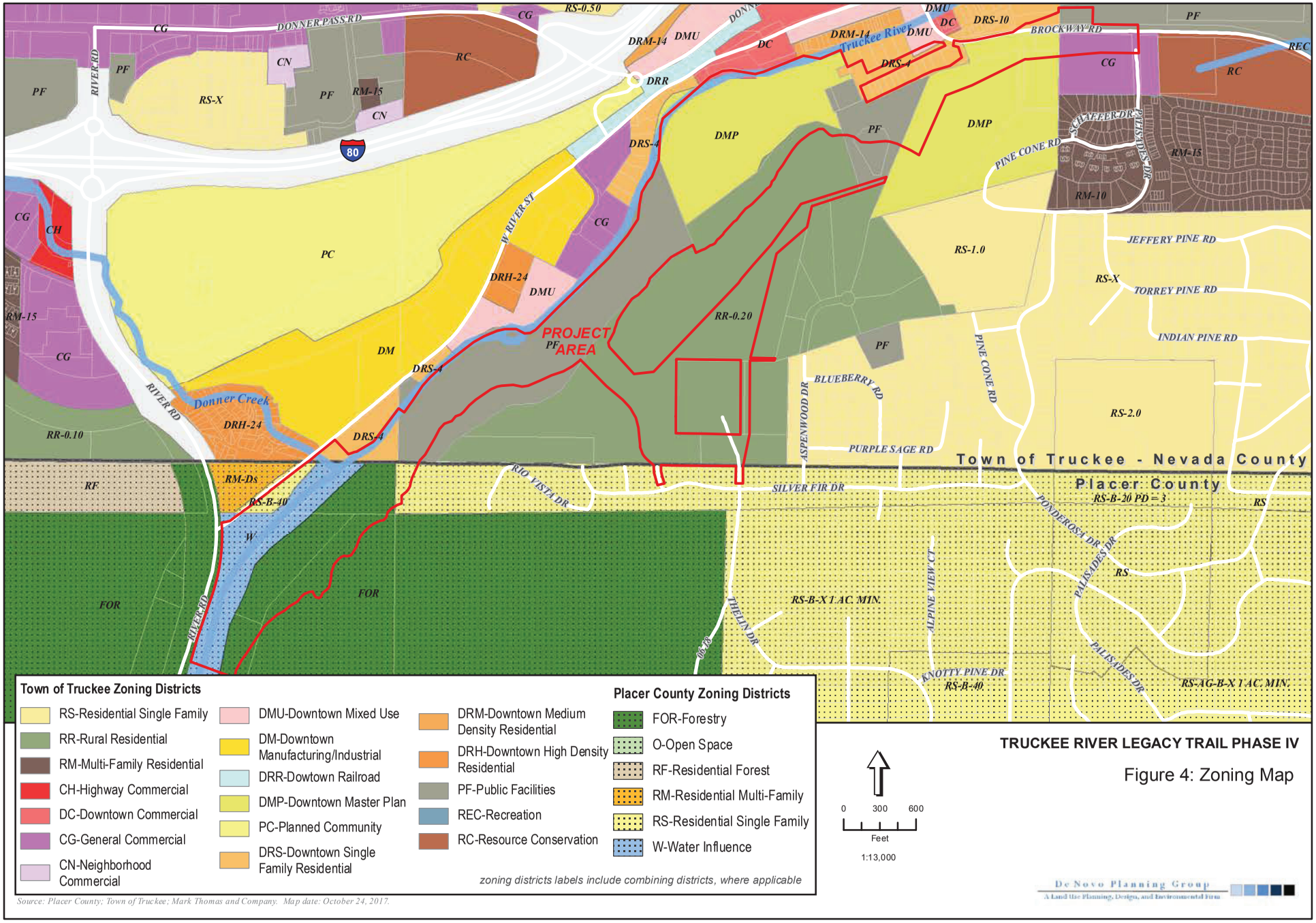

Town of Truckee Zoning Districts

- RS-Residential Single Family
- RR-Rural Residential
- RM-Multi-Family Residential
- CH-Highway Commercial
- DC-Downtown Commercial
- CG-General Commercial
- CN-Neighborhood Commercial
- DMU-Downtown Mixed Use
- DM-Downtown Manufacturing/Industrial
- DRR-Dowtown Railroad
- DMP-Downtown Master Plan
- PC-Planned Community
- DRS-Downtown Single Family Residential
- DRM-Downtown Medium Density Residential
- DRH-Downtown High Density Residential
- PF-Public Facilities
- REC-Recreation
- RC-Resource Conservation

Placer County Zoning Districts

- FOR-Forestry
- O-Open Space
- RF-Residential Forest
- RM-Residential Multi-Family
- RS-Residential Single Family
- W-Water Influence

zoning districts labels include combining districts, where applicable

0 300 600
Feet
1:13,000

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 4: Zoning Map

Source: Placer County; Town of Truckee; Mark Thomas and Company. Map date: October 24, 2017.

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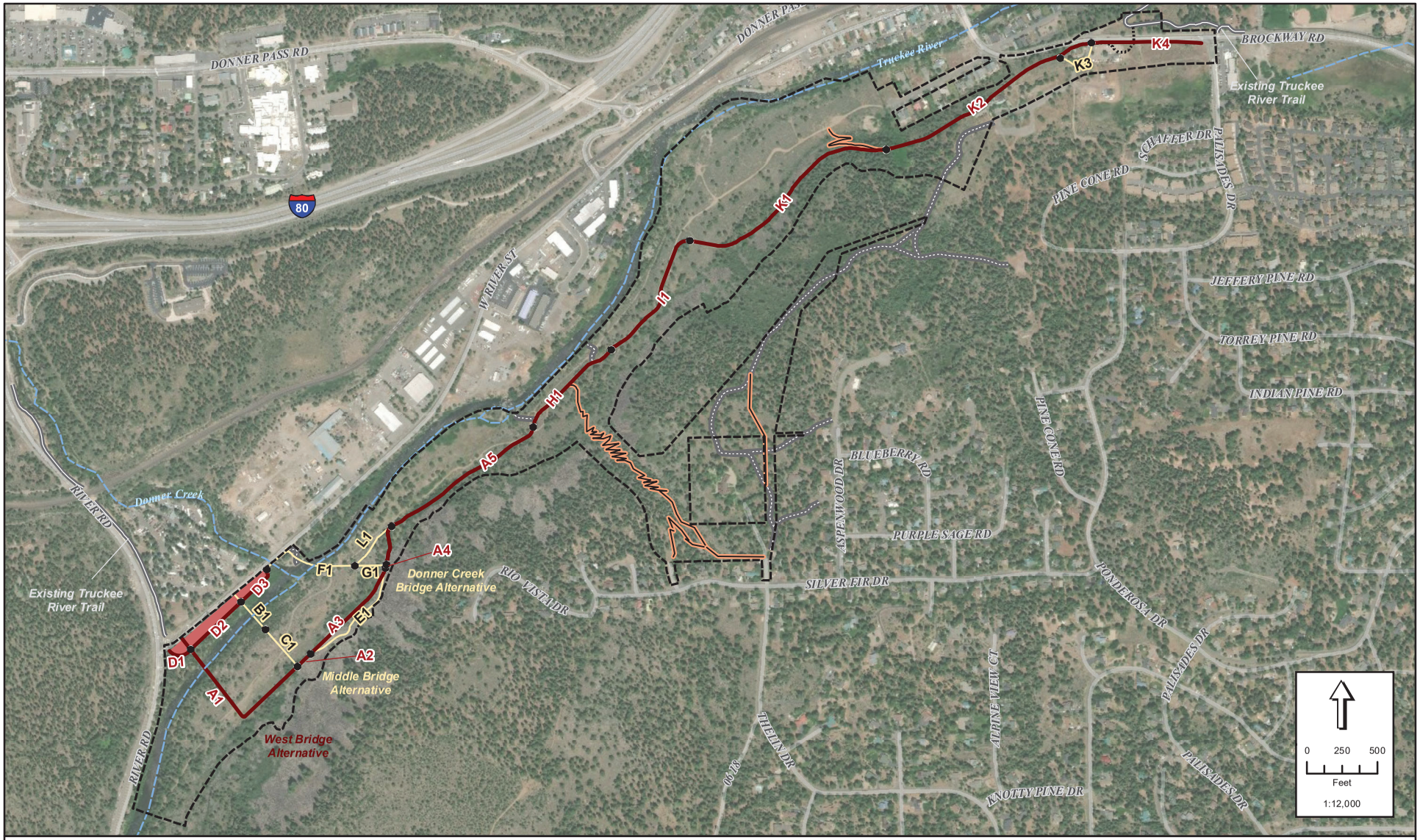

Legend

Proposed Trail

- Proposed Trail Alignment
- Alternate Alignment Scenarios
- Proposed Soft Surface Trail
- Trail Segment Start/End Stations
- Parking Lot - Paved

Future Phase

- Roundabout

Other Trails and Roads

- Existing Trail - Paved
- Existing Trail - Soft Surface

- Area of Potential Effects (APE)

TRUCKEE LEGACY TRAIL PHASE IV

Figure 5a: Proposed Trail Alignment

Data source: Mark Thomas and Company, TRL_Denovo_12-11-2018; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.

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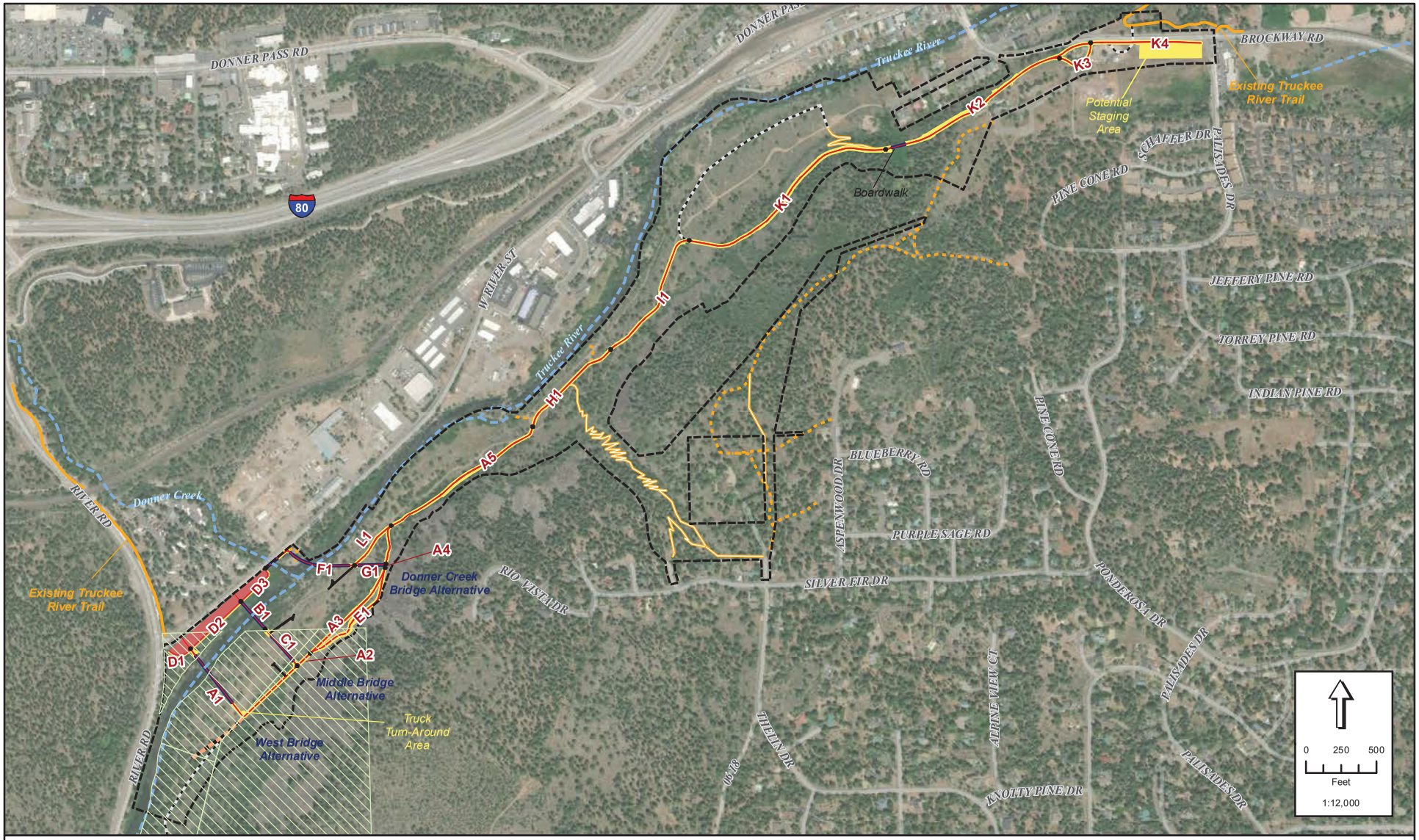

Existing Features

- Area of Potential Effects (APE)
- US Forest Service Parcels
- Truckee River and Donner Creek
- Existing Trail - Paved
- Existing Trail - Soft Surface
- TTSD Access Road

Project Features

- Trail Segment Start/End Stations
- Trail Alignment - Paved
- Boardwalk/Bridge
- Access Road
- Paved Parking Lot
- Paved Trail and Other Temporary Impacts

Future/Proposed Features

- Future Phases/Trails
- Proposed Soft Trail

TRUCKEE LEGACY TRAIL PHASE IV

Figure 5b: Conceptual Map

Data source: Mark Thomas and Company, TRL_Denovo_12-11-2018; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 28, 2019.

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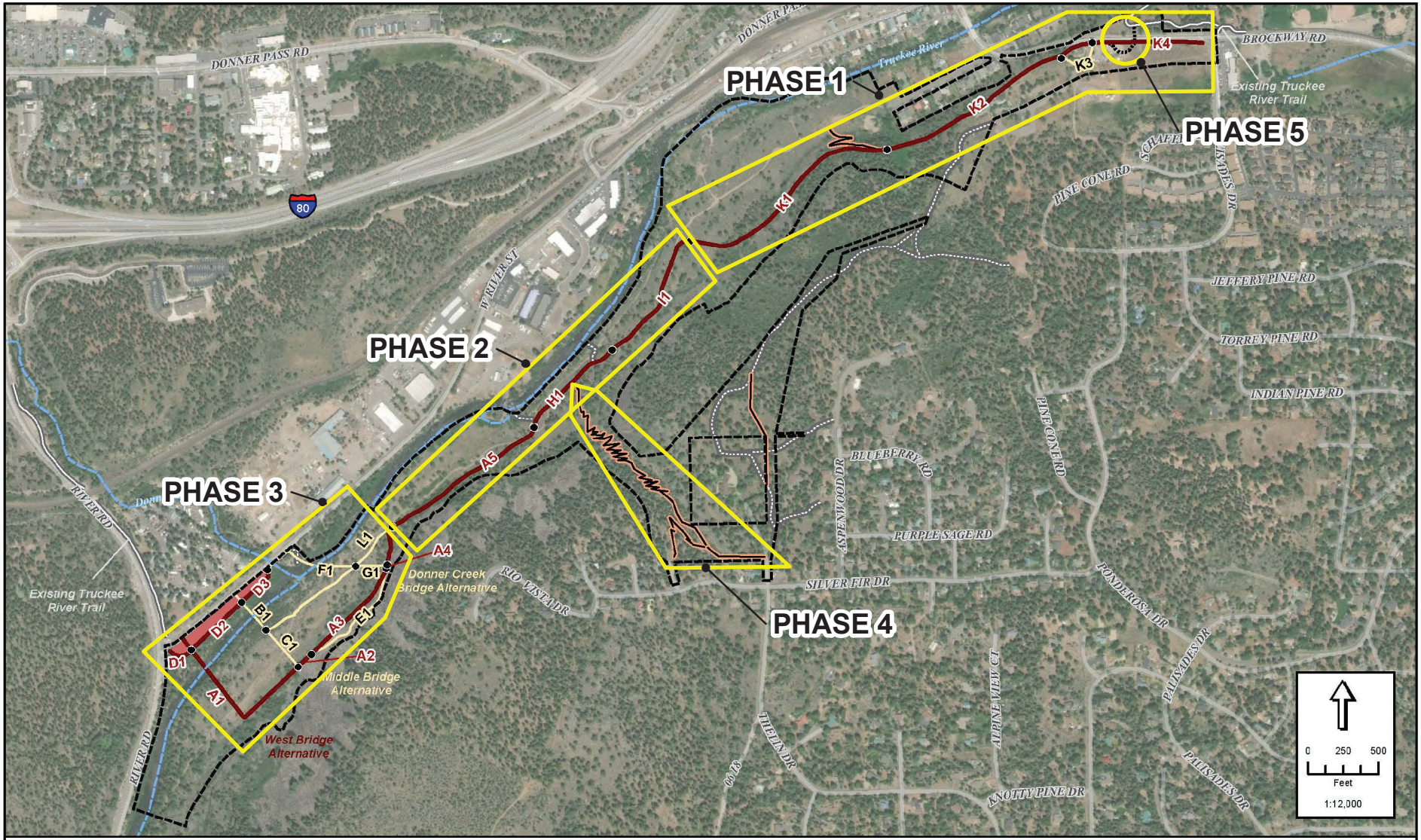
Potential Trail Phasing Plan



Legend

Proposed Trail
- Proposed Trail Alignment
- Alternate Alignment Scenarios
- Proposed Soft Surface Trail
- Trail Segment Start/End Stations
- Parking Lot - Paved

Future Phase
- Roundabout

Other Trails and Roads
- Existing Trail - Paved
- Existing Trail - Soft Surface

- Area of Potential Effects (APE)

TRUCKEE LEGACY TRAIL PHASE IV

FIGURE 5C: Potential Phasing Plan

Data source: Mark Thomas and Company, TRL_Denovo_12-11-2018; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Agriculture and Forestry Resources		Air Quality
	Biological Resources		Cultural Resources		Energy
	Geology/Soils		Greenhouse Gas Emissions		Hazards & Hazardous Materials
	Hydrology/Water Quality		Land Use/Planning		Mineral Resources
	Noise		Population/Housing		Public Services
	Recreation		Transportation		Tribal Cultural Resources
	Utilities/Service Systems		Wildfire		Mandatory Findings of Significance

DETERMINATION:

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature Date

EVALUATION INSTRUCTIONS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
    a) Earlier Analysis Used. Identify and state where they are available for review.
    b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9) The explanation of each issue should identify:
    a) The significance criteria or threshold, if any, used to evaluate each question; and
    b) The mitigation measure identified, if any, to reduce the impact to less than significance

EVALUATION OF ENVIRONMENTAL IMPACTS:

In each area of potential impact listed in this section, there are one or more questions which assess the degree of potential environmental effect. A response is provided to each question using one of the four impact evaluation criteria described below. A discussion of the response is also included.

- Potentially Significant Impact. This response is appropriate when there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries, upon completion of the Initial Study, an EIR is required.
- Less than Significant with Mitigation Incorporated. This response applies when the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.
- Less than Significant Impact. A less than significant impact is one which is deemed to have little or no adverse effect on the environment. Mitigation measures are, therefore, not necessary, although they may be recommended to further reduce a minor impact.
- No Impact. These issues were either identified as having no impact on the environment, or they are not relevant to the Project.

ENVIRONMENTAL CHECKLIST

This section of the Initial Study incorporates the most current Appendix "G" Environmental Checklist Form, contained in the CEQA Guidelines. Impact questions and responses are included in both tabular and narrative formats for each of the 18 environmental topic areas.

I. AESTHETICS

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Have a substantial adverse effect on a scenic vista?		X		
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant with Mitigation. Aesthetic or visual resources include the "scenic character" of a region and site. Scenic features can include both natural features, such as vegetation and topography, and manmade features (e.g. historic structures). Areas that are more sensitive to potential effects are usually readily observable, such as land found adjacent to major roadways and hilltops.

The proposed project is not located on a site that is designated as a Scenic Vista by the *Town of Truckee 2025 General Plan* or the most recent version of the *Placer County General Plan*. The proposed project is located within an area that is largely open space. A dirt trail currently covers a large portion of the trail planning area, which approximately follows the general path that the proposed paved trail would take. The proposed trail is located south of the Truckee River and connects to the Phases 1 through 3B of the Truckee River Legacy Trail at its eastern end. The proposed project also connects to the existing Mousehole Project, along SR 89.

The area to the south of the central and western portions of the proposed project is designated as a "Prominent Slope, Ridge Line, Bluff Line or Hillside" by the *Town of Truckee 2025 General Plan* (See *Town of Truckee 2025 General Plan* Figure 4-11). The proposed project would generally

be constructed on the relatively flat land north of this designated area; therefore, this "Prominent Slope, Ridge Line, Bluff Line or Hillside" will not be directly impacted. However, given the proximity of the proposed project to this designated area, there is a potential for indirect impacts to the natural scenic qualities of this area. Implementation of the following mitigation measure would ensure that impacts to scenic qualities would remain **less than significant.**

Mitigation Measure

> ***Mitigation Measure AES-1****: The project applicant shall incorporate the following design and construction guidelines to ensure limited impact to the natural scenic qualities of the area:*
>
> - *Grading shall be designed to conserve natural topographic features and appearances by minimizing the amount of cut and fill and by means of landform grading to blend graded slopes and benches within the natural topography (as applicable); and retain major natural topographic features.*
> - *Grading plans shall identify slopes that are to be landform graded ("Landform grading" refers to a contour grading method that creates artificial slopes and varying slope ratios in the horizontal plane designed to simulate the appearance of the surrounding natural terrain). Cut and fill slope shall be designed not to exceed a vertical height of 10 feet, unless the review authority (i.e. the Town of Truckee Engineer) approves slopes of greater height with benching, terracing, and/or use of retaining walls. Slopes created by grading shall not exceed a ratio of 2:1 (vertical:horizontal), except where the Town Engineer determines that a greater slope is appropriate, based on a geotechnical report and stabilization study.*
> - *All graded areas shall be revegetated with native vegetation as soon as possible following grading and shall be of substantial density so that resultant vegetation is consistent with surrounding vegetation.*
> - *The primary purpose of the restoration identified within this project is to reduce sediment, revegetate and restore temporary impact areas and areas with existing dispersed recreation impacts. These actions would stabilize and normalize the sediment transport regime in areas with existing impacts from dispersed recreation along the Truckee River banks, restore natural bank and riparian function, resulting in areas of reduced instream and bank scour and rates of sediment transport.*
> - *All retaining walls, edge protection (guard rails or fencing), the bridge, and other structures, as appropriate, shall be simple in design and compatible with and complementary to the surrounding natural vegetation and landscape.*

Response b): Less than Significant. A review of the current Caltrans Map of Designated Scenic Routes indicates that there are no officially designated state scenic highways with the Town of Truckee. Interstate 80 (I-80) and SR 89 (north of I-80) are eligible to become state scenic highways but are not officially designated.

Although the proposed project would not be visible from I-80, the western edge of the trail planning area would be visible from SR 89. This may include views of the proposed bridge

structure that would span the Truckee River with limited piles to support the structure. However, the view of the trail planning area is so brief from SR 89 that it is unlikely that the trail itself would be visible, given that that the trail does not have large vertical structures (including the bridge), and given the thick tree line blocking views of the trail from SR 89. With the exception of the trailhead parking lot, the proposed project is also not expected to be highly visible from West River Street (note: as provided in Table PD-4, the trailhead parking lot area would permanently impact approximately 1.68 acres and temporarily impact approximately 0.19 acres).

Furthermore, neither West River Street, South River Street, Brockway Road, which are the nearest roadways to the trail planning area, nor any other nearby roadway or road segment, are identified as scenic roadways by any county or state planning document. Therefore, the proposed project would have a **less than significant** impact on scenic resources associated with a scenic highway or roadway.

Response c): Less than Significant. The visual context of the proposed trail planning area consists of natural open space, the Truckee River, and existing local roadways and residences. Portions of the trail planning area are visible to several types of viewing groups including motorists traveling along Bridge Street, West River Street, and existing residences. There is currently a dirt trail in the trail planning area that is actively used for walking/hiking/bicycling. The existing users of this trail would be expected to utilize the proposed trail in-lieu of the existing trail.

Construction of the project would impact between approximately 11.4 and 12.6 acres, depending on the exact alignment and bridge that is constructed. This would include between approximately 5.0 and 5.9 acres of permanent impact and between 6.6 and 6.7 acres of temporary disturbance. Construction of the proposed project would result in changes in local visual conditions during construction. During construction, trucks, equipment, and construction workers would be present daily in this natural open space. However, this visual change would generally revert to a natural open space quality with a paved trail and boardwalk in some locations.

The western portion of the proposed project would include one of three bridge crossing alternatives that spans the Truckee River with limited piles to support the structure. The bridge facility would be much more noticeable to viewers from a distance compared to the at-grade trails given that they will be an elevated structure. Given the potential for a visual impact from these structures, the Town has incorporated architectural design elements into the bridge design as a visual enhancement to minimize the impact (note: the plan/profile for the various bridge crossing alternatives are provided in Appendix A of this IS/MND). Therefore, the proposed project would generate a **less than significant** impact relative to affecting the visual character or quality of public views of the site.

Response d): Less than Significant. The proposed project does not propose any new light sources and the proposed bridge and fencing materials are not expected to produce glare. Lighting may be installed (i.e., within the proposed parking and restroom area). The lighting would be designed consistent with the applicable Placer County and/or the Town of Truckee lighting standards for public spaces. A lighting design meeting these standards would minimize

light and glare with appropriate light placement and hooded/shielded features that ensure light does not spill onto adjacent properties or to areas not intended to be illuminated. The proposed project would not generate significant sources of light or glare. Therefore, the proposed project would generate a **less than significant** impact relative to this topic.

II. AGRICULTURE AND FORESTRY RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 1222(g)) or timberland (as defined in Public Resources Code section 4526)?			X	
d) Result in the loss of forest land or conversion of forest land to non-forest use?			X	
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

RESPONSES TO CHECKLIST QUESTIONS

Response a): No impact. The trail planning area does not contain any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. Therefore, there is **no impact** relative to this topic.

Response b): No Impact. There are no agricultural uses within the trail planning area. The trail planning area consists of multiple properties, none of which are under the provisions of an active Williamson Act Contract. Therefore, there is **no impact** relative to this topic.

Response c): Less than Significant. The trail planning area traverses the following Town of Truckee zoning districts: Downtown Master Plan (DMP), Downtown Mixed Use (DMU) Public Facilities (PF), Downtown Single Family Residential (DRS), Rural Residential (RR), and General Commercial (CG). The trail planning area also traverses the following Placer County zoning districts (in the portion of the trail planning area located outside of the Town of Truckee): Forestry (FOR), Water Influence (W), and Residential Single Family (RS). Therefore, a portion of the trail planning area is zoned for forest land or timberland. However, the proposed project would not conflict with, or cause rezoning of, the forest land zoning. The proposed project would maintain the existing vacant/undeveloped character of the site, adding only a trail system that would open the site to a variety of users that may not otherwise be able to access the existing trails (e.g. physically disabled people). There would be no conflict with existing zoning for, or

cause rezoning of, forest land, timberland, or timberland zones. There is **less than significant** impact relative to this topic.

Response d): Less than Significant. The entire region within, and surrounding the Town of Truckee, can be characterized as forest land. However, the forest land is further defined by its mosaic of vegetative communities that make up the forested region. This includes streams, river, wetlands, riparian habitat, eastside pine, sage, and rocky slopes/cliffs, all of which are located within the trail planning area.

Construction of the project would impact between approximately 11.4 and 12.6 acres, depending on the exact alignment and bridge that is constructed. This would include between approximately 5.0 and 5.9 acres of permanent impact and between 6.6 and 6.7 acres of temporary disturbance. The trail segments were designed to minimize impacts to riparian and wetlands to the extent feasible by either avoiding through design or constructing a boardwalk or bridge that spans these areas. The total wetland impact (trail segments, bridges, and boardwalks) is anticipated to range between 0.0498 to 0.0753 acres.

The project would include the loss of some trees and vegetation within the sage, eastside pine, wetland, and riparian areas within the trail planning area. The temporary impact areas would be revegetated and over time would become unnoticeable to offsite viewers, which would reduce the impact to the extent feasible.

The design of the trail is specifically tailored to minimize vegetation and tree removal to the extent possible. Numerous alternatives were evaluated to find the path that balanced the objective of building the trail system, with the overarching goal of minimizing the impacts to the natural open space. The amount of forested land that would be impacted by the proposed project is minimized by design. Furthermore, the California Department of Forestry and Fire Protection (CAL FIRE) must approve timber harvest plans and logging permits if any trees to be cut down are commercial timber harvest species (i.e. a Timber Harvest Permit would need to be obtained from CAL FIRE).

Section 18.30.155 of the Town of Truckee Development Code provides an exemption for tree removal for public pedestrian and bicycle trails and pathways. However, tree removal of live trees with a 6" diameter at breast height (dbh) or greater, within the Placer County portion of the trail planning area, would be subject to Article 12.20 of the Placer County Municipal Code. Article 12.20 requires a tree cutting permit for the removal of live trees 6" dbh or greater.

Overall, given the existing restrictions on tree removal within the trail planning area, and since the proposed project would minimize vegetation and tree removal to the extent possible, there is a **less than significant** impact relative to this topic.

Response e): No Impact. There would not be any other changes to the existing environment that would result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use, beyond what has already been described. There is no known existing agricultural activity within the trail planning area, and there would be minimal impact to trees in the trail planning area; therefore, the proposed project would have **no impact** relative to this topic**.**

III. AIR QUALITY

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		X		
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

EXISTING SETTING

The primary factors that determine air quality are the locations of air pollutant sources and the amounts of pollutants emitted. Meteorological and topographical conditions, however, also are important. Factors such as wind speed and direction, and air temperature gradients interact with physical landscape features to determine the movement and dispersal of criteria air pollutants.

The project is located within the Town of Truckee, which lies within the Mountain Counties Air Basin and is under the jurisdiction of the Northern Sierra Air Quality Management District (NSAQMD). Most of the air pollution generated within the NSAQMD comes from motor vehicles. The pollutants of greatest concern to the NSAQMD are ozone (O_3), particulate matter (PM), and toxic air contaminants (TACs).

On July 15, 1999, the Truckee Town Council adopted the *Particulate Matter Air Quality Management Plan* (AQMP) (Resolution No. 99-39). The goal of the AQMP is to assist the NSAQMD in achieving and maintaining compliance with National and State Ambient Air Quality Standards for particulate matter. The AQMP establishes annual emission goals for the Town and, on an annual basis, requires the preparation of a report that analyzes local air quality monitoring data for particulate matter and the Town's compliance with national and state ambient air quality standards.

Based on information in the AQMP, the Mountain Counties Air Basin has routinely exceeded the State PM_{10} 24-hour standards and has been close to exceeding the State PM_{10} annual standards. The Mountain Counties Air Basin is currently designated a non-attainment area for PM_{10} under State ambient air quality standards (CARB, 2015). The Mountain Counties Air Basin is currently designated as an unclassified area for PM_{10} under Federal ambient air quality standards (CARB, 2015). Monitoring stations have recorded 24-hour exceedances of the Federal PM_{10} standard in the past. The three primary sources of PM_{10} are woodstove smoke, re-entrained road dust, and construction and demolition activities.

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. As described above, the project is located within the Mountain Counties Air Basin. The Mountain Counties Air Basin is designated a non-attainment area under State ambient air quality standards for ozone and PM_{10}. Although the Mountain Counties Air Basin complies with federal ambient air quality standards and is designated a federal unclassified area for PM_{10}, monitoring stations have recorded several 24-hour exceedances of the federal standard in recent years.

The NSAQMD is the local agency with primary responsibility for compliance with both the federal and state standards and for ensuring that air quality conditions are maintained. They do this through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues.

The Town of Truckee 2025 General Plan identifies specific goals and policies regarding air quality. The Conservation and Open Space Policy 13.3 would be applicable to the proposed project. This Policy requires that all construction projects implement dust control measures, to reduce particulate matter emissions. The proposed project would also comply with NSAQMD Rule 226 (Dust Control Plan), which would ensure that the proposed project complies with all applicable General Plan policies (including *Town of Truckee 2025 General Plan* Open Space Policy 13.3). Additionally, the *Placer County General Plan* identifies the priority for air quality planning to occur alongside land use and transportation planning policies (Natural Resources Element Goal 6.G and Policies 6.G.1 through 6.G.7).

A minimal number of new vehicles would be generated by the operational phase of the proposed project (e.g. maintenance vehicles during winter months), and woodstoves are not proposed as part of the project. Grading activities associated with construction would disturb soil, generating airborne dust that may affect air quality in the area. However, as shown in Table AIR-1, PM_{10} emissions from construction would be far below the NSAQMD threshold. Additionally, as noted above, the proposed project would be compliant with NSAQMD Rule 226 which requires dust control measures.

The project does not exceed the threshold for the "Large Project Emission Offset" control strategy in the *Particulate Matter Air Quality Management Plan*. Therefore, additional air quality mitigation measures are not required. This is further supported by Town Council Resolution No. 2003-52 of which the proposed project does not meet the threshold for significant cumulative impacts (i.e. since the proposed project would not generate the use of any new solid fuel burning devices).

The project would not conflict with or obstruct implementation of the *Truckee Particulate Matter AQMP* or other applicable air quality plans, or the General Plans for the Town of Truckee or Placer County. The proposed project would comply with all provisions contained within the Town Municipal Code. This is a **less than significant** impact.

Responses b): Less than Significant with Mitigation. The proposed project would result in additional air emissions in the region because of construction activities and maintenance of the

proposed project. Construction and maintenance of the proposed project has the potential to create air quality impacts through the use of heavy-duty off-road equipment (during construction) and through vehicle trips generated from construction workers traveling to and from the trail planning area (during construction). There is also the potential for trips generated by project operation, such as vehicles accessing the trailhead parking, and the use of winter vehicles during operational maintenance activities.

Fugitive dust emissions during construction activities would result from grading, excavation, and hauling. Mobile source emissions, including nitrogen oxides (NOx), would likely result from the use of some construction equipment. The assessment of construction air quality impacts considers each of these potential sources. Fugitive dust emissions, ROG, NOx, and CO would also be generated from mobile sources during project operation. Construction and operational maintenance emissions can vary substantially from day to day, depending on the level of activity, the specific type of operations, and, for dust, the prevailing weather conditions. There would be limited, to no, regional air pollutant emissions associated with proposed project long-term operations by either consumption of electricity or natural gas (since the proposed project would not utilize these sources of energy).

Construction

Construction emissions were estimated using CalEEMod (v.2016.3.2). Maximum daily construction-related emissions for the proposed project and NSAQMD Level A thresholds (representing the most stringent tier of NSAQMD thresholds) are presented in Table AIR-1 (NSAQMD, 2009). Construction was assumed to occur during year 2021.

TABLE AIR-1: PROJECT CONSTRUCTION EMISSIONS (POUNDS PER DAY)

EMISSIONS YEAR	*ROG (POUNDS/DAY)* [A]	*NOX (POUNDS/DAY)* [A]	*PM_{10} (POUNDS/DAY)* [A]	*CO (POUNDS/DAY)* [A]
2021	1.98	20.99	7.62	11.82
Total	**1.98**	**20.99**	**7.62**	**11.82**
NSAQMD Threshold	**24**	**24**	**79**	**N/A**
Above NSAQMD Threshold?	**N**	**N**	**N**	**N/A**

[A]Maximum

As shown, maximum daily construction emissions would not exceed the NSAQMD significance thresholds for ROG, NOx, CO, and PM_{10}. A $PM_{2.5}$ threshold has not yet been developed, and a CO threshold was not provided by the NSAQMD guidance.

The NSAQMD maintains rules and regulations in place to reduce construction-related emissions and dust impacts. All construction phases of the proposed project are subject to the existing NSAQMD requirements. In particular, NSAQMD *District Rule 226: Dust Control* requires the submittal of a Dust Control Plan to the NSAQMD for approval prior to any surface disturbance, including clearing of vegetation. The proposed project would be required to develop and implement an a Dust Control Plan in accordance with NSAQMD Rule 226, as provided by

Mitigation Measure AIR-1. For PM_{10}, implementing a Dust Control Plan in accordance with NSAQMD Rule 226 is expected to further reduce PM_{10} emissions during the construction phase.

Project Operations

Operational on-road emissions of criteria pollutants are not expected to increase substantially from levels before the project, since few to no net new vehicle trips would be caused by the project (while the project may generate new trips to the trail planning area, this is expected to be offset by a reduction in vehicle travel resulting from the creation of non-motorized vehicle trails). Trail maintenance activities (i.e. during winter months) could generate a minimal amount of additional on-road and off-road vehicle traffic. For example, during winter months, winter maintenance could include snow removal and the application of de-icing and traction control materials in ice prone areas of the trail. However, these emissions would be minimal, and not violate any air quality standard or contribute substantially to any air quality violation, or result in emissions that would result in a cumulatively considerable net increase in criteria air pollutants. In addition, the consumption of electricity or natural gas on-site would not occur, or would be negligible. Consequently, the operational air quality impact of the proposed project would be considered **less than significant**.

Summary

According to the *California Environmental Quality Act (CEQA) Guidelines*, an air quality impact may be considered significant if the proposed project's implementation would result in, or potentially result in, conditions, which violate any existing local, State or federal air quality regulations. Mitigation Measure AIR-1 describes the requirements to develop and implement a Dust Control Plan, as provided under NSAQMD Rule 226. Accordingly, with the development and implementation of a Dust Control Plan, the project would not exceed any applicable NSAQMD threshold related to construction related emissions of particulate matter. Additionally, the proposed project would not result in a cumulatively considerable net increase in any criteria pollutant for which the region is in non-attainment. With implementation of this mitigation measure, the proposed project would result in a **less than significant** impact to this topic.

Mitigation Measure

Mitigation Measure AIR-1: *Prior to any surface disturbance activities, the project applicant shall develop and implement a Dust Control Plan in accordance with NSAQMD Rule 226. The Dust Control Plan shall be submitted for approval by the NSAQMD. The Dust Control Plan shall comply with all applicable requirements as provided in the NSAQMD Guidelines for Assessing and Mitigating Air Quality Impacts of Land Use Projects (2009), including identifying project phases and construction schedules. The Dust Control Plan is required to include, but is not limited to, the following NSAQMD-recommended measures for the control of fugitive dust emissions:*

- *The project applicant shall be responsible for ensuring that all adequate dust control measures are implemented in a timely manner during all phases of project development and construction.*
- *All material excavated, stockpiled, or graded shall be sufficiently watered, treated, or covered to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard. Watering should occur at least twice*

daily, with complete site coverage.

- *All areas with vehicle traffic shall be watered or have dust palliative applied as necessary for regular stabilization of dust emissions.*
- *All on-site vehicle traffic shall be limited to a speed of 15 mph on unpaved roads.*
- *All land clearing, grading, earth moving, or excavation activities on a project shall be suspended as necessary to prevent excessive windblown dust when winds are expected to exceed 20 mph.*
- *All inactive portions of the development site shall be covered, seeded, or watered until a suitable cover is established. Alternatively, the applicant may apply County-approved nontoxic soil stabilizers (according to manufacturers' specifications) to all inactive construction areas (previously graded areas which remain inactive for 96 hours) in accordance with the local grading ordinance.*
- *All material transported off-site shall be either sufficiently watered or securely covered to prevent public nuisance, and there must be a minimum of 6 inches of freeboard in the bed of the transport vehicle.*

Response c): Less than Significant. Some land uses are considered more sensitive to air pollutants, such as carbon monoxide and toxic air contaminants, than others. The nearest sensitive receptors are residents at the eastern end of the trail alignment, along and near to Brockway Road and/or South River Street.

Emissions of carbon monoxide (CO) are of potential concern, as the pollutant is a toxic gas that results from the incomplete combustion of carbon-containing fuels such as gasoline or wood. CO emissions are particularly related to traffic levels under significant congestion, which would not result from the proposed project. Residents of this neighborhood would not be exposed to substantial pollutant concentrations from project construction or maintenance activities either. The proposed project would not create or contribute to a non-stationary source CO hotspot.

Toxic Air Contaminants (TACs) are also a category of environmental concern. The California Air Resources Board's (CARB) *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) provides recommendations for siting new sensitive land uses near sources typically associated with significant levels of TAC emissions, including, but not limited to, freeways and high traffic roads, distribution centers, and rail yards. The trail planning area is not located within 1,000 feet of any rail yard. The CARB has identified diesel particulate matter (DPM) from diesel-fueled engines as a TAC; thus, high volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic are identified as having the highest associated health risks from DPM. Health risks from TACs are a function of both the concentration of emissions and the duration of exposure. Health-related risks associated with DPM are primarily associated with long-term exposure and associated risk of contracting cancer.

Children, pregnant women, the elderly, and those with existing health problems are considered more sensitive to air pollution than others. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, day care centers, playgrounds, and medical facilities.

The proposed project does not involve long-term operation of any stationary diesel engine or other major on-site stationary source of TACs. Furthermore, the proposed project would not be expected to generate a significant number of new on-road vehicle trips. Therefore, the proposed project would not generate any substantial concentrations of TACs during operations. Moreover, the proposed project would not be located near sensitive receptors such as a school, day care facility, hospital, or senior center.

Construction activities have the potential to generate DPM emissions related to the number and types of equipment typically associated with construction. For example, off-road heavy-duty diesel equipment used for site grading would result in the generation of DPM. The residences located at the eastern end of the trail planning area, near Brockway Road and South River Street, would be the nearest existing sensitive receptors to the trail planning area and could become exposed to DPM emissions from the site during construction activities. However, small construction projects are not known to create toxic hotspots of DPM or other pollutants. Construction is temporary and occurs over a relatively short duration in comparison to the operational lifetime of the proposed project. The proposed project would require only a small number of construction vehicles. In addition, only portions of the site would be disturbed at a time during buildout of the proposed project, with operation of construction equipment regulated and sometimes occurring intermittently throughout the course of a day. Therefore, the likelihood that any one sensitive receptor would be exposed to high concentrations of DPM for any extended period would be very low. Because health risks associated with exposure to DPM or any TAC are correlated with high concentrations over a long period of exposure (e.g., over a 70-year lifetime), the temporary, intermittent construction-related DPM emissions would not be expected to cause any health risks to nearby sensitive receptors. Thus, construction of the proposed project would not expose sensitive receptors to significant concentrations of TACs.

Implementation of the proposed project would have a **less than significant** impact with regard to the potential to expose sensitive receptors to substantial pollutant concentrations.

Response d): Less than Significant. According to the CARB's Handbook, some of the most common sources of odor complaints are sewage treatment plants, landfills, recycling facilities, waste transfer stations, petroleum refineries, biomass operations, auto body shops, coating operations, fiberglass manufacturing, foundries, rendering plants, and livestock operations. The proposed project does not include any of these odor-producing uses, nor is the proposed trail planning area located near these types of uses.

Diesel fumes from construction equipment and delivery trucks are often found to be objectionable; however, the construction phase of the proposed project would be temporary and there would be no long-term nuisance associated with odors. There would be few to no net trips generated during the operational phase of the proposed project.

Implementation of the proposed project would have a **less than significant** impact and no mitigation is required.

IV. BIOLOGICAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?		X		

SETTING

Most of the project area is composed of Great Basin sagebrush scrub, with some forested, riparian, and wetland areas. Jeffery pine *(Pinus jefferyi)* is the dominant tree in forested habitats, while brushy areas support mountain big sagebrush *(Artemisia tridentata vaseyana),* antelope bitterbrush *(Purshia tridentata), and* yellow rabbitbrush (*Crysothamnus viscidiflorus*). Within the APE, black cottonwood *(Populus angustifolia)* trees border portions of the Truckee River. Aspens *(Populus tremuloides)* occur along the base of steep rocky slopes that form the southern border of the APE. The APE includes channels that may convey snowmelt during the spring melt. A large meadow area supporting willows *(Salix* sp.) and Nebraska sedge *(Carex nebrascensis)* was found in the central portion of the APE. Low areas that appeared to have been wetted earlier in the season were found south of a dirt road that traverses the western part of the APE. Flow on a slope in the eastern end of the APE supplied a large stand of willow, twinberry *(Lonicera involucrata)* and red-osier dogwood *(Cornus stolonifera).*

CALIFORNIA WILDLIFE HABITAT RELATIONSHIP SYSTEM

The California Wildlife Habitat Relationships (CWHR) is an information system for California's wildlife. CWHR contains life history, geographic range, habitat relationships, and management information on 694 species of amphibians, reptiles, birds, and mammals known to occur in the state. CWHR products are available to anyone interested in understanding, conserving, and managing California's wildlife. The CWHR habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly-occurring birds, mammals, reptiles and amphibians. There are 59 wildlife habitats in the CWHR System: 27 tree, 12 shrub, 6 herbaceous, 4 aquatic, 8 agricultural, 1 developed, and 1 non-vegetated. There are six wildlife habitat classifications within the APE out of 59 found in the state. The habitat classifications include: Barren, Eastside Pine, Sagebrush, Riverine, Montane Riparian, and Urban.

Barren habitat is defined by the absence of vegetation. It can be found with many different habitats, depending on the region of the state.

Eastside pine habitat occurs from about 4,000 to 6,500 feet elevation from Lake Tahoe north to Oregon, with small scattered stands that occur south to Inyo County. It is found on coarse, well-drained basaltic soils, in a drier, and colder setting, with all exposures represented. Stands are short to moderate height, 65 to 115 feet tall, with ponderosa pine being the dominant tree and some representation by Jeffrey pine, lodgepole pine, white fir, incense-cedar, Douglas-fir, California black oak and western juniper. Undergrowth typically includes one or more of the following shrubs: big sagebrush, antelope bitterbrush, manzanita, ceanothus, rubber rabbitbrush, mountain mahogany, creambush oceanspray and mountain snowberry. Prominent herbaceous plants include mule ears, arrowleaf balsamroot, Idaho fescue, pinegrass, bluebunch wheatgrass and bottlebrush squirreltail.

Sagebrush occurs at a wide range of middle and high elevations (1600 to 10,500 feet) along the east and northeast borders of California on dry slopes and flats. At lower elevations and on drier sites, species such as saltbrush, greasewood, creosotebush, and winterfat are found. At mid-elevations and on more mesic (wet) sites, species such as bitterbrush, curlleaf mountain mahogany, and western serviceberry are found. At high elevations this habitat intergrades with Ponderosa Pine and Aspen habitat types. Sagebrush stands are typically large, open, discontinuous stands of fairly uniform height (1.6 to 9.8 feet). Plant density ranges from very open, widely spaced, small plants to large, closely spaced plants with canopies touching.

Montane riparian habitats are found in the Klamath, Coast and Cascade ranges and in the Sierra Nevada south to about Kern and northern Santa Barbara Counties, usually below 8000 feet elevation. Riparian areas are found associated with montane lakes, ponds, seeps, bogs and meadows as well as rivers, streams and springs. Water may be permanent or ephemeral. The growing season extends from spring until late fall, becoming shorter at higher elevations. Most tree species flower in early spring before leafing out.

Riverine habitats can occur in association with many terrestrial habitats. Riparian habitats are found adjacent to many rivers and streams. Riverine habitats are also found contiguous to

lacustrine and fresh emergent wetland habitats. Streams begin as outlets of ponds or lakes (lacustrine) or rise from spring or seepage areas. All streams at some time experience very low flow and nearly dry up. Some streams, except for occasional pools, dry up seasonally every year. The temperature of the riverine habitat is not constant. In general, small, shallow streams tend to follow, but lag behind air temperatures, warming and cooling with the seasons. Rivers and streams with large areas exposed to direct sunlight are warmer than those shaded by trees, shrubs and high, steep banks. The constant swirling and churning of high-velocity water over riffles and falls result in greater contact with the atmosphere-and thus have a high oxygen content. In polluted waters, deep holes or low velocity flows, dissolved oxygen is lower (Smith 1974). Rivers and streams occur statewide, mostly between sea level and 8000 feet elevation.

Urban habitats are not limited to any particular physical setting. Three urban categories relevant to wildlife are distinguished: downtown, urban residential, and suburbia. The heavily-developed downtown is usually at the center, followed by concentric zones of urban residential and suburbs. There is a progression outward of decreasing development and increasing vegetative cover. Species richness and diversity is extremely low in the inner cover. The structure of urban vegetation varies, with five types of vegetative structure defined: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. A distinguishing feature of the urban wildlife habitat is the mixture of native and exotic species.

LITERATURE REVIEW AND SURVEYS

The Biological Evaluation/Biological Assessment of plants and wildlife was based on literature reviews, plant/wildlife data base records held by regulatory agencies, and extensive field surveys over a 10+ year span.

Biological evaluations of Phase 4 of the trail was initiated in 2006 when the Town contracted with JBR Environmental Consultants, Inc. JBR perform field surveys and evaluated the potential for special status plants and wildlife, as well as wetlands to occur within the boundary of the project. JBR conducted field surveys for sensitive plant and animal species, and wetlands on June 21 and 23, and July 6 and 13, 2006. The results of the field surveys and research performed is detailed in *Listed and Sensitive Species Assessment, Truckee Recreational Trail, Phase 4 and Martis Creek Realignment Area, Truckee, California* (JBR Environmental Consultants, Inc. 2007) and in *Delineation of Wetlands and Waters of the United States, Truckee Recreational Trail, Phase 4 and Martis Creek Realignment Area, Truckee, California* (JBR Environmental Consultants, Inc. 2007).

2016 RE-INITIATION OF INVESTIGATIONS

Following the previous field investigations by JBR Environmental Consultants in 2006-2007, the project went on hold. In 2016, the Town contracted with Mark Thomas and Company to begin evaluating alignments of the Phase 4 Trail. The intent of this effort was to identify opportunities and constraints with the objective of avoiding sensitive cultural and biological resources, and ultimately develop 30% plans for approval. De Novo Planning Group was hired to prepare a biological resources assessment of the project site. This involved an evaluation of the potential for special status plants and wildlife, wetlands, and general habitat documentation.

Prior to the field investigation, numerous maps, databases, and reports were reviewed including:

- Truckee, California, U.S. Geological Survey (USGS) 7.5-minute Quadrangle
- USGS National Hydrography Data Set
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps
- National Resource Conservation Service (NRCS) Soil Survey
- California Wildlife Habitat Relationships (CWHR) maps
- California Natural Diversity Database (CNDDB)
- California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants
- U.S. Fish and Wildlife Service's (USFWS) IPac
- U.S. Fish and Wildlife Service's (USFWS) Official List
- Truckee Trails and Bikeways Master Plan
- Sierra Nevada Forests Management Indicator Species Amendment Record of Decision (USDA Forest Service 2007)
- Tahoe National Forest Land and Resource Management Plan (USDA 1990)
- Migratory Landbird Conservation, Truckee River Legacy Trail Phase 3B Project. Tahoe National Forest, Truckee Ranger District. 2013
- Project Management Indicator Species Report, Truckee River Legacy Trail s Phase 3B Project. Tahoe National Forest, Truckee Ranger District 2013.
- Biological Evaluation for Sensitive Plants and Fungi, Truckee River Legacy Trail Phase 3B, Truckee Ranger District, Tahoe National Forest, 2013
- Weed Risk Assessment, Truckee River Legacy Trail Phase 3B Project, Tahoe National Forest Truckee Ranger District. 2013.
- Biological Evaluation/Biological Assessment, Birds Mammals, Amphibians, Reptiles, Fish, Invertebrates, Truckee River Legacy Trail Phase 3B, Truckee Ranger District, Tahoe National Forest 2013.

Field investigations were performed in the study area on July 27 and 28, 2016, August 19, 2016, September 23, 2016, June 16, 2017, and August 22, 2017. The surveys served several purposes. First, they served as reconnaissance of the site to establish the existing conditions of the site and to verify information gathered in the pre-field investigation. This included identification of the habitat types, hydrologic features, topography, soil characteristics, vegetation.

The field investigations followed the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2009). Field investigations were performed during the floristic period for species in the region. Field investigations during the winter period were deemed inappropriate do to the anticipated snow covering vegetative material. Due to the 2016 drought conditions, surveys were also performed in 2017 to represent the non-drought conditions. Field investigations were performed on foot using transects. In areas with high vegetative variation, transects were spaced approximately 10 feet apart. In areas with high vegetative monotony, transects were wider and the focus was on finding smaller vegetative inclusions among the monotony. All surveys were conducted on foot.

The field investigation included recording habitat, and the BSA was inspected for the presence, or potential for presence of wildlife. This included inspecting the trees for signs of active or remnant nests. The riparian corridor in the areas proposed for a bridge were intensively surveyed for birds. The timing of the field investigations coincided with the nesting season. The

area was inspected for its upland and aquatic habitat functions. The Truckee River was inspected for backwater areas or other areas with slower moving waters for potential amphibian breeding habitat. The perennial drainage originating as a seep along the eastern boundary was investigated for amphibian visual encounters. The timing of the field investigations coincided with multiple periods where visual encounters would be expected if present.

Tools used during the field investigations included a Trimble GeoExplorer XH Handheld (sub-foot unit), 30-meter tape measure, diameter tape, spade, Munsell color chart, Vortex 20-60x80 spotting scope, and Bushnell 10x42 binoculars.

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant with Mitigation.

Special-status amphibian species: There are five special status amphibian species that were evaluated for this project.

Northern leopard frog (*Lithobates pipiens*). The northern leopard frog is a California species of special concern. The northern leopard frog is a smooth-skinned green, brown, or sometimes yellow-green frog covered with large, oval dark spots, each of which is surrounded by a lighter halo. Adult body lengths range from 2 to 4.5 inches. The northern leopard frog requires a mosaic of habitats to meet the requirements of all its life stages and breeds in a variety of aquatic habitats that include slow-moving or still water along streams and rivers, wetlands, permanent or temporary pools, beaver ponds, and human-constructed habitats such as earthen stock tanks and borrow pits. Subadult northern leopard frogs typically migrate to feeding sites along the borders of larger, more permanent bodies of water and recently-metamorphosed frogs will move up and down drainages and across land to locate new breeding areas.

There are documented occurrences of this species within approximately nine miles of the APE. During field surveys, there was no observations of this species. The seasonal drainages and seasonal wetland areas are not appropriate habitat for this species. The Truckee River within the planning area is not conducive to this species given: 1) little available backwater or other off-channel aquatic habitat to provide off-channel breeding or non-breeding refugia for frogs; 2) swift flows throughout the APE; and; 3) a lack of nearby pond or lake complexes that support frog breeding populations. Additionally, the Truckee River supports salmonids (i.e. brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*), and rainbow trout (*Oncorhynchus mykiss*) populations. Such predatory fish are also not conducive to optimal environmental conditions for frogs. The small ephemeral drainage/seep on the eastside of the APE was assessed for the potential to provide habitat. The drainage is not conducive to this species given: 1) lacks appropriate depth to provide off-channel breeding, non-breeding refugia, or overwintering habitat for frogs; and; 2) a lack of nearby pond or lake complexes that support frog breeding populations. Based on these findings, the northern leopard frog is considered unlikely to occur in the APE. The project area does not support suitable habitat for northern leopard frog. Therefore, this project will not affect this species or its habitat, and no further analysis is necessary.

California red-legged frog (*Rana aurora draytonii*) is a federally threatened species with USFWS finalized designation of critical habitat within three locations in or adjacent to the Tahoe National Forest (USFWS 2010; 75 FR 12816). Locations include PLA-1, Michigan Bluff, NEV-1, Sailor Flat, and YUB-1, Oregon Creek. In the Sierra Nevada, the California red-legged frog historically occupied portions of the lower elevations west of the crest from Shasta County south to Tulare County (USFWS 2002). Almost all known California red-legged frog populations have been documented at elevations below about 1,050 meters (3,500 feet) with some historical sightings documented at elevations up to 1,500 meters (5,200 feet) (USFWS 2002). The project area does not support suitable habitat for California red-legged frog. Therefore, this project will not affect this species or its habitat, and no further analysis is necessary.

Mountain yellow-legged frog (*Rana muscosa*) is listed as USFS R5 Sensitive and is a USFWS Candidate species, being part of the Sierra Nevada Distinct Population Segment (DPS). Recent genetic analysis combined with morphological and acoustic studies have described *Rana muscosa* as two separate species, *Rana muscosa* (mountain yellow-legged frog) and *Rana sierrae* (Sierra Nevada yellow-legged frog). Mountain yellow-legged frogs occur in the Sierra Nevada from around 4,500 feet to over 12,000 feet elevation, and inhabit ponds, lakes, and streams of sufficient depth for overwintering (Jennings and Hayes 1994). All age classes (subadult and adult frogs, and larvae) overwinter underwater; in high elevations they are restricted to relatively deep lakes (over 5 feet deep) that do not freeze solid in winter (Knapp 1994, Knapp and Matthews 2000). Frogs (subadults and adults) hibernate underwater in winter; winterkill of subadults and adults may occur due to oxygen deprivation over winter under ice, while larvae are more resistant (Bradford 1983). Little is known about their habitat requirements in spring, stream, and pond habitats where they are typically found in the Tahoe National Forest. Based on habitat characteristics of occupied locations, they are thought to overwinter in spring and stream habitats, possibly less than 3 feet deep, that do not freeze solid in winter, such as deep pools in stream channels. During spring thaw, frogs emerge to the surface to bask in the sun, or travel over ice and snow to other nearby bodies of water (Pope and Matthews 2001), while larvae seek warmer water near shore (after spring turnover in large bodies of water) (Bradford 1984).

The seasonal drainages and seasonal wetland areas are not appropriate habitat for this species. The Truckee River is not conducive to this species given: 1) little available backwater or other off-channel aquatic habitat to provide off-channel breeding or non-breeding refugia for frogs; 2) swift flows throughout the APE; and; 3) a lack of nearby pond or lake complexes that support mountain yellow-legged frog breeding populations. Additionally, the Truckee River supports salmonids (i.e. brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*), and rainbow trout (*Oncorhynchus mykiss*) populations. Such predatory fish are also not conducive to optimal environmental conditions for mountain yellow-legged frog. The small ephemeral drainage/seep on the eastside of the APE was assessed for the potential to provide habitat. The drainage is not conducive to this species given: 1) lacks appropriate depth to provide off-channel breeding, non-breeding refugia, or overwintering habitat for frogs; and; 2) a lack of nearby pond or lake complexes that support mountain yellow-legged frog breeding populations. Finally, mountain yellow-legged frog populations are not identified within 5 miles of the APE and no records are reported from any nearby Truckee River tributaries. Based on these findings, the mountain

yellow-legged frog is considered unlikely to occur in the APE. The project area does not support suitable habitat for mountain yellow-legged frog. Therefore, this project will not affect this species or its habitat, and no further analysis is necessary.

Sierra Nevada yellow-legged frog (*Rana sierra*). The Sierra Nevada yellow-legged frog (SNYLF) is a California Threatened species and Federal Endangered species. Suitable habitat for the SNYLF includes streams, ponds and lakes, all of which is present within the biological planning area. Recent genetic analysis combined with morphological and acoustic studies have described *Rana sierrae* (SNYLF) as a separate species from *Rana muscosa* (mountain yellow-legged frog). Typical habitat includes lakes, ponds, marshes, meadows, and streams at high elevations— typically ranging from about 4,500 to 12,000 feet, but can occur as low as about 3,500 feet in the northern portions of their range. SNYLFs are highly aquatic and adults can be found sitting on rocks along the shoreline, where there was little or no vegetation. They are rarely found more than 3.3 feet from water.

The CNDDB provides documented occurrences of this species within approximately four miles to the north of the APE.

The seasonal drainages and seasonal wetland areas are not appropriate habitat for this species. The small ephemeral drainage/seep on the eastside of the APE was assessed for the potential to provide habitat. The drainage is not conducive to this species given: 1) lacks appropriate depth to provide off-channel breeding, non-breeding refugia, or overwintering habitat for frogs; and; 2) a lack of nearby pond or lake complexes that support SNYLF breeding populations.

The Truckee River within the planning area is not conducive to this species given: 1) little available backwater or other off-channel aquatic habitat to provide off-channel breeding or non-breeding refugia for frogs; 2) swift flows throughout the APE; and; 3) a lack of nearby pond or lake complexes that support SNYLF breeding populations. Additionally, the Truckee River supports salmonids (i.e. brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*), and rainbow trout (*Oncorhynchus mykiss*) populations. Such predatory fish are also not conducive to optimal environmental conditions for mountain yellow-legged frog.

The proposed project includes a small section of the Donner Creek near the confluence with the Truckee River, which is documented by the USFS as potential habitat for SNYLF. Normally the USFS would require an amphibian habitat assessment (considering presence of predators, water flow regime, water depth, riparian vegetation, food availability, refugia, overwintering habitat, etc.) However, because of the reasons stated above, this additional analysis is deemed unnecessary and instead pre-construction surveys are recommended to mitigate this potential impact .to a **less than significant** level.

Conclusion: Implementation of the proposed project would involve limited disturbances to aquatic and wetland habitat. This habitat was evaluated for the potential for special status amphibians to be present. It was found that the Truckee River and Donner Creek confluence area provided little available backwater or other off-channel aquatic habitat to provide off-channel breeding or non-breeding refugia for frogs; the river flows are too swift throughout the APE; and;

there is a lack of nearby pond or lake complexes that support frog breeding populations. The small ephemeral drainage/seep on the eastside of the APE was assessed for the potential to provide habitat. The drainage is not conducive to frogs for many of the same reasons that the Truckee River and Donner Creek area not conducive to frogs. Implementation of the following mitigation measure would reduce this impact to a **less than significant** level.

Mitigation Measure

Mitigation Measure BIO-1*: If any federal or state threatened, endangered, proposed, or Forest Service sensitive species previously unknown in the project area are detected or found within 250 feet of project activities, appropriate mitigation measures will be implemented based on input from the aquatics biologist, botanist, and/or wildlife biologist. Measures can include, but are not limited to, flagging and avoiding an area, implementing a species specific LOP, or designating a protected activity center.*

Mitigation Measure BIO-2*: The project proponent shall implement the following avoidance and minimization measures for Sierra Nevada yellow-legged frog (Rana sierra) for any work around Donner Creek (i.e. Donner Creek Bridge and/or restoration): Pre-construction surveys for the Sierra Nevada yellow-legged frog shall be conducted in all potential habitat by a qualified biologist prior to construction in the project area around Donner Creek Should the Sierra Nevada yellow-legged frog be identified, the impact will be mitigated through avoidance or relocation by a permitted biologist, as approved by the California Department of Fish and Game. To minimize effects to SNYLF during and after project implementation, tightly woven fiber netting or similar material shall not be used for erosion control or other purposes within 30 meters of Donner Creek. The Truckee River access shall not disturb additional area other than for restoration/revegetation within identified SNYLF habitat.*

Special-status bird species: There are eight special-status bird species that are documented by the CDFW within a ten-mile radius of the APE including: Cooper's hawk (*Accipiter cooperii*), northern goshawk (*Accipiter gentilis*), black swift (*Cypseloides niger*), yellow warbler (*Dendroica petechia brewsteri*), willow flycatcher (*Empidonax traillii*), Bald eagle (*Haliaeetus leucocephalus*), Osprey (*Pandion haliaetus*), and Black-backed woodpecker (*Picoides arcticus*). There are an additional 20 migratory birds that are documented by the USFWS, and two USFS Sensitive species that were evaluated. Each are discussed below:

No/Low Potential for Presence - No Mitigation Necessary

Black swift (*Cypseloides niger*). The California Department of Fish and Wildlife lists the Black Swift as a Species of Special Concern. Black swift seems to be limited in range by its very particular choice of nesting sites: it requires shady, sheltered spots on vertical cliffs totally inaccessible to predators, and often nests on the damp rock behind waterfalls.

There are documented occurrences of Black swift within approximately ten miles of the APE. Field surveys did not reveal the presence of this species within the APE. There does not appear to be suitable habitat for this species in the APE. Implementation of the proposed project would have a **less than significant** impact on this species.

Greater sandhill crane (*Grus canadensis tabida*). This is a California State Threatened species and is listed as Sensitive on the Region 5 Forester's Sensitive Species List (USDA Forest Service 1998). The California Central Valley population of sandhill cranes is the most western of five distinct populations. A total of 276 cranes were recorded within the state during a breeding pair survey in 1988 (California Department of Fish and Game 1997). In California, greater sandhill cranes winter primarily throughout the Sacramento, San Joaquin, and Imperial Valleys (Grinnell and Miller 1944). Current known breeding populations are located within Lassen, Modoc, Plumas, Shasta, Sierra, and Siskiyou Counties (James 1977, Littlefield 1982, California Department of Fish and Game 1994). In the Tahoe National Forest, a breeding population of approximately 11 pair occur within Carman Valley and Kyburz Flats on the Sierraville Ranger District.

California pairs of sandhill cranes generally nest in wet meadow, shallow lacustrine, and fresh emergent wetland habitat, with nests constructed of large mounds of water plants over shallow water (Zeiner et al. 1990, California Department of Fish and Game 1994). Studies in California during 1988 showed water depths averaging 2.3 inches (California Department of Fish and Game 1994). Open meadow habitats are also used (Littlefield 1989). On dry sites, nests are scooped-out depressions lined with grasses (Zeiner et al. 1990). Nesting territory size depends on the quality of available habitat.

The project area does not support ideal habitat for greater sandhill crane, and none are documented within ten miles of the planning area. The seasonal wetland areas do not provide the appropriate composition of vegetation and shallow water; however, the seasonal wetland areas are largely avoided by design. Implementation of the proposed project would have a **less than significant** impact on this species.

California spotted owl (*Strix occidentalis occidentalis*). The California spotted owl is a management indicator species on all National Forests in the Sierra Nevada Bioregion, and is listed on the USFS R5 Sensitive Species List for the Tahoe National Forest. California spotted owls utilize various compositions of mixed conifer, ponderosa pine, red fir and montane hardwood forest types with high structural diversity, and dominated by medium (12-24") and large (>24") trees and with moderate to high levels of canopy cover (generally >40). Optimal habitat conditions involve mixtures of forest stands with differing compositions and densities. Spotted owl home range sizes are extremely variable across their range, and are suspected to be linked to availability of prey. California spotted owl home range is smallest in habitats at relatively low elevations that are dominated by hardwoods, intermediate in size in mixed-conifer forests, and largest in true fir forests. Recent research has assessed California spotted owl habitat at range of several hundred acres to several thousand acres.

Pure eastside pine habitat is not considered to be suitable unless it is well stocked and has a white fir understory which may provide stand structural components that make it marginally suitable. The probability of use as foraging habitat decreases as the basal area of ponderosa pine increases.

The project area does not support ideal habitat for this species. The eastside pine habitat and sagebrush habitat do not provide the composition of vegetation ideal for this species. The project

area does not support suitable nesting or foraging habitat for California spotted owl. Therefore, this project will not affect this species or its habitat, and no further analysis is necessary. Implementation of the proposed project would have a **less than significant** impact on this species.

Moderate Potential for Presence

Cooper's hawk (Accipiter cooperii). The California Department of Fish and Wildlife lists the Cooper's hawk as a California raptor species without any specific listing. Cooper's hawk a medium-sized hawk found in mature forest, open woodlands, wood edges, and river groves. They nest in coniferous, deciduous, and mixed woods, typically those with tall trees and with openings or edge habitat nearby. They feed mostly on birds and small mammals.

There are documented occurrences of Cooper's hawk within approximately eight miles of the APE. During field surveys, there was no evidence of this species; however, this species could establish nests in any given breeding season along the Truckee River. The proposed project is not anticipated to result in any significant removal of habitat in any of the riparian areas along the Truckee River within the APE. The proposed project will result in some tree removal within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, bridge and trail alignments that are least likely to have adverse effects on biological resources were considered, and those with greater impacts were eliminated. Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced to a less than significant level. Mitigation Measure BIO-3 requires a preconstruction survey to be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Northern goshawk (*Accipiter gentilis*). The California Department of Fish and Wildlife lists the Northern goshawk as a Species of Special Concern. Northern goshawks occupy a variety of habitats including mature coniferous and deciduous forests. Nest sites are generally in stands of larger trees with dense canopy cover. Northern goshawks hunt in openings and in forested stands with an open understory that allow for catching prey in flight. Within a nest stand, northern goshawks may have as many as eight alternate nest sites. They eat a wide variety of small mammals and birds. They lay one to four eggs in early spring, with a clutch commonly producing two to three chicks. Young fledge at about five to six weeks old, but are dependent upon their parents for food until late summer or early fall. (USFWS, 2011).

There are documented occurrences of Northern goshawk within approximately two miles of the biological study area. Nesting habitat for this species is potentially present in the mature Jeffery pine (*Pinus jefferyi*) stands within the biological study area. During field surveys there was no evidence of nesting; however, this species could establish nests in any given breeding season. The proposed project will result in some tree removal within the biological study area. Preconstruction surveys will be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within

250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Yellow warbler (*Dendroica petechia brewsteri*). The California Department of Fish and Wildlife lists the yellow warbler as a Species of Special Concern. Yellow warblers generally occupy riparian vegetation in close proximity to water along streams and in wet meadows. They are found in willows, cottonwoods, and in numerous other species of riparian shrubs or trees. These birds feed mainly on animal matter, including ants, bees, wasps, caterpillars, beetles, true bugs, flies, and spiders, as well as some berries and similar small juicy fruits. They arrive in their breeding range in late spring and begin moving to their winter range again starting as early as July, or as soon as their young are fledged (CDFW, 2008).

There are documented occurrences of yellow warbler within less than two miles of the APE. Field surveys did not reveal the presence of this species within the APE. Potentially suitable yellow warbler habitat is present along the Truckee River within the APE. Additional potential habitat is present in the riparian stream on the steep slope near the eastern end of the APE. The proposed project is not anticipated to result in any significant removal of habitat in any of the riparian areas within the APE. The proposed project will result in some tree removal within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, bridge and trail alignments that are least likely to have adverse effects on biological resources were considered, and those with greater impacts were eliminated. Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced to a less than significant level. Mitigation Measure BIO-3 requires a preconstruction survey to be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Willow flycatcher (*Empidonax traillii*). The California Department of Fish and Wildlife lists the willow flycatcher as Endangered. Willow flycatchers occupy riparian and mesic (wet) upland thickets. They are a "sit and wait" predator of winged insects. They were historically common summer residents throughout California, breeding wherever extensive willow thickets occurred, however, they have been extirpated as breeding birds over much of their range in California. Today, they are rare to locally uncommon summer residents in wet meadow and montane riparian habitats at 2,000-8,000 ft. in the Cascade and Sierra Nevada ranges, and occur along the Kern, Santa Margarita, and San Luis Rey rivers. In the spring and fall, willow flycatchers are fairly common transients throughout the state's riparian willow.

There are documented occurrences of willow flycatchers within approximately three miles of the APE. Field surveys did not reveal the presence of this species within the APE. Potentially suitable willow flycatchers habitat is present in scattered locations along the Truckee River within the APE. The proposed project is not anticipated to result in any significant removal of habitat in any of the riparian areas along the Truckee River within the APE. The proposed project will result in some tree removal within the APE. As part of this analysis, the lead agency, in coordination with

local, state, and federal agencies, bridge and trail alignments that are least likely to have adverse effects on biological resources were considered, and those with greater impacts were eliminated.

Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced. Preconstruction surveys will be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Bald eagle (*Haliaeetus leucocephalus*). The California Department of Fish and Wildlife lists the bald eagle as Endangered. This species is our national symbol and one of North America's largest birds, weighing about 8 to 14 pounds with a wingspan of 6½ to 8 feet. Females are larger than males. Adults are dark brown with a pure white head and tail. Younger birds are mostly brown, mottled with varying amounts of white. They acquire their adult plumage at 4 or 5 years of age. This species is a powerful predator, but they often feed on carrion, including dead fish washed up on shore. They are also known to steal food from Ospreys and other smaller birds. The highest concentrations of this species be found wintering along rivers or reservoirs in some areas.

There are documented occurrences of bald eagle within approximately six miles of the APE. During field surveys, there was no evidence of this species; however, this species could establish nests in any given breeding season along the Truckee River. The proposed project is not anticipated to result in any significant removal of habitat in any of the riparian areas along the Truckee River within the APE. The proposed project will result in some tree removal within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, bridge and trail alignments that are least likely to have adverse effects on biological resources were considered, and those with greater impacts were eliminated. Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced. Preconstruction surveys will be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of the Mitigation Measure BIO-3 the potential for an impact is reduced to a **less than significant** level.

Osprey (*Pandion haliaetus*). The California Department of Fish and Wildlife lists the osprey as a California raptor species without any specific listing. This is a very distinctive fish-hawk, formerly classified with other hawks but now placed in a separate family of its own. They are found along coastlines, lakes, and rivers almost worldwide, the osprey is often seen flying over the water, hovering, and then plunging feet-first to catch fish in its talons. After a successful strike, the bird rises heavily from the water and flies away, carrying the fish head-forward with its feet. Bald Eagles sometimes chase Ospreys and force them to drop their catch.

There are documented occurrences of osprey within approximately two miles of the APE. During field surveys, there was no evidence of this species; however, this species could establish nests in any given breeding season along the Truckee River. The proposed project is not anticipated to

result in any significant removal of habitat in any of the riparian areas along the Truckee River within the APE. The proposed project will result in some tree removal within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, bridge and trail alignments that are least likely to have adverse effects on biological resources were considered, and those with greater impacts were eliminated. Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced to a less than significant level. Mitigation Measure BIO-3 requires a preconstruction survey to be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Black-backed woodpecker (*Picoides arcticus*). This species is not listed under federal or state regulations, but is generally considered rare. They are typically found in boreal forests of firs and spruces. They favor areas of dead or dying conifers, and may concentrate at burned or flooded areas with many standing dead trees. They are also found in undamaged forests of pine, Douglas-fir, hemlock, tamarack, and spruce, especially spruce bogs.

There are documented occurrences of this species within approximately nine miles of the APE. During field surveys, there was no evidence of this species; however, this species could establish itself in any given breeding season. The proposed project is not anticipated to result in any significant removal of habitat within the APE. The proposed project will result in some tree removal within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, bridge and trail alignments that are least likely to have adverse effects on biological resources were considered, and those with greater impacts were eliminated. Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced to a less than significant level. Mitigation Measure BIO-3 requires a preconstruction survey to be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Great gray owl (*Strix nebulosi*) is listed on the USFS R5 Sensitive Species List for the Tahoe National Forest. The distribution of the great gray owl is circumpolar, with the Sierra Nevada encompassing the most southern extent of the species (Beck and Winter 2000). The core range of the great gray owl in California is centered on the greater Yosemite National Park area (Winter 1986, Greene 1995, Beck and Winter 2000, Sears 2006). There are records of great gray owls as far south as Tulare County, and to the north from the Modoc, Lassen, Plumas, Tahoe, and Eldorado National Forests, and from Del Norte, Humboldt, Shasta, and Siskiyou Counties (Beck and Winter 2000).

Current knowledge on great gray owl distribution and habitat requirements is somewhat limited, in part because research and surveys are difficult due to the wary and elusive behavior of the species (Sears 2006, Rognan 2007). In the Sierra Nevada, great gray owls have been found to require two particular habitat components; a meadow system with a sufficient prey base, and

adjoining forest with adequate cover and nesting structures (Winter 1980, Winter 1986, Greene 1995, van Riper and van Wagtendonk 2006). Meadows appear to be the most important foraging habitat for great gray owls, where approximately 93% of their prey is taken (Winter 1981). In the Sierra Nevada, great gray owl breeding activity is generally found in mixed coniferous forest from 2,500 to 8,000 feet elevation where such forests occur in combination with meadows or other vegetated openings (Greene 1995, Beck and Winter 2000). In their study in Yosemite National Park, van Riper and van Wagtendonk (2006) found that home ranges were located adjacent to meadows in red fir and Sierra mixed conifer most frequently, and home range boundaries followed meadow and drainage topography. They found that most females nested where red fir was the most common habitat type, and some nested in habitat dominated by lodgepole pine (van Riper and van Wagtendonk 2006). Habitat types used by breeding females included Sierra mixed conifer, montane riparian, and montane chaparral types (van Riper and van Wagtendonk 2006). Nesting usually occurs within 840 feet (averaging 500 feet) of the forest edge and adjacent open foraging habitat (Beck and Winter 2000). Greene (1995) found that nest sites had greater canopy closure (mean 84%) and were more likely located on northern aspects than expected by chance.

In the Tahoe National Forest, there have been few recorded great gray owl sightings, and nesting has only recently been confirmed in one location on or near private land. Possible sighting and/or detection locations include Perazzo Meadows (May 2004), along Pliocene Ridge Road (occasional sightings since 2003 with confirmed nesting in the area in 2009), three miles north of Nevada City (an adult located in January 1996 and January 1997), Donner Ranch Ski Area (pair observed in November 1994), near Spencer Lakes at the northern border of the Tahoe National Forest (detection in July 1990), south of Lincoln Creek Campground (an individual in July 1987), and near Sattley (pair in January 1985).

The project area does not support ideal habitat for this species. The seasonal wetland areas provide some prey opportunity, but the composition of vegetation and lack of water throughout the season is a limiting factor for prey. Nevertheless, the seasonal wetland areas are largely avoided by design and there will be preconstruction surveys for birds to ensure that there are no nesting birds that are disturbed. Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced. Preconstruction surveys will be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Other Raptors and Migratory Birds: There are a variety of raptors and migratory birds that are known throughout the Sierra Nevada range including the Tahoe region. The USFWS IPAC lists an additional 20 migratory birds that were not documented in the CNDDB. These birds are protected by a variety of laws that prevent the harassment and willful take of these species. There are numerous other protected raptors and migratory birds that are not mapped, but may utilize the APE or vicinity at times. These species are highly mobile and may forage throughout the APE.

The proposed project would result in some loss to foraging habitat in the area that the trail alignment would be constructed. Construction activities would generally occur during the spring, summer, and/or fall months, which is generally when migratory birds would be present. Construction activities could disrupt nesting depending on the proximity of the activities to the nest. Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced to a less than significant level. Mitigation Measure BIO-3 requires a preconstruction survey to be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Mitigation Measure

> ***Mitigation Measure BIO-3:*** *Pre-construction surveys for yellow warbler, tree-nesting raptors and migratory birds shall be conducted within 30 days prior to any construction that will occur between March 15 and August 31 of any given year. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction survey, the site shall be resurveyed. Preconstruction surveys shall be conducted within 250 feet of the proposed project impact area by a qualified biologist. Should active nests be identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged, unless consultation with the regulatory agency(s) has occurred.*

Special-status fish species: There are three special status fish species that were evaluated for this project.

Hardhead (*Mylopharodon conocephalus*) is listed as Sensitive on the Region 5 Forester's Sensitive Species List (USDA Forest Service 1998). Hardhead are widely distributed in low to mid-elevation streams in the main Sacramento-San Joaquin drainage as well as the Russian River drainage. The project area does not support suitable habitat for hardhead. Therefore, this project will not affect this species or its habitat, and no further analysis is necessary.

Lahontan Lake tui chub (*Siphateles bicolor pectinifer*) is listed as Sensitive on the Region 5 Forester's Sensitive Species List (USDA Forest Service 1998). The Lahontan Lake tui chub are a cyprinid subspecies found in Lake Tahoe and Pyramid Lake (Nevada) which are connected to each other by the Truckee River and in nearby Walker Lake (Nevada). The Lake Tahoe population is the only confirmed population in the Sierra Nevada, with a probable population in Stampede, Boca and Prosser Reservoirs in the Tahoe National Forest. The project area does not support suitable habitat for Lahontan Lake tui chub. Therefore, this project will not affect this species or its habitat, and no further analysis is necessary.

Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*). Lahontan cutthroat trout (LCT), like other trout species, are found in a wide variety of cold-water habitats including large terminal alkaline lakes, alpine lakes, slow meandering rivers, mountain rivers, and small headwater tributary streams. Generally, they occur in cool flowing water with available cover of well-

vegetated and stable stream banks, in areas where there are stream velocity breaks, and in relatively silt free, rocky riffle-run areas. They are endemic to the Lahontan basin of northern Nevada, eastern California, and southern Oregon. Today, they occupy between 123 to 129 streams within the Lahontan basin and 32 to 34 streams outside the basin, totaling approximately 482 miles of occupied habitat. The species is also found in five lakes, including two small populations in Summit and Independence Lakes. Self-sustaining populations of the species occur in 10.7 percent of the historic stream habitats and 0.4 percent of the historic lake habitats.

LCT has been introduced into the Truckee River as an unofficial experimental population (JBR 2007). These fish are reported to spawn in smaller tributaries including the lower Martis Creek. The LCT fish involved in this plant were taken from Pyramid Lake and Pilot Peak stocks.

Implementation of the proposed project would involve limited indirect disturbances to the LCT habitat in the Truckee River. Direct impacts would be avoided by the construction of a bridge spanning over the majority of the Truckee River. No in-water activities are anticipated except for potential removal of existing footings in Donner Creek. Removal of the footings may be part of the restoration of the Donner Creek confluence area, or if necessary, mitigation for floodplain impacts under the Donner Creek Bridge Alternative. Under this scenario, the creek would be temporarily rerouted while removing the footings. This design is intended to avoid the aquatic habitat of the Truckee River to the maximum extent feasible.

All construction activity within the 100-year floodplain zone and/or jurisdictional wetlands are restricted to May 1st to October 15th in order to avoid water quality impacts and disturbance to riparian habitat adjacent with the Truckee River. Restricting work to this timeframe shall limit work to the driest period of the year, thereby avoiding excessive runoff and erosion. Proposed construction activities shall avoid contact with the ordinary high-water mark of the Truckee River and nearby wetland habitat to the extent feasible. The ordinary high-water mark shall be defined by the "…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [Federal regulations (33 CFR 328.3(e))], equivalent to a biological vegetation mark. Any encroachment into these areas must be authorized through a regulatory permit issued by the applicable regulatory bodies (e.g. the USACE, LRWQCB, and CDFW) prior to implementation. Additionally, the proposed project requires a Construction General Permit through the State Water Resources Control Board (SWRCB). The permit requires implementation of a Stormwater Pollution Prevention Plan that includes best management practices, including: site-specific erosion control and bank stability measures, containment or proper handling of construction materials, construction scheduling, and construction fencing. In addition, permanent stormwater treatment and containment for new improvements would be included in this permit. The intent of these measures is to avoid and minimize indirect impacts to the LCT by protecting the water quality. Direct impacts are not anticipated given the limited in-water activities, and the high mobility of this species. With implementation of the mitigation measures BIO-7, BIO-8, BIO-9, GEO-2, HDY-

1, HYD-2, and HYD-3, provided herein, implementation of the proposed project would have a **less than significant** impact on special status fish species.

Special-status insect species: There are two special status insect species that were evaluated for this project. The first is the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). This species is deemed to not be present on the project site given the lack of appropriate elderberry habitat. The other species evaluated is the Western bumble bee (*Bombus occidentalis*), which is potentially present. This is a USFS sensitive species that was once common & widespread, but has declined precipitously from CA, perhaps from disease. The proposed project would result in indirect effects to the western bumble bee within the analysis area from the loss of habitat. Construction of the project would impact between approximately 11.4 and 12.6 acres, depending on the exact alignment and bridge that is constructed. This would include between approximately 5.0 and 5.9 acres of permanent impact and between 6.6 and 6.7 acres of temporary disturbance. The temporary impact areas would be revegetated, such that it would remain habitat for this species.

The bumble bee would also be directly affected if present during project implementation. During implementation, workers, along with motorized equipment would be used to complete the proposed action. The human presence, noise disturbance, and ground disturbance could displace individual bees, resulting in direct effects to the species.

The habitat that would be lost is a small area in comparison with the entirety of bumble bee habitat. Displaced bumble bees would move out of the area into other adjacent suitable habitats. Additionally, portions of the trail that will be rehabilitated would likely in the future support re-growth of vegetative species that provide foraging opportunities within the project area. Because of the small scope of this project and the likely re-growth in rehabilitated areas, it is determined that the proposed project may affect the western bumble bee, but is not likely to lead to a trend toward federal listing or loss of viability within the planning area. Implementation of the proposed project would have a **less than significant** impact on special status insect species.

Special-status mammal species: There are nine special-status mammal species that are documented within a ten mile radius of the APE including: Sierra Nevada mountain beaver (*Aplodontia rufa californica*), California wolverine (*Gulo gulo*), Sierra Nevada snowshoe hare (*Lepus americanus tahoensis*), western white-tailed jackrabbit (*Lepus townsendii townsendii*), Sierra marten (*Martes caurina sierrae*), long-legged myotis (*Myotis volans*), gray-headed pika (*Ochotona princeps schisticeps*), fisher - West Coast DPS (*Pekania pennanti*), and Sierra Nevada red fox (*Vulpes necator*). In addition to those documented, there are a variety of bat species with the potential to occur in the region. Each is discussed below.

Special Status Bats: Pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), Western red bat (*Lasiurus blossevillii*), Fringed myotis (*Myotis thysanodes*), and long-legged myotis (*Myotis volans*) are each listed as CDFW Species of Special Concern and/or listed as USFS R5 Sensitive. These special status species occur in a variety of habitats throughout California. Within the regional vicinity of the planning area bats can be found roosting in caves, mines, under bark, in hollow trees, in rock or other crevices, in building and bridge crevices, and

sometimes in junk pile crevices. These special status bat species are mobile and can occur throughout the region.

During field surveys, there was no evidence of these special status bat species; however, the APE provides potential roosting habitat for this species in numerous locations (under bark or in tree hollows), and these species could traverse through the APE at times foraging, and they could use rocks or trees for roosting. The proposed project will result in tree removal, and impacts to the rocky talus areas, which will result in removal of potential habitat for these special status bat species within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, is considering the bridge and trail alignments that are least likely to have adverse effects on biological resources, including these special status bat species.

Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced. Preconstruction surveys will be conducted prior to any construction and if bat roosts are identified by these surveys, the regulatory agencies will be notified to develop an appropriate measure to avoid the species. This may include exclusionary devises if appropriate, or may include avoidance if it is a maternity roost. Additionally, no construction shall take place after sunset or before sunrise. Implementation of the following mitigation measure (Mitigation Measure BIO-4) would ensure that any potential to impact this species is reduced to a ***less than significant*** level.

Mitigation Measure

> ***Mitigation Measure BIO-4****: Any snags measuring at least 20 inches diameter at breast height, and any rocky crevices (i.e. talus slopes) shall be inspected by a qualified biologist for potential bat use not more than 15 days prior to removal. Should a bat roost be discovered in a snag or crevice, the regulatory agencies shall be notified to develop appropriate mitigation measures (such as exclusionary nets). No construction shall take place after sunset or before sunrise.*

Sierra Nevada mountain beaver (Aplodontia rufa californica) is a CDFW Species of Special Concern. The field survey revealed evidence of past beaver activity in the ice pond area within the APE. It is not known if this activity is associated with this species or another beaver species. There are documented occurrences of Sierra Nevada mountain beaver within approximately 2.4 miles of the APE. Field surveys did not reveal the presence of this species in the APE. The Truckee River is a potential movement corridor for this aquatic mammal; however, it is not anticipated that the Truckee River serves as permanent habitat for this species, as they typically inhabit smaller tributaries with slower moving water.

Implementation of the proposed project would involve limited disturbances to the Truckee River, and it would not disturb the ice pond area. Impacts would be limited to the construction of a bridge crossing over the Truckee River on the eastern end of the APE. While the design of the project is intended to avoid the aquatic habitat of the Truckee River, it will require a bridge crossing in one location to ensure trail connectivity. Because construction activities will require some temporary disturbance to the Truckee River during the construction phase, it has the potential for short term temporary impacts to this species if it were moving through the area

during construction. Given this species mobility, and ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. Implementation of the proposed project would have a **less than significant** impact.

California wolverine (*Gulo gulo*) is a CDFW listed Endangered species. They are found in the north coast mountains and Sierra Nevada in a wide variety of high elevation habitats. There are several CNDDB documented occurrences of California wolverine within the ten-mile radius map of the APE. Documented occurrences are in Sagehen Creek (7.5 mi north), Euer Valley (5 mi northwest), Independence Road (8.5 mi northwest), and along SR 89 near the entrance to Squaw Valley (8 mi south). The APE is not ideal habitat for this species given the human presence within the surrounding developments and there is no evidence of existing or past denning in the APE. Given this species' ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. The proposed project is anticipated to have no effect on this species given limited disturbance to its habitat and the lack of any evidence that this species is present. Implementation of the proposed project would have a **less than significant** impact.

Sierra Nevada snowshoe hare *(Lepus americanus tahoensis)* is a CDFW Species of Special Concern. There are documented occurrences of Sierra Nevada snowshoe hare within the APE. The riparian thickets along the Truckee River, as well as the coniferous and sage brush habitat in the APE provide potential habitat. The proposed project will provide limited disturbance within the APE. All construction will be limited to the trail and bridge alignment. There are several alternative trail segment and bridge alignments, all of which would have some disturbance to the riparian habitat. Given this species mobility, and ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. The proposed project may affect, but is not likely to trend toward a federal or state listing or loss of viability within the planning area. Implementation of the proposed project would have a **less than significant** impact on this species.

Western white-tailed jackrabbit (*Lepus townsendii townsendii*) is on the CDFW Species of Special Concern. The APE provides suitable habitat for this species in in the sagebrush areas of the APE. Additionally, this species could traverse through other portions of the APE at times. The proposed project will provide limited disturbance to the sagebrush habitat within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, is considered the bridge and trail alignments that are least likely to have adverse effects on biological resources, including this species. There were several alternative trail segment and bridge alignments, all of which would have some disturbance to the sagebrush habitat. Given this species mobility, and ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. The proposed project may affect, but is not likely to trend toward a federal or state listing or loss of viability within the planning area. However, out of an abundance of caution, the proposed project would implement the following avoidance, minimization, and mitigation measure. Implementation of

the following mitigation measure (Mitigation Measure BIO-5) would ensure that impacts to this animal species are reduced to a **less than significant** level.

Mitigation Measure

> ***Mitigation Measure BIO-5:*** *If construction activities are proposed to occur during the jackrabbit breeding, gestation, or rearing season (February through August), a qualified biologist shall conduct a preconstruction survey for active white-tailed jackrabbit forms within the work area no more than 48 hours prior to construction. Should breeding or juvenile white-tailed jackrabbits be discovered, CDFW shall be notified to develop appropriate mitigation measures, which may include erecting temporary exclusionary fencing and/or the creation of a buffer zone to protect the form and individual white-tailed jackrabbits from construction activities.*

Sierra marten (*Martes caurina sierrae*) is on the CDFW Special Animal List. This species is a mobile species that can occur throughout the region. While the APE does not provide ideal habitat, this species could traverse through the site at times. Implementation of the proposed project would involve limited disturbances within the APE, and none of the disturbances are within areas that are high quality habitat for this species. This species has mobility, which provides an ability to avoid direct conflict. It is not anticipated that the construction activities would directly affect this species. Implementation of the proposed project would have a **less than significant** impact on this species.

Pacific fisher (*Martes pennanti*) (West Coast DPS) is a CDFW listed Threatened species. Observations are rare and detections are infrequent**.** Numerous large-scale survey efforts since 1990 between Mt Shasta and Yosemite Nat'l. Park have failed to detect fishers. There are documented occurrences of Pacific fisher within ten miles of the APE. This species is a mobile species that can occur throughout the region. Given this species ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. The APE does not provide ideal habitat. Implementation of the proposed project would involve limited disturbances within the APE, and none of the disturbances are within areas that are high quality habitat for this species. The proposed project would have no effect on this species given limited disturbance to its habitat and the lack of any evidence that this species is present. Implementation of the proposed project would have a **less than significant** impact on this species.

Gray-headed pika (*Ochotona princeps schisticeps*) is on the CDFW Special Animal List. The APE provides suitable habitat for this species in in the talus slopes of the southern portion of the APE. Additionally, this species could traverse through other portions of the APE at times. The proposed project includes trail alignments through the talus slope area within the APE. The reduction of habitat for the trail alignments within the talus slopes would be minimal and no direct impact to individuals would be anticipated given this species mobility, and ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. Implementation of the proposed project would have a **less than significant** impact.

Mitigation Measure

> ***Mitigation Measure BIO-6:*** *If construction activities are proposed to occur during the pika breeding, gestation, or rearing season (April to July), a qualified biologist shall conduct a preconstruction survey for active pika within the work area no more than 48 hours prior to construction. Should breeding or juvenile pika be discovered, CDFW shall be notified to develop appropriate mitigation measures, which may include erecting temporary exclusionary fencing and/or the creation of a buffer zone to protect the adult and young from construction activities.*

Sierra Nevada red fox (*Vulpes necator*) is on the CDFW listed Threatened species. There are documented occurrences of Sierra Nevada red fox within five miles of the APE. The APE provides limited habitat for this species and there is no evidence of existing or past denning in the APE. Given this species mobility, and ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. The proposed project would have no effect on this species given limited disturbance to its habitat and the lack of any evidence that this species is present. The final determination would be made by the regulatory agency. Implementation of the proposed project would have a **less than significant** impact.

Special-status Invertebrate species: There are three mollusk species that were evaluated for this project: California floater (*Anodonta californiensis*), Black juga (*Juga nigrina*), and Great Basin Rams-horn (*Helisoma (Carinifex) newberryi*). These species are listed as Sensitive on the Region 5 Forester's Sensitive Species List (USDA Forest Service 1998). All are aquatic species and can be adversely affected by direct construction activities to their aquatic habitat, or indirectly through changes in water quality. The proposed project does not include any in water construction activities that would have the potential to directly impact these species. Additionally, the project includes a range of best management practices that are intended to control stormwater runoff, erosion, and other preventative measures that would ensure water quality in the Truckee River does not degrade. Implementation of the proposed project would have a **less than significant** impact.

Special-status plant species: There are twenty-six special-status plant species that are documented within a ten mile radius of the APE including: Galena Creek rockcress (*Arabis rigidissima var. demote*), Threetip sagebrush (*Artemisia tripartita ssp. Tripartite*), Austin's astragalus (*Astragalus austiniae*), Upswept moonwort (*Botrychium ascendens*), Scalloped moonwort (*Botrychium crenulatum*), Common moonwort (*Botrychium lunaria*), Mingan moonwort (*Botrychium minganense*), Bolander's bruchia (*Bruchia bolanderi*), Davy's sedge (*Carex davyi*), woolly-fruited sedge (*Carex lasiocarpa*), Mud sedge (*Carex limosa*), English sundew (*Drosera anglica*), Starved daisy (*Erigeron miser*), Donner Pass buckwheat (*Eriogonum umbellatum var. torreyanum*), American manna grass (*Glyceria grandis*), Plumas ivesia (*Ivesia sericoleuca*), long-petaled lewisia (*Lewisia longipetala*), Santa Lucia dwarf rush (*Juncus luciensis*), Three-ranked hump moss (*Meesia triquetra*), Broad-nerved hump moss (*Meesia uliginosa*), Hiroshi's flapwort (*Nardia hiroshii*), Robbins' pondweed (*Potamogeton robbinsii*), Alder

buckthorn (*Rhamnus alnifolia*), Tahoe yellow cress (*Rorippa subumbellata*), marsh skullcap (*Scutellaria galericulata*), Munro's desert mallow (*Sphaeralcea munroana*).

Surveys have been performed on June 21 and 23, 2006 and July 6 and 13, 2006 by JBR Environmental. Additionally, surveys were performed by De Novo Planning Group on May 9, 2016, June 30, July 13, August 17, and September 14, 2016. The field surveys in 2006 and 2016 did not reveal the presence of special status plants within the APE. Implementation of the proposed project would have a **less than significant** impact on special status plants.

Response b) and c): Less than Significant with Mitigation. The APE has approximately 16.99 acres of wetlands. The aquatic resources delineation would need to be verified and a final determination made by the USACE prior to any activities that would involve construction in the jurisdictional areas. Any encroachment and fill activities in the Truckee River or the wetland features would be an impact and would require authorization through a Section 404 permit. In addition, these features are subject to the Porter-Cologne Water Quality Act and the California Fish and Game Code Section 1601. As such, any encroachment and fill activities in these features would require authorization through a Section 401 permit from the RWQCB and a 1600 permit through the CDFW.

The trail segments were designed to minimize impacts to riparian and wetlands to the extent feasible by either avoiding through design or constructing a boardwalk or bridge that spans these areas. The boardwalk/bridge would still result in some loss of natural light on the underside of the boardwalk and vegetated areas would become largely barren. Also, the bridge will include limited piles to support the bridge, which will have very little impact to the wetland. As such the boardwalk/bridge areas are classified as permanent impact within this study.

The trail segments portion of the project (which excludes bridge and boardwalk segments) would include approximately 0.0073 acres of impacts to wetlands (0.0035 permanent impact and 0.0038 temporary impact). These impacts are irrespective of the bridge that is selected. The bridge and boardwalk portion of the project would include impacts that range from approximately 0.0425 to 0.0680 acres of impacts to wetlands, depending on the bridge that is selected. Therefore, the total wetland impact (to the trail segments and bridges) is anticipated to range between approximately 0.0498 to 0.0753 acres. Table BIO-1, below, provides a summary of area of impact to wetlands (by wetland type) from the trail segments. Table BIO-2 provides a summary of the area of impact to wetlands (by wetland type) from the bridge and boardwalk segments. The preferred alignment would have the smallest temporary and permanent impacts to wetlands, as shown in Table BIO-2.

Table BIO-3 provides a summary of all areas of the proposed project (inclusive of the alternative alignments) within the 100-year floodplain. The preferred alignment (West Bridge alignment) would have the least area within the floodplain, compared with the other alternatives, since the preferred alignment would have approximately 0.233 acres of permanent area and 0.269 acres of temporary area within the 100-year floodplain. In comparison, the Middle Bridge alignment would have approximately 0.256 acres of permanent area and 0.330 acres of temporary area, and

the Donner Bridge alignment would have approximately 0.361 acres of permanent area and 0.377 acres of temporary area within the floodplain.

TABLE BIO-1: SUMMARY OF TRAIL SEGMENT WETLAND IMPACTS (PERMANENT AND TEMPORARY) (ACRES)

Facility	Wetland Type			Grand Total
	Riparian	Waters of the U.S.	Seasonal Drainage	
Trail Segments(A5/H1)				
A5				
Paved Trail Permanent	0	0	0.0020	0.0020
Paved Trail Temporary	0	0	0.0009	0.0009
H1				
Paved Trail Permanent	0	0	0.0015	0.0015
Paved Trail Temporary	0	0	0.0029	0.0029
Permanent Subtotal	***0***	***0.0000***	***0.0035***	***0.0035***
Temporary Subtotal	***0***	***0.0000***	***0.0038***	***0.0038***
Grand Total	**0**	**0.0000**	**0.0073**	**0.0073**

Source: Mark Thomas GIS, 2019.

TABLE BIO-2: SUMMARY OF BRIDGE & BOARDWALK WETLAND IMPACTS (PERMANENT AND TEMPORARY) (ACRES)

Facility	Wetland Type			Grand Total
	Riparian	Waters of the U.S.	Seasonal Drainage	
Proposed Project – West Bridge Alternative				
West Bridge (A1)				
A1 Bridge Permanent	0.0139	0.0181	0	0.0320
Paved Trail Permanent	0	0	0.0002	0.0002
Paved Trail Temporary	0	0	0.0005	0.0005
Access Road - A1	0	0	0.0002	0.0002
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0139***	***0.0276***	***0.0005***	***0.0420***
Temporary Subtotal	***0.0000***	***0.0000***	***0.0005***	***0.0005***
Grand Total	**0.0139**	**0.0276**	**0.001**	**0.0425**
Middle Bridge Alternative				
Middle Bridge (B1/C1)				
B1 Bridge Permanent	0.0221	0.0238	0	0.0459
C1 Bridge Permanent	0	0	0.0006	0.0006
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0221***	***0.0333***	***0.0006***	***0.0560***
Grand Total	**0.0221**	**0.0333**	**0.0006**	**0.0560**
Donner Bridge Alternative				
Donner Bridge (F1/G1)				
F1 Bridge (Donner Creek) Permanent	0.0028	0.0099	0	0.0127
F1 Bridge (Truckee River) Permanent	0.0086	0.0369	0	0.0455
G1 Bridge Permanent	0	0	0.0003	0.0003
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0114***	***0.0563***	***0.0003***	***0.0680***
Grand Total	**0.0114**	**0.0563**	**0.0003**	**0.0680**

Source: Mark Thomas GIS, 2019.

TABLE BIO-3: SUMMARY OF FLOODPLAIN IMPACTS (PERMANENT AND TEMPORARY) (ACRES)

Facility	*Floodplain Impact*
Proposed Project – West Bridge Alternative	
Trail Segments	
Trail Segments Permanent	0.140
Trail Segments Temporary	0.269
West Bridge	
Bridge A1 Permanent	0.090
Parking Lot	
Parking Lot Permanent	0.003
Permanent Subtotal	***0.233***
Temporary Subtotal	***0.269***
Grand Total	**0.502**
Middle Bridge Alternative	
Trail Segments	
Trail Segments Permanent	0.170
Trail Segments Temporary	0.330
Middle Bridge	
Bridge Segment B1 Permanent	0.068
Bridge Segment C1 Permanent	0.061
Parking Lot	
Parking Lot Permanent	0.003
Access Roads	
Access Road - A1 (Permanent)	0.021
Access Road - Middle Bridge (Permanent)	0.001
Permanent Subtotal	***0.256***
Temporary Subtotal	***0.330***
Grand Total	**0.586**
Donner Bridge Alternative	
Trail Segments	
Trail Segments Permanent	0.174
Trail Segments Temporary	0.377
Donner Bridge	
Bridge Segment F1 Permanent	0.138
Bridge Segment G1 Permanent	0.047
Parking Lot	
Parking Lot Permanent	0.003
Permanent Subtotal	***0.361***
Temporary Subtotal	***0.377***
Grand Total	**0.738**

Source: Mark Thomas GIS, 2019.

Note: Numbers may not add up due to rounding.

All three bridge segments are designed to span over the Truckee River, with limited piles supporting the bridge. The bridges are designed to minimize/eliminate any direct physical impact to wetlands, and the installation of the abutments and piles will have very limited impact to the floodplain. Additionally, the boardwalks are designed to span the wetland areas. The wetland and riparian areas under the bridges/boardwalks, however, are classified as permanent impacts within this study because they will result in some loss of natural light on the underside of the bridge/boardwalk and vegetated areas would become largely barren. Fill may require compensatory mitigation, which will be calculated by the regulatory agencies during the

permitting process. Implementation of the following mitigation measures would ensure that the impacts to wetlands are reduced to a **less than significant** level.

Mitigation Measures

Mitigation Measure BIO-7: *Prior to any activities that would result in removal, fill, or hydrologic interruption of the jurisdictional areas, the project proponent shall consult with the regulatory agencies (USACE, RWQCB, and CDFW) to secure an authorization for any fill activities associated with the alternative selected. This shall include obtaining a 404 permit, 401 certification, and 1600 Streambed Alteration Agreement, unless alternative permits are deemed necessary by the permitting agencies. The permits may require compensation for the fill, and implementation of all minimization and conservation measures recommended by the regulatory agencies.*

Mitigation Measure BIO-8: *Prior to construction, the project proponent shall install orange construction barrier fencing to identify environmentally sensitive areas around all delineated and verified wetland(s). This requirement shall only apply to delineated areas that are within 100 feet of the construction zone.*

Mitigation Measure BIO-9: *Based on the potential for impacts to riparian and wetland habitat, the Town shall prepare and implement an onsite revegetation and restoration plan for the riparian and wetland habitat temporarily impacted by construction activities. Restoration and revegetation shall take place onsite if possible and will directly restore those areas temporarily impacted. The plan shall be prepared in consultation with a qualified restoration ecologist. Restoration activities shall be monitored in accordance with the restoration plan or permit requirements. The revegetation/restoration of the temporarily impacted areas shall also include an additional acreage for onsite created/restored habitat to account for the permanent loss of riparian and wetland habitat based on the trail placement (anticipated at a rate of 1.5 to 1), in compliance with Town of Truckee Development Code Section 8.46.040 (C.2.), or in lieu fees for the loss of wetland in accordance with the permitting agency. The additional acreage will be located in the vicinity of the project and adjacent to existing or restored riparian and wetland habitat.*

Response d): Less than Significant with Mitigation. The APE offers habitat for wildlife species such as mule deer (*Odocoileus hemionus*), mountain quail (*Oretyx pictus*), coyote (*Canis latrans*), and black bear (*Ursus americanus*), among numerous other species. However, there are no documented occurrences of a migratory corridor or nursery site in the APE. Field surveys did not reveal the presence of a migratory corridor or nursery sites on the APE.

Since the trail would be mostly constructed at grade, the proposed project would not fragment the APE (aside from the bridge crossings and boardwalk), and would not place permanent vertical structures in the APE. The proposed trail would provide some increased presence of humans and pet canine companions along the trails system. The Town has established the following etiquette for users of the trail system:

- Always carry a leash for your dog: all dogs must be leashed in Regional Park during the months of May through October.
- Keep dogs under voice and visual control, and use leash if needed
- Clean up after your dog: waste bags and trash receptacles are provided, please use both
- Please do not litter
- Please do not feed the wild animals
- Use existing river access trails only — do not bushwhack to the river

The above measures are tried and tested along existing segments of the trails system and the Town has deemed them largely successful in minimizing human/pet conflicts with the wildlife along existing segments of the trail system. Overall, the proposed project would not interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site. Implementation of the proposed project would have a **less than significant** impact on this issue. No mitigation is necessary.

Response e): Less than Significant with Mitigation. Construction activities associated with the proposed project could introduce noxious weeds or result in their spread into currently uninfested areas, possibly resulting in the displacement of special-status plant species and degradation of habitat for special-status wildlife species. Plants or seeds may be dispersed via construction equipment if appropriate measures are not implemented. This impact is considered potentially significant because the introduction or spread of noxious weeds could result in a substantial reduction or elimination of species diversity or abundance. The following mitigation measure would require plans and specifications to include specific measures that reduce the likelihood of new noxious weed infestations after construction is completed. With implementation of the following mitigation measure, the proposed project would have a **less than significant** impact relative to this topic.

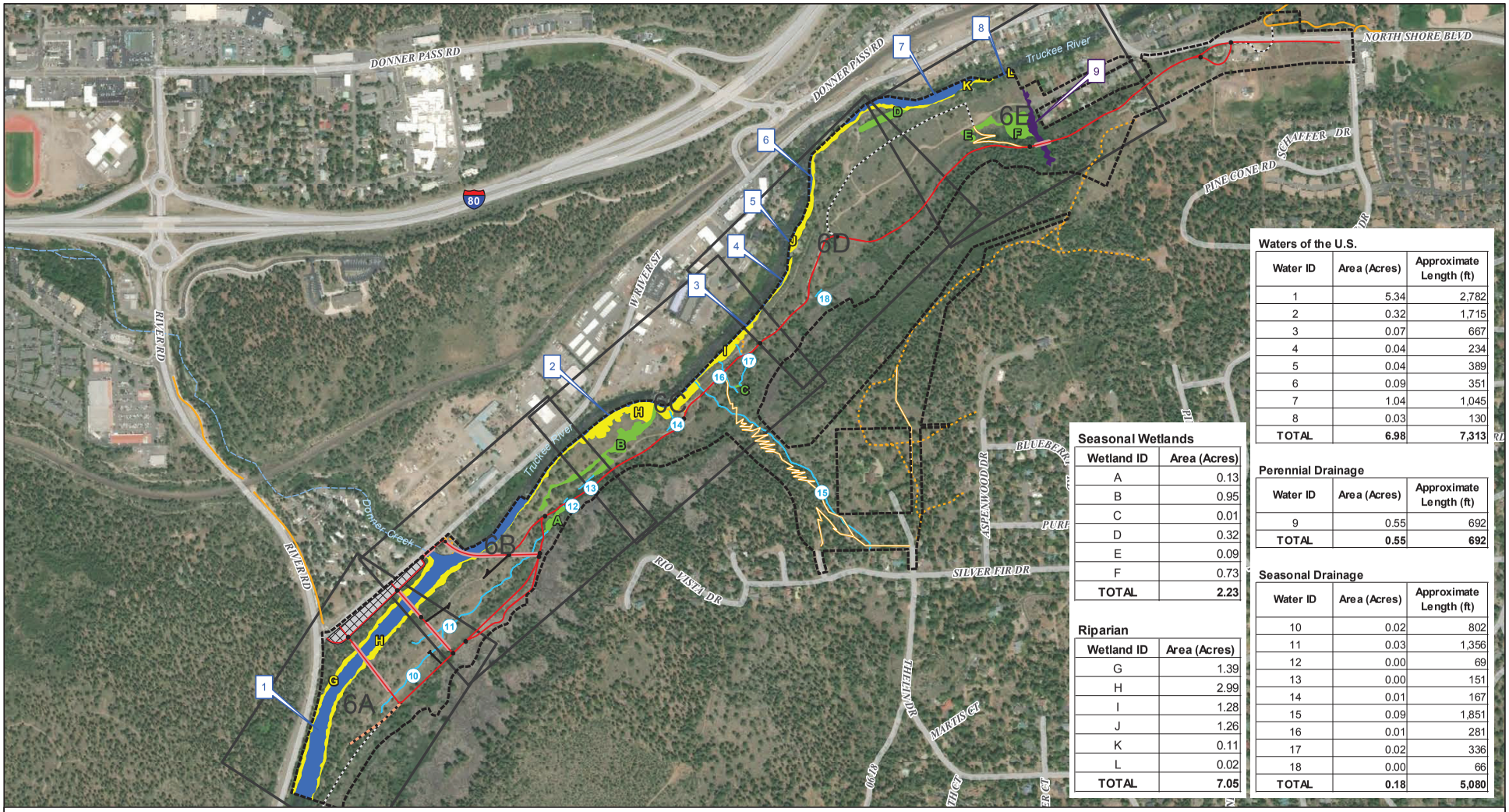
Mitigation Measure

Mitigation Measure BIO-10: *Prior to the issuance of a grading permit, the project proponent shall incorporate the following measures into project plans and specifications:*

- *Construction supervisors and managers will be educated about noxious weed identification and the importance of controlling and preventing their spread.*
- *Any equipment that is brought on site should be washed. Cleaning shall include the undercarriage of any mobile equipment. Clean equipment inspection should be performed before the heavy equipment arrives on site and when equipment moves from heavily infested to lightly infested areas. Use C-clause for cleaning of heavy equipment as applicable.*
- *Any materials used for erosion control or revegetation should be from a native source and come from adjacent areas. It is recommended that conifer needles and chipped branches be used for mulch and native seeds be raked in from the side to revegetate and cover disturbed ground. As a last resort, weed free materials could be brought from approved gravel pits or other weed-free certified sources.*

- *Re-compaction of trail is recommended to prevent weed establishment in these disturbed areas.*
- *Known musk thistle infestations occur nearby, so this site should be periodically checked after completion.*

Response f): Less than Significant with Mitigation. There are no Habitat Conservation Plans or Natural Community Conservation Plans in effect for the APE. The *Town of Truckee 2025 General Plan*, however, has various policies within the Conservation and Open Space Element that protect biological resources. The proposed project, with all mitigation measures incorporated, is consistent with the policies within the *Town of Truckee 2025 General Plan* that are related to biological resources. With implementation of mitigation measures, the proposed project would have a **less than significant** impact relative to this topic.



Waters of the U.S.

Water ID	Area (Acres)	Approximate Length (ft)
1	5.34	2,782
2	0.32	1,715
3	0.07	667
4	0.04	234
5	0.04	389
6	0.09	351
7	1.04	1,045
8	0.03	130
TOTAL	**6.98**	**7,313**

Perennial Drainage

Water ID	Area (Acres)	Approximate Length (ft)
9	0.55	692
TOTAL	**0.55**	**692**

Seasonal Drainage

Water ID	Area (Acres)	Approximate Length (ft)
10	0.02	802
11	0.03	1,356
12	0.00	69
13	0.00	151
14	0.01	167
15	0.09	1,851
16	0.01	281
17	0.02	336
18	0.00	66
TOTAL	**0.18**	**5,080**

Seasonal Wetlands

Wetland ID	Area (Acres)
A	0.13
B	0.95
C	0.01
D	0.32
E	0.09
F	0.73
TOTAL	**2.23**

Riparian

Wetland ID	Area (Acres)
G	1.39
H	2.99
I	1.28
J	1.26
K	0.11
L	0.02
TOTAL	**7.05**

Legend

- Waters of the U.S. (6.98 ac; 7,313 linear ft)
- Perennial Drainage (0.55 ac; 692 linear ft)
- Seasonal Drainage (0.18 ac; 5,080 linear ft)
- Seasonal Wetland (2.23 ac)
- Riparian (7.05 ac)
- Area of Potential Effects (APE) (146.32 ac)
- Trail Segment Start/End Stations
- Trail Alignment - Paved
- Bridge or Boardwalk
- Existing Trail - Paved
- Existing Trail - Soft Surface
- Future Trail (by Others)
- Proposed Soft Trail
- TTSD Access Road
- Bridge Access Road
- Parking Lot

0 250 500
Feet

1:8,400

1 inch = 700 feet

Data source: Placer County GIS; Town of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.

TRUCKEE LEGACY TRAIL PHASE IV

Figure 6: Jurisdictional Map Index

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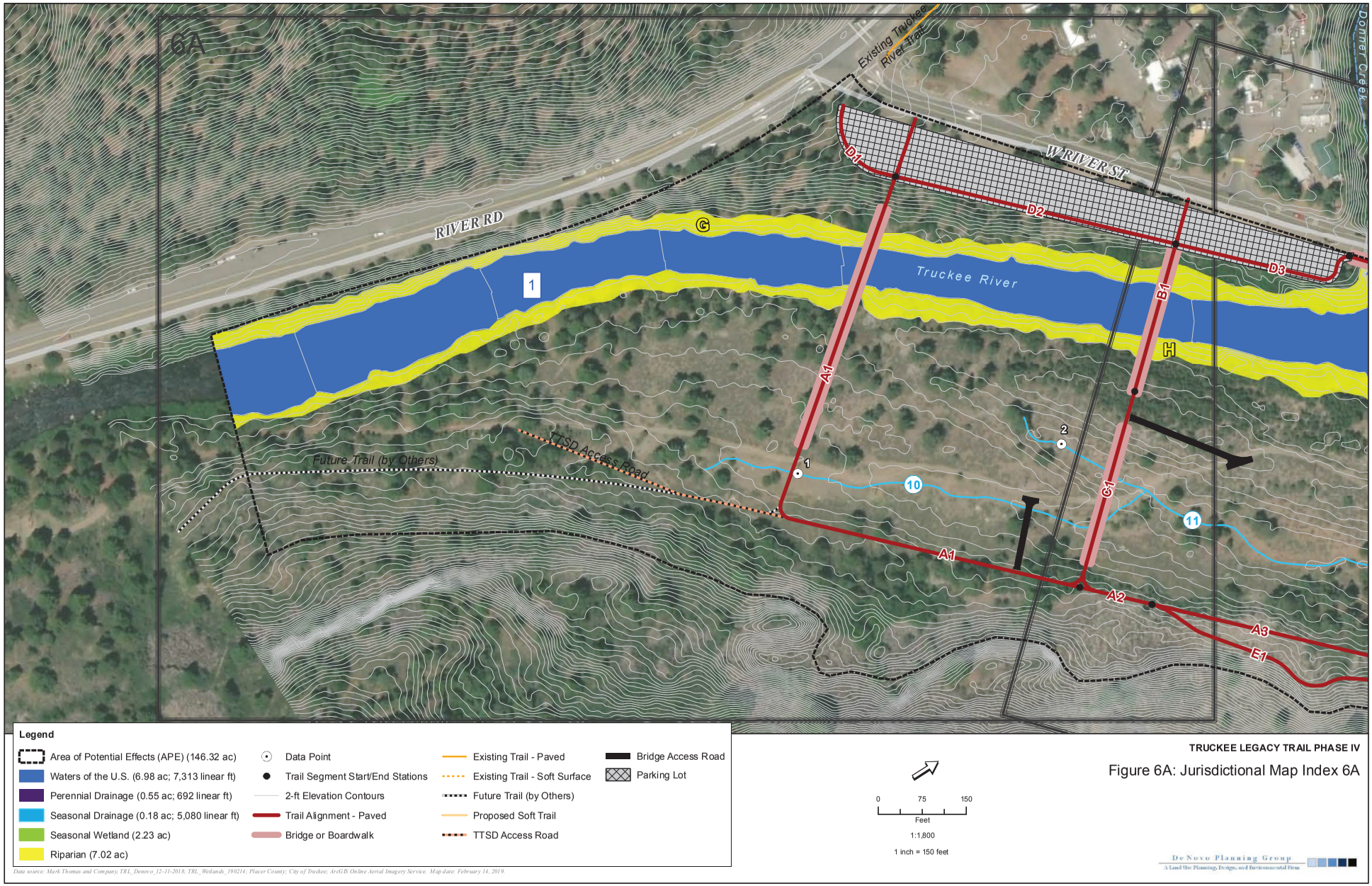

Data source: Mark Thomas and Company; TRL_Denovo_12-11-2018; TRL_Wetlands_190214; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.

TRUCKEE LEGACY TRAIL PHASE IV

Figure 6A: Jurisdictional Map Index 6A

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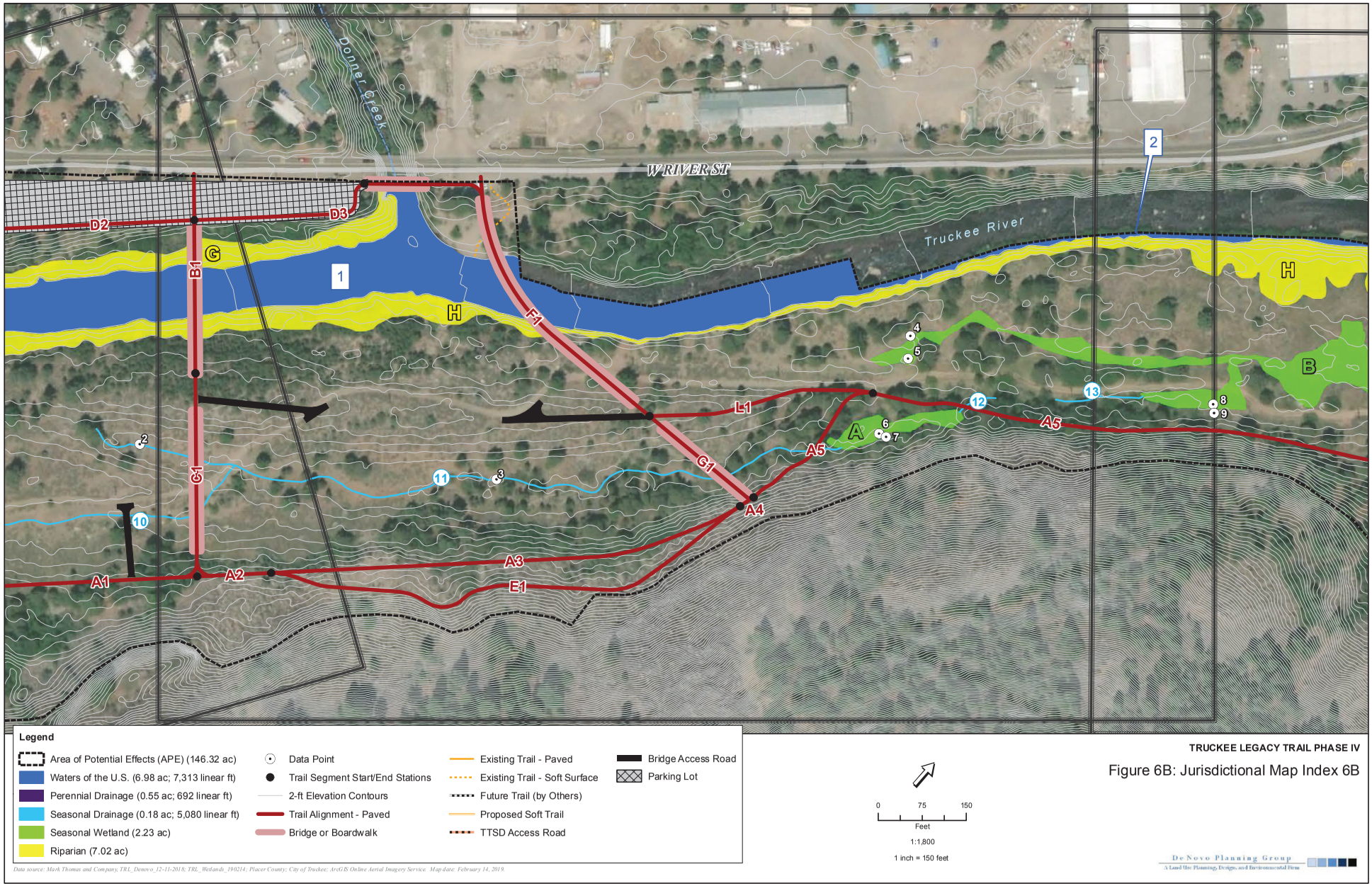

Data source: Mark Thomas and Company; TRL_Denovo_12-11-2018; TRL_Wetlands_190214; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.

TRUCKEE LEGACY TRAIL PHASE IV

Figure 6B: Jurisdictional Map Index 6B

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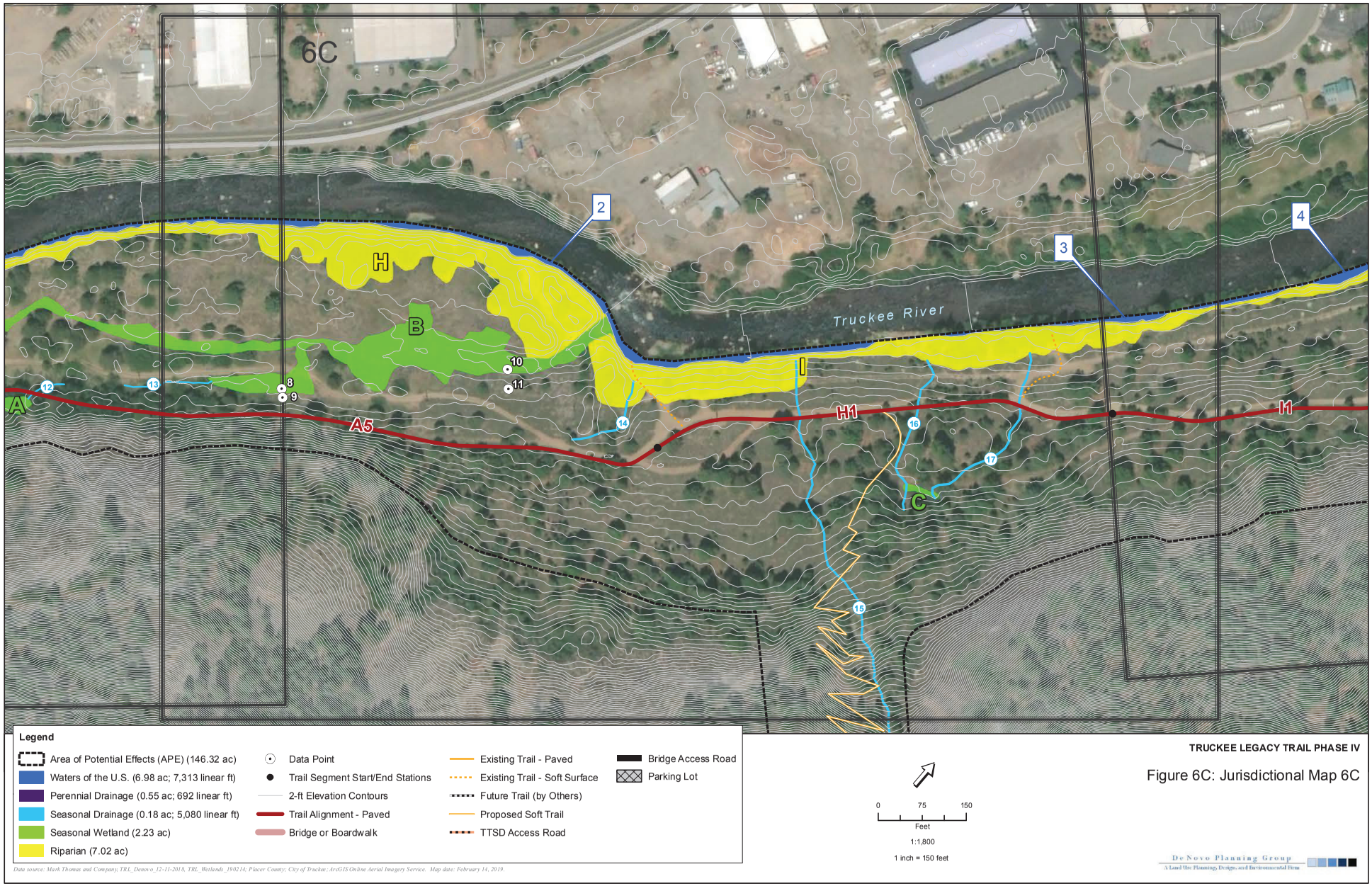
6C
2
3
4
Truckee River
H
B
I
A
A5
H1
I1
C
8
9
10
11
12
13
14
15
16
17
Legend
Area of Potential Effects (APE) (146.32 ac)
Waters of the U.S. (6.98 ac; 7,313 linear ft)
Perennial Drainage (0.55 ac; 692 linear ft)
Seasonal Drainage (0.18 ac; 5,080 linear ft)
Seasonal Wetland (2.23 ac)
Riparian (7.02 ac)
Data Point
Trail Segment Start/End Stations
2-ft Elevation Contours
Trail Alignment - Paved
Bridge or Boardwalk
Existing Trail - Paved
Existing Trail - Soft Surface
Future Trail (by Others)
Proposed Soft Trail
TTSD Access Road
Bridge Access Road
Parking Lot
0
75
150
Feet
1:1,800
1 inch = 150 feet
Data source: Mark Thomas and Company; TRL_Denovo_12-11-2018; TRL_Wetlands_190214; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.
TRUCKEE LEGACY TRAIL PHASE IV
Figure 6C: Jurisdictional Map 6C
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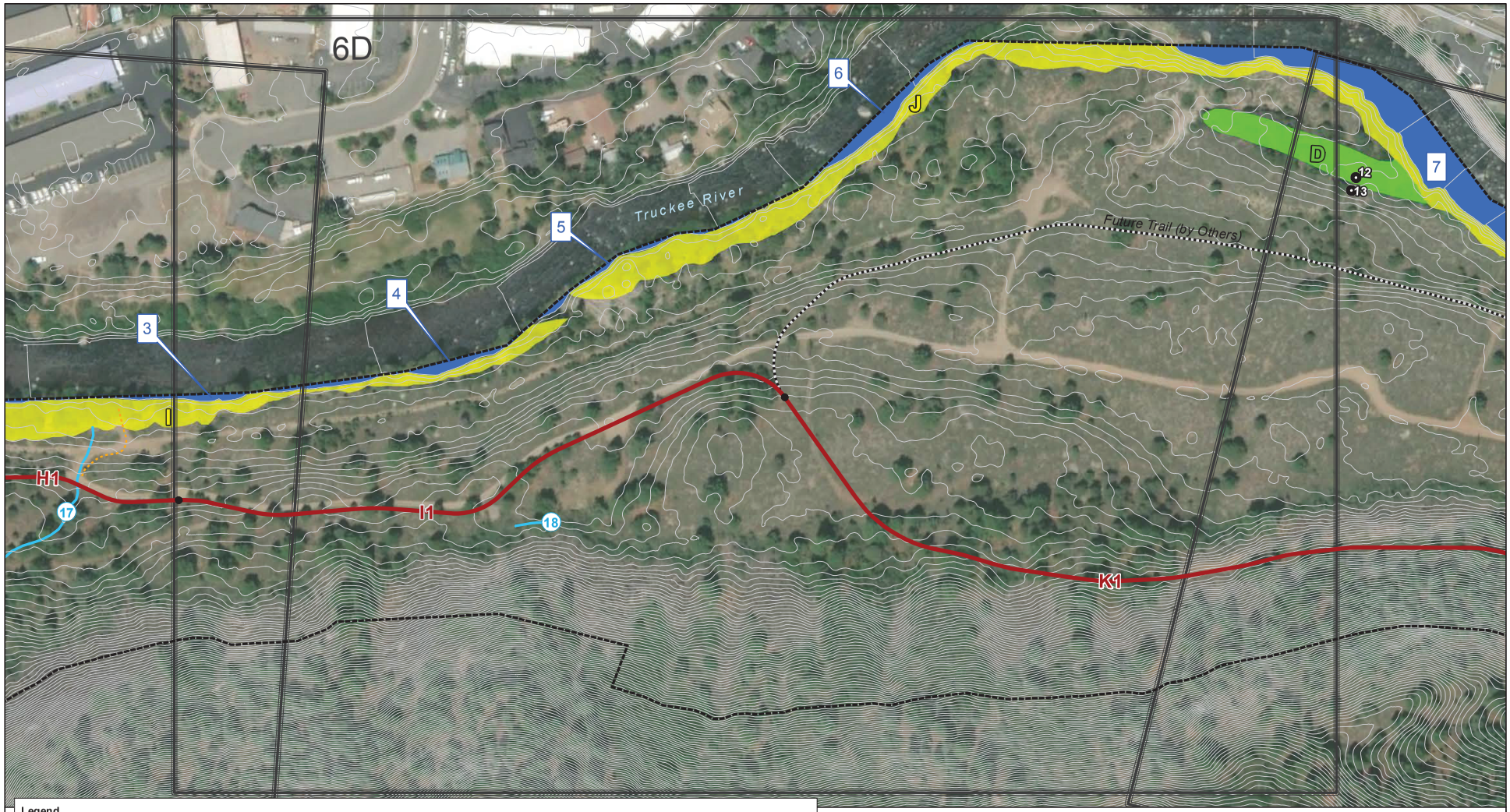

Legend

- Area of Potential Effects (APE) (146.32 ac)
- Waters of the U.S. (6.98 ac; 7,313 linear ft)
- Perennial Drainage (0.55 ac; 692 linear ft)
- Seasonal Drainage (0.18 ac; 5,080 linear ft)
- Seasonal Wetland (2.23 ac)
- Riparian (7.02 ac)
- Data Point
- Trail Segment Start/End Stations
- 2-ft Elevation Contours
- Trail Alignment - Paved
- Bridge or Boardwalk
- Existing Trail - Paved
- Existing Trail - Soft Surface
- Future Trail (by Others)
- Proposed Soft Trail
- TTSD Access Road
- Bridge Access Road
- Parking Lot

0 75 150
Feet
1:1,800
1 inch = 150 feet

Data source: Mark Thomas and Company; TRL_Denovo_12-11-2018; TRL_Wetlands_190214; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.

TRUCKEE LEGACY TRAIL PHASE IV

Figure 6D: Jurisdictional Map Index 6D

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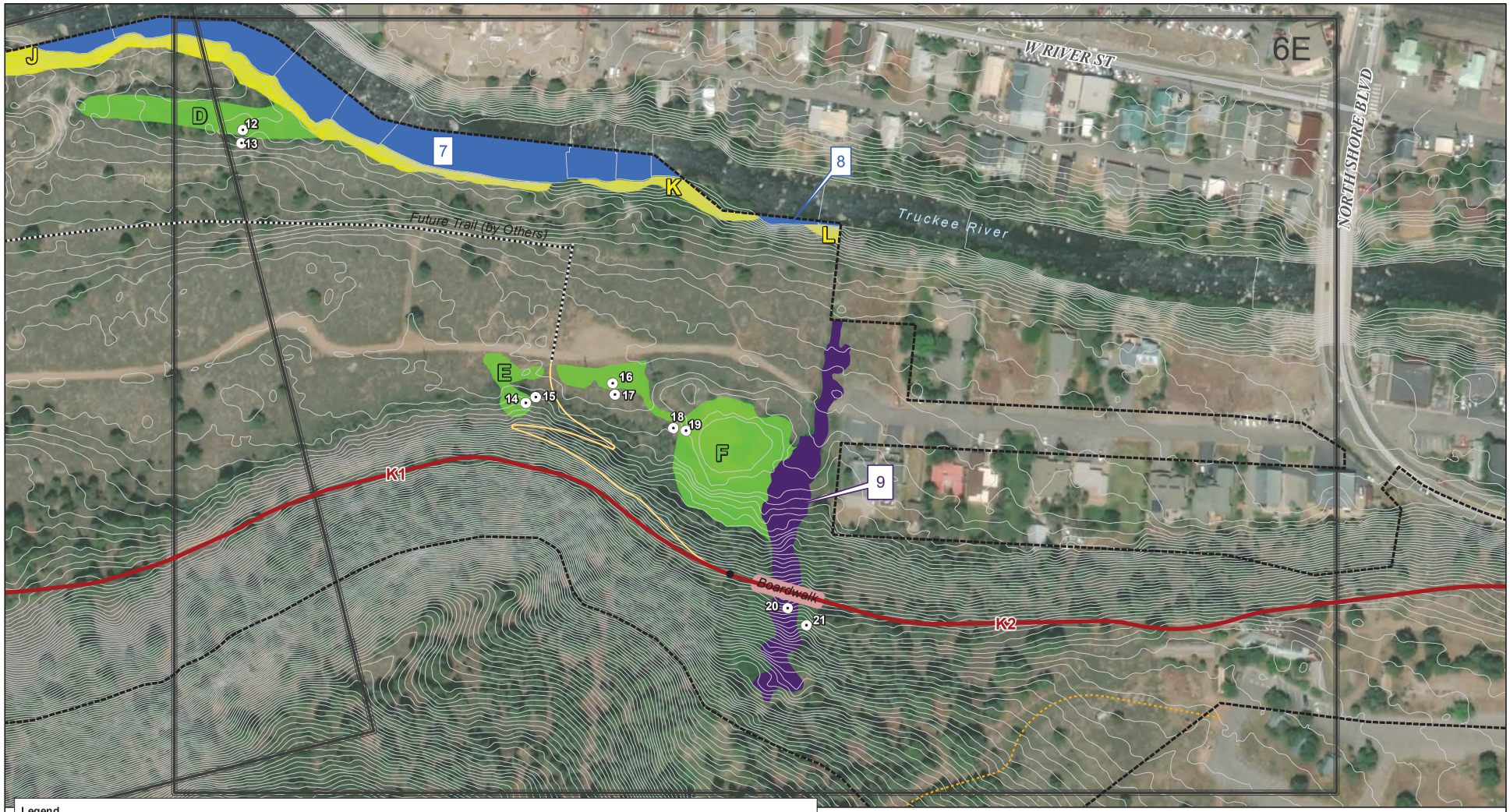

Legend

- Area of Potential Effects (APE) (146.32 ac)
- Waters of the U.S. (6.98 ac; 7,313 linear ft)
- Perennial Drainage (0.55 ac; 692 linear ft)
- Seasonal Drainage (0.18 ac; 5,080 linear ft)
- Seasonal Wetland (2.23 ac)
- Riparian (7.02 ac)
- Data Point
- Trail Segment Start/End Stations
- 2-ft Elevation Contours
- Trail Alignment - Paved
- Bridge or Boardwalk
- Existing Trail - Paved
- Existing Trail - Soft Surface
- Future Trail (by Others)
- Proposed Soft Trail
- TTSD Access Road
- Bridge Access Road
- Parking Lot

0 75 150
Feet
1:1,800
1 inch = 150 feet

Data source: Mark Thomas and Company; TRL_Denovo_12-11-2018; TRL_Wetlands_190214; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.

TRUCKEE LEGACY TRAIL PHASE IV

Figure 6E: Jurisdictional Map Index 6E

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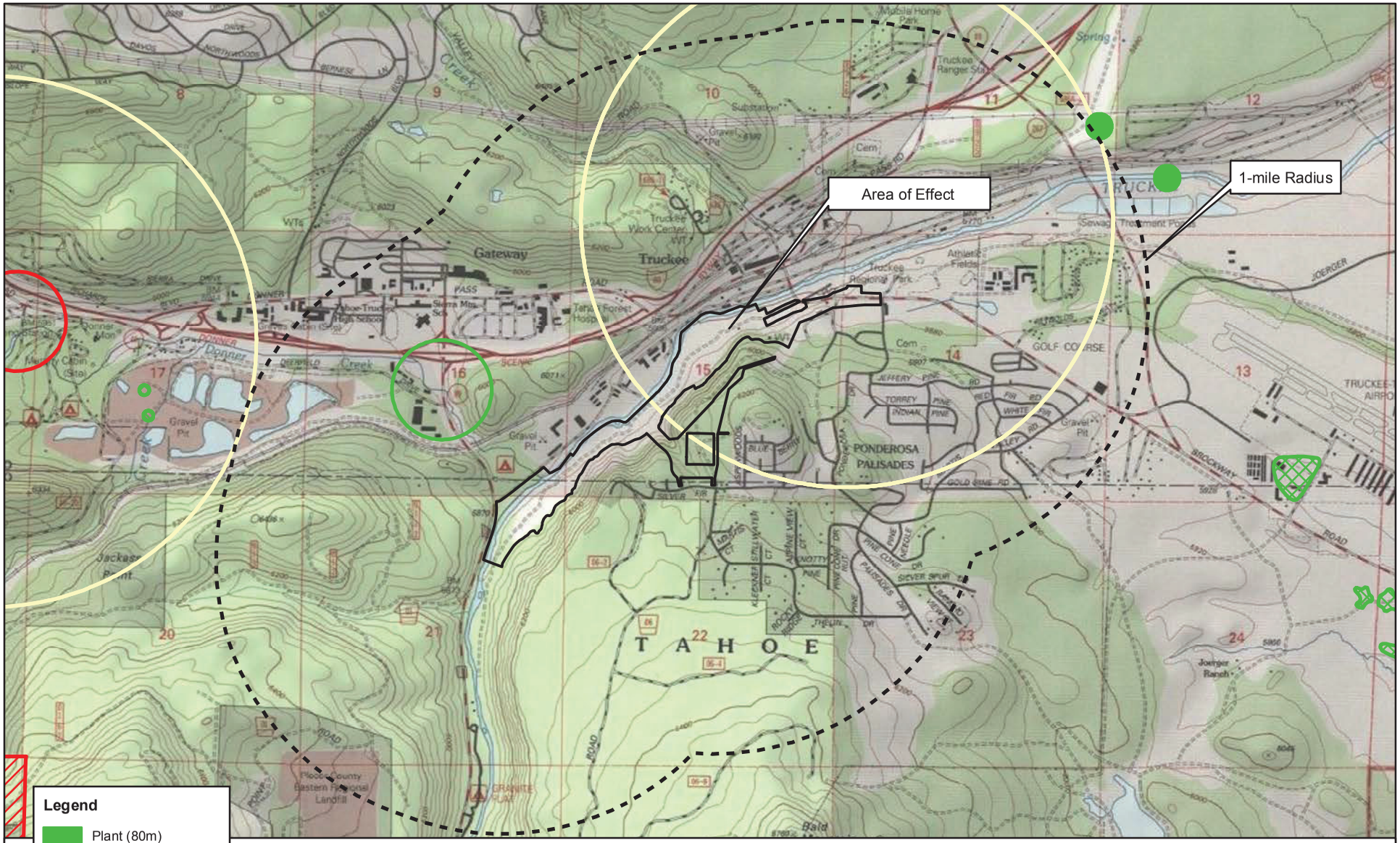

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 7a: California Natural Diversity Database

1-mile Radius Search

Data source: Mark Thomas; California Natural Diversity Database, August 2017; ArcGIS Online USGS Topographic Map Service.
Map date: October 24, 2017.

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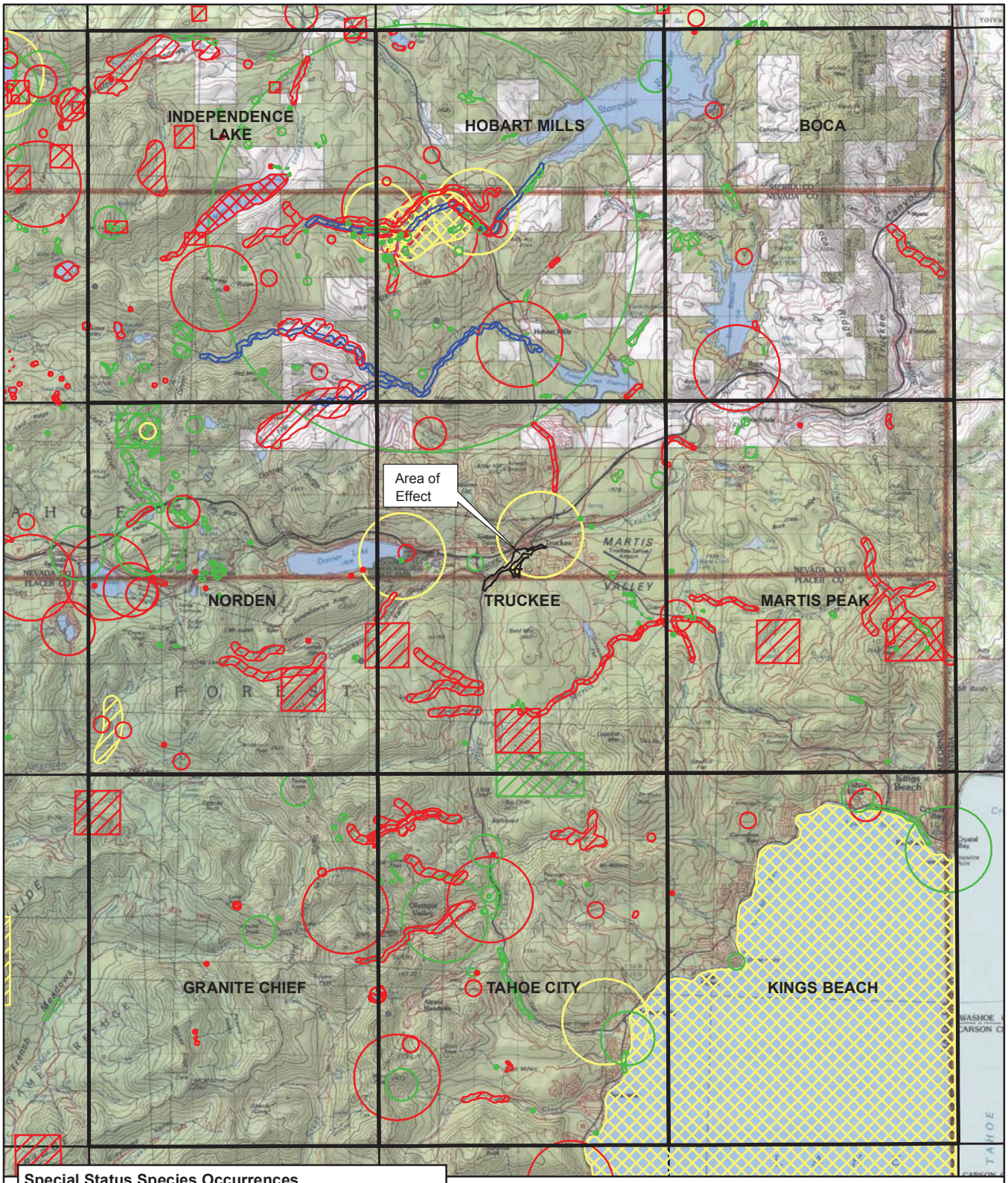

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 7b: California Natural Diversity Database

9-Quad Search

N

0 1 2

Miles

1:210,000

CNDDB version 08/2017. Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area. Basemap: ArcGIS Online Topographic Map Service. Map date: October 24, 2017.

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V. CULTURAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Cause a substantial adverse change in the significance of a historical resource pursuant to '15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

EXISTING SETTING

The earliest human occupation of northeastern California and northwestern Nevada is generally agreed to have occurred approximately 12,500 years before present (BP). Climate data indicate that most of the upper elevations in the northern Sierra were covered in glacial ice until sometime after 14,000 years ago. In the Tahoe Basin, alpine vegetation was gone by 10,000 BP, perhaps giving way to an environment more hospitable to humans.

The Town of Truckee and surrounding environs lie within the ethnographic territory of the Washoe Tribe of Nevada and California. In the 1850s, when non-natives began moving into their territory, the Washoe homeland surrounded Lake Tahoe and the Sierra Nevada, south from Honey Lake, through Antelope Valley and the West Fork of the Walker River; and east from the western slopes to the top of the Pine Nut Mountains in the Great Basin. The traditional way of life was based on seasonally harvested resources-fish, animals, and plants-from catchments tethered to areas associated with specific lineages. Social networks extended visiting rights and resource procurement well beyond these borders, but neighbors generally respected familial use-rights to specific areas and associated resources, and observed protocols for gaining access to hunt or collect resources outside their domains.

After initial and sporadic resistance to Euro-Americans appropriating camping and resource areas by "gradual encroachment" during the 1860s-1870s, Washoe leaders are said to have advised a strategy of accommodation and negotiation. They distanced themselves from the Pyramid Lake Paiute War of 1860, for instance, and sought assistance from federal agents for protection of their fisheries, pine nut groves, and other resources. The Washoe tribe achieved federal recognition in 1936 after establishing a government and constitution under authority of the Indian Reorganization Act of 1934.

The Town of Truckee grew out of the construction effort to build the first transcontinental railroad, the Central Pacific, as well as heavy traffic to the Comstock Lode, which had been discovered in nearby Nevada in 1859. At least two railroads also traversed the project area. The first narrow gauge railroad was built through the area by local Truckee businesswoman Mary Burckhalter, who established the Donner and Tahoe Railroad (D&TRR) in 1893 and contracted

with the Truckee Lumber Company (TLC) to haul logs from East Martis Valley into the TLC mill in Truckee. The line included two trestles over the Truckee River. One was built in 1897 to bring logs to the mill pond of the TLC. Another was built near Donner Creek that led to a firewood stacking yard near the mainline railroad tracks on the north side of the river. The line was abandoned by 1905. The only remaining railroad operational through the project area after that time was the Lake Tahoe and Truckee Railroad, which started operation in 1901, continued under lease as the Southern Pacific Railroad after 1926, and then finally ceased operation in 1942.

Several themes dominate historic-period events within the trail planning area, including transportation infrastructure (including railroads), Chinese settlement, logging and timber, water development, winter recreation and tourism, and development with the upper terrace of the east end of the project area (commonly known as Hilltop to residents of Truckee) (PAR Environmental, 2018).

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant with Mitigation. Construction of the project would impact between approximately 11.4 and 12.6 acres, depending on the exact alignment and bridge that is constructed. This would include between approximately 5.0 and 5.9 acres of permanent impact and between 6.6 and 6.7 acres of temporary disturbance. The trail would minimize impacts to riparian and wetlands to the extent feasible by either avoiding through design or constructing a boardwalk or bridge that spans these areas.

The proposed project could cause a significant impact to the eligibility of one or more historical resources. PAR Environmental Services prepared Built Environmental Report that evaluated the potential for historical resources in the trail planning area (*Built Environmental Report for the Truckee Legacy Trail Phase 4 Project*). PAR Environmental also conducted an investigation of architectural and linear resources within the APE and an associated archaeological report (*Cultural Resources Inventory and Evaluation for the Truckee Legacy Trail Phase 4 Project*), which examined the potential for archaeological resources within the APE. The following analysis is based on the results of these reports, as prepared by PAR Environmental.

Historical Resources

CEQA Guidelines Section 15064.5 requires the lead agency to consider the effects of a proposed project on historical resources. A historical resource is defined as any building, structure, site, or object listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR), or determined by a lead agency to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California.

The CRHR includes resources that have been listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP), as well as some California State Landmarks and Points of Historical Interest. Under U.S. Department of the Interior, National Park Service guidelines, buildings, structures, and objects usually need to be more than 50 years old to be eligible for listing in the NRHP. The California Office of Historic Preservation guidelines for project review and planning call for the identification and evaluation of resources that are more

than 45 years old to account for the passage of time between the period of project review and project completion. Resources that are less than 50 years old are generally excluded from listing in the NRHP or CRHR, unless they can be shown to be exceptionally significant.

As described in the Built Environmental Report (PAR Environmental Services, 2018), there are three parcels totaling 24.89 acres and located in the southeastern section of the trail planning area that are federally managed by the Tahoe National Forest Service (TNF). The federally managed land is subject to the requirements of Section 106 of the NHPA. PAR Environmental evaluated properties in accordance with Section 15064.5(a)(2)-(3) of the 2016 CEQA Guidelines using the criteria outlined in Section 5024.1 of the California Public Resources Code, in order to determine if they are historical resources for the purposes of CEQA. To this end, an investigation of architectural and linear resources within the APE was conducted in November 2006. Archival Research and fieldwork was conducted in September 2016 and September 2018. All sites were also evaluated in accordance with applicable National Environmental Protection Act (NEPA) criteria.

Archival research and architectural surveys conducted in 2006, 2016 and 2018 for the Truckee Legacy Bike Trail Project identified 16 built environment resources located adjacent to or within one quarter-mile of the trail planning area and eight built environment resources within the trail planning area. The eight built environment resources include concrete railroad bridge abutments, a complex of recreational buildings, a wooden rope tow, a metal ski lift, lumber mill building, and three private residences. With the exception of the wooden rope tow, the built environment resources do not meet the criteria for listing on the NRHP.

The wooden rope tow structure was constructed as early as 1933, but certainly before 1937. It was the first in the Tahoe region (Titus 2007) and is the only remaining example of Truckee's earliest ski-related winter recreation and tourism architecture. This structure retains integrity of design, materials, workmanship, setting, association and feeling. As such, it appears to be eligible for the NRHP on a local level under Criterion A (California Register of Historical Resources (CRHR) Criterion 1), for its association with the origins of the Tahoe region's world-famous skiing heritage and recreational economy, and under NRHP Criterion C (CRHR Criterion 3) as an example of the earliest architectural style of mechanized skiing equipment in the Tahoe region. It has a period of significance dating to its construction ca. 1935 (after 1932 but before 1938) (PAR Environmental, 2018).

The private residence at 10245 Brockway Road, while of unknown context, retains all seven aspects of integrity and may be of special interest on a local level. While not considered individually eligible for inclusion in the NRHP or CRHR, it is recommended as being a potential contributory (Category B) structure to the Town of Truckee's South River "Character Area." (PAR Environmental, 2018).

In 1999, the Town of Truckee hired Kautz Environmental Consultants, Inc. [Kautz] to conduct a Historic Resources Inventory that evaluated structures in the historic portion of Truckee for their NRHP eligibility. The Town of Truckee soon after established a Local Historic Rating system that uses a ranking of A (essential), B (contributory), C (supporting) or D (non-essential) (PAR

Environmental, 2018). In 2008, the Town applied their rating system to the Hilltop area based on the findings of the 1999 Inventory. The Hilltop area is located on an elevated terrace at the east end of the project area and contains a complex of buildings associated with winter recreational activities. The Town of Truckee ranked Building 1 (the Valerie) as B (contributory), Building 2 (the Hilltop Lodge/Cottonwood Restaurant) as A (essential), Building 3 (the office/storage space) as B (contributory), Building 4 as B (contributory), and the wooden rope tow as C (supporting). These findings were reiterated in the Hilltop Master Plan adopted by the Town of Truckee in 2008.

PAR Environmental found that the buildings in the complex, while significant under NRHP Criterion A (CRHR Criterion 1), have lost integrity to the extent that none of these buildings are considered eligible for listing on the NRHP. Because the Town of Truckee considers them to be historical resources, they are considered historical resources for the purposes of CEQA. The rope tow, however, appears eligible under NRHP criteria A and C (CRHR 1 and 3) on a local level with a circa 1935 period of significance. Although originally ranked by the Town of Truckee as being a Category C resource, PAR Environmental recommended the rope tow be re-categorized as a Category A (essential) property. If the rope tow is relocated, it would no longer be considered eligible for the NRHP because of the significant loss of integrity of location and setting.

Archaeological Resources

CEQA requires the lead agency to consider the effects of a project on archaeological resources and to determine whether any identified archaeological resource is a historical resource. CEQA Guidelines Section 15064.5 also requires consideration of potential project impacts on "unique" archaeological resources that do not qualify as historical resources. Public Resources Code (PRC) Section 21083.2 defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria. The resource:

> (1) contains information needed to answer important scientific research questions, and there is a demonstrable public interest in that information;
>
> (2) has a special and particular quality, such as being the oldest of its type or the best available example of its type; and/or
>
> (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

PRC Section 15064.5(c)(4) provides that, if an archaeological resource is neither a unique archaeological resource nor a historical resource, the effects of a project on the resource are not considered significant.

The trail planning area was originally surveyed from October 30 through November 3, 2006 by PAR staff archaeologists John Dougherty and former PAR staff archaeologist Monica Nolte. The project went on hold and was revived in 2016. On September 29 and 30, 2016, field surveys were performed by Ms. Heffner and Ms. Maniery (PAR Environmental Services, 2019). The APE was

then revised and the additional APE added to the trail planning area was surveyed after the snow melt on June 8, 2017 by Mallory Triplett and Andrea Maniery. Evaluation of the six unevaluated sites not able to be evaluated at the survey level was conducted in May of 2018 by Ms. Maniery, Mr. Geordon Taylor, Dr. Sarah Heffner, and Ms. Mary Maniery. The work was monitored by Mr. Lydell Wyatt of the Washoe Tribe of California and Nevada. Ms. A. E. Maniery and Dr. Heffner also authored the updated project report.

PAR Environmental conducted intensive surveying, rerecording and updating sites where necessary, archival research, and consultation with tribes and historical societies. The field inventory of the trail planning area identified a total of 19 resources within the APE (11 previously recorded). A full description of the archaeological sites found within the trail planning area are detailed in the *Cultural Resources Inventory and Evaluation for the Truckee Legacy Trail Phase 4 Project* (PAR Environmental Services, 2019). The detailed site information, including site location, and the report itself are exempt from public disclosure and are not included in this Initial Study. Instead, in this Initial Study we present the site ID and general information about the type of sites that have been found (i.e. lithic scatters, etc.)

The sites specifically addressed during the subsurface testing phase of the archaeology efforts for this project are P-29-1228, P-29-1229, P-29-1231, TL-4, TL-11, and TL-12. These resources represent Truckee's prehistoric, ethnographic, and historic past and include lithic scatters, milling stations, remnants of logging, occupation, and recreational use around and in Truckee. Of the 11 previously recorded sites, 8 are recommended as not eligible for inclusion in the CRHR and NRHP, two are recommended eligible, and one appears eligible for its prehistoric component. Eligible resources are considered historical resources for the purposes of CEQA.

The trail planning area was surveyed using intensive survey coverage (parallel transects spaced 10 to 15 meters apart). No portion of the trail planning area was excluded from the survey for any reason. A total of 22 sites were identified within the APE through a combination of prefield research and pedestrian survey. In all, the trail planning area was found by PAR Environmental to contain 4 prehistoric sites, 16 historic sites, and two sites with both prehistoric and historic components. Eight architectural resources are within the APE and are addressed in the Built Environment report. Three of the 22 sites are located on land managed by the TNF. These include CA-PLA-27 (FS 05-17-57-44), CA-PLA-1842 (FS 05-17-57-331), and CA-PLA-1842 (FS 05-17-57-425). These three sites have previously been determined ineligible for the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR).

PAR Environmental found that only one of the newly evaluated sites is recommended eligible for the NRHP and CRHR. The prehistoric component at P-29-1228 contains a lithic assemblage representing all aspects of tool manufacturing and dates to between 7500-1600 BP. As such, it contains data potentially important to exploring regional research domains regarding technology choices, and meets Criterion D. It retains integrity of material, workmanship, setting, location, design and is recommended as eligible for the NRHP and CRHR. It is considered a historical resource for the purposes of CEQA.

Two previously recorded sites are also recommended eligible: P-29-1227 (TLC Incinerator remains) and P-29-4399 (the Ice Palace). The Ice Palace is recommended as eligible for its importance to the community of Truckee and for its potential to provide information on construction methods and activities taking place at that location.

Conclusion

Given that there are eligible and potentially eligible historical and archaeological resources within the trail planning area, the following mitigation measures shall apply to the proposed project. With implementation of these mitigation measures, the proposed project would have a **less than significant** impact to the potential for causing a substantial adverse change to the significant of historical and/or archaeological resources.

Mitigation Measures

Mitigation Measure CLT-1*: The project construction plans shall indicate that if historic, cultural, archaeological and/or paleontological resources are encountered during site grading or other site work, all such work shall be halted immediately within 200 feet of discovery and the project applicant shall immediately notify the relevant Town of Truckee Community Development Department and/or Placer County Community Development Resources Agency (as applicable) of the discovery. In such case, the applicant will retain the services of a qualified archaeologist for the purpose of recording, protecting, or curating the discovery as appropriate. The archaeologist shall be required to submit to the Town of Truckee Community Development Department and/or Placer County Community Development Resources Agency (as applicable) for review and approval a report of the findings and method of curation or protection of the resources. The archaeologist shall consult the Native American monitors or other appropriate Native American representatives in determining appropriate treatment for unearthed cultural resources if the resources are prehistoric or Native American in nature. In considering any suggested mitigation proposed by the archaeologist in order to mitigate impacts to cultural resources, the Town and/or Placer County (as applicable) will determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, and other considerations. Further grading or site work within the area of discovery would not be allowed until the preceding work has occurred. Work may proceed on other parts of the trail planning area while mitigation for cultural resources is being carried out.*

Mitigation Measure CLT-2*: Due to the presence of historic and prehistoric resources in the vicinity of the Legacy trail, trailheads will contain signage consistent with the Archaeological Resources Protection Act (ARPA) language to notify trail users that cultural resources are not to be disturbed.*

The potential dirt trail alignment (between the Legacy Trail and the dirt road extension of South River Street) is intended to connect to the proposed trail network in the Truckee Springs project, if and when this property is developed. If the soft surface trail is constructed, the following performance standards are required:

1. Consultation is required to occur with the property owner and Washoe Tribe to determine the final soft surface trail alignment

2. If the final alignment is determined to impact the features, the following performance standards are required:

a) Install signage consistent with ARPA language to alert trail users to the historic importance of the area.

b) Fencing consistent with the Town of Truckee fencing standards for trails, such as two-rail, split rail fencing, or similar design

c) Provide construction monitors where portions of the soft surface trail are within 200 feet of features.

Response c): Less than Significant with Mitigation. Based upon a records search, no human remains are known to exist within the trail planning area. In the event that human remains are discovered, work within the area will be stopped and the applicable County Coroner will be notified immediately. Work will only resume after the investigation and in accordance with any requirements and procedures imposed by the applicable County Coroner. In the event that the bones most likely represent a Native American interment, the Native American Heritage Commission will be notified so that the most likely descendants can be identified and appropriate treatment can be implemented. Therefore, with the incorporation of mitigation measures the proposed project would not result in any significant impacts with respect to disturbing any human remains, including those interred outside of formal cemeteries.

To ensure a less than significant impact in the event of an accidental discovery, Mitigation Measure CLT-3, in conjunction with previously listed mitigated, shall be implemented. Additionally, Mitigation Measure CLT-4 would ensure protection of culturally sensitive areas.

Mitigation Measure

Mitigation Measure CLT-3*: If human skeletal remains are uncovered during project construction, the Town will immediately halt work, contact the Nevada County and/or Placer County Coroner (as applicable) to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines.*

If the County Coroner determines that the remains are Native American, the project proponent will contact the Native American Heritage Commission (NAHC) within 24 hours, in accordance with Health and Safety Code Section 7050.5, subdivision (c), and Public Resources Code 5097.98 (as amended by AB 2641). Per Public Resources Code 5097.98, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section (PRC 5097.98), with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains.

Mitigation Measure CLT-4*: Prior to construction, the project proponent shall install orange construction barrier fencing to identify culturally sensitive areas around all delineated and verified resource(s). This requirement shall only apply to culturally sensitive areas that are within 100 feet of the construction zone.*

VI. ENERGY

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

RESPONSES TO CHECKLIST QUESTIONS

Response a), b): Less than Significant. The proposed action would develop Phase 4 of the Truckee River Legacy Trail from Palisades Drive/Brockway Road to the SR89/West River Street intersection. When completed, the proposed action would feature approximately 1.9 miles of Class 1 (paved) bikeway and multi-use trail between the Truckee River Regional Park (Brockway Road and Palisades Drive intersection) and SR 89 South (by West River Street). This section of the Truckee River Legacy Trail would cross both public and private property and would include an approximately 400-foot bridge across the Truckee River.

Energy would be used primarily during the construction phase. Energy usage during the construction phase would originate from mobile and stationary construction equipment, and from construction worker vehicle exhaust. Construction-related energy usage can vary substantially depending on the level of activity, length of the construction period, specific construction operations, and types of equipment. Operational energy usage would be generated by electricity use for the night lighting at the project site, and visitor vehicles. Energy use associated with project operation would be minimal, and would only occur during periodic maintenance activities (such as deicing during the winter).

Energy usage during both the construction and operational phases of the proposed project would be typical for a project of this kind, and therefore would not represent a wasteful, inefficient, or unnecessary consumption of energy resources, and would not conflict with any existing plan for renewable energy or energy efficiency. Therefore, impacts to this topic would be **less than significant**.

VII. GEOLOGY AND SOILS

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation*	*Less Than Significant Impact*	*No Impact*
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?		X		
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				

EXISTING SETTING

Regional Geology

The Truckee area, situated east of the Sierra Nevada Crest, lies within the eastern portion of the Sierra Nevada Geomorphic Province. The Sierra is a tilted fault block nearly 400 miles long. Its east face is a high, rugged multiple scarp, contrasting with the gentle western slope. The trail planning area lies within the Sierra Nevada Ecological Section and the Tahoe-Truckee Ecological Subsection. Cenozoic volcanic rocks predominate in this subsection. There are some Mesozoic granitic rocks, Jurassic marine sedimentary rocks, and Jurassic and older metavolcanic rocks. The

Cenozoic volcanic rocks are mostly Pliocene andesite, basalt and pyroclastic rocks and Pleistocene basalt.

Local Geology

The proposed trail alignment is located south of the Truckee River. The terrain throughout the trail planning area contains substantial slopes. The regional geological map published by the California Geologic Survey (CGS) identifies the trail planning area as primarily lying in the area of Quarternary age glacial deposits. These deposits are described by CGS as undivided glacial till, moraine and outwash deposits (Black Eagle Consulting, 2012).

Soils

Soil resources identified in the trail planning area include the following soil types, as shown in Figure 8:

- Aquolls and Borolls (0-5% slopes)
- Inville-Riverwash-Aquolls complex (2-5% slopes)
- Kyburz-Trojan complex (9-30% slopes)
- Rubble land-Rock outcrop complex
- Martis-Euer variant complex (2-30% slopes)
- Sierraville-Trojan-Kyburz complex (2-30% slopes)

The Inville-Riverwash-Aquolls complex soils make up the vast majority of the trail planning area.

Regional Seismicity

Geologic hazards present within the Truckee area are primarily associated with seismic activity. The Truckee area lies within an area with a potential for strong earthquake shaking due to its proximity to the eastern margin of the Sierra Nevada (CBSC, 2010). Recurrence intervals for earthquakes along faults that have been studied in western Nevada are estimated to be in the range of 6,000 to 18,000 years. Eastern boundary faults of the Sierra Nevada are active and have a recurrence interval of 1,000 to 2,000 years. Faults located near Truckee include the Mohawk Valley Fault, the southern section of which lies approximately 20 miles northwest of Truckee, and the Dog Valley Fault, which extends from Dog Valley (approximately 20 miles northeast of Truckee) southwest to near Donner Lake. Several small trace faults are also located within the Town limits. None of these faults are designated as Alquist-Priolo Special Study Zones. Active fault zones at the eastern base of the Sierra Nevada have a history of producing moderate to great earthquakes.

Historically, the area surrounding the trail planning area has been subjected to few earthquakes. Some of the significant events in the region include an 1887 quake near Carson City (magnitude [M] 6.3 located at a distance of about 20 miles to the southeast of the trail planning area; a 1914 quake in Reno (M 6.4) located 21 miles to the northeast; a 1948 quake west of Reno (M 6) 15 miles to the north; a 1952 quake south of Reno (M 5.1) 20 miles to the east; a 1953 quake west of Verdi (M 5.3) 15 miles to the northeast; and a 1966 quake near Boca (M 6) 7 miles to the north. More recently, a swarm of earthquakes centered on the Mogul-Somerset area began in February of 2008 and continued throughout most of the year.

The trail planning area is located within the Western Nevada Seismic Zone. The Western Nevada Zone is composed of a poorly defined system of strike slip and dip slip faults within the eastern portion of the Sierra Nevada and the western portion of Nevada. The 2002 California Geological Survey earthquake catalog categorizes the Western Nevada Zone as an approximately 150-mile long shear zone with the hazard derived from an areal source, rather than from a single fault. The fault system is designated as Type C, with a low rate of slip and low rate of recurrence (Holdrege & Kull, 2016).

Liquefaction Potential

Liquefaction is a type of ground failure most likely to occur in water-saturated silts, sands, and gravels, having low to medium density. When a soil of this type is subjected to vibration, it tends to compact and decrease in volume. If the groundwater is unable to drain during the vibration, the tendency of the soil to decrease in volume results in an increase in pore-water pressure. When the pore-water pressure builds up to the point where it is equal to the over-burden pressure (effective weight of overlying soil), the effective stress becomes zero. In this condition, the soil loses its shear strength and assumes the properties of a heavy liquid. Because much of the trail planning area is underlain by dense glacial till that consists of cobbles, boulders, and possible volcanic bedrock at relatively shallow depth, liquefaction potential is minimal (Black Eagle Consulting, 2012).

Subsidence

Subsidence is the gradual settling or sinking of the earth's surface with little or no horizontal motion. Subsidence is caused by groundwater withdrawal, gas withdrawal, hydrocompaction or peat oxidation. Subsidence would not be expected to occur in the geology that characterizes the APE.

Expansive Soils

Expansive soils are largely comprised of clays, which greatly increase in volume when water is absorbed and shrink when dried. When structures are placed on expansive soils, foundations may rise each wet season and fall each dry season. This movement may result in cracking foundations, distortion of structures and warping of doors and windows. The soils at the trail planning area have a low shrink-swell potential (NCRS, 2016). Consequently, expansive soils are not an issue at the trail planning area.

Erosion

Erosion is a natural geological process by which landforms are worn down or reshaped by wind and water and the eroded material is deposited elsewhere. The highest potential for erosion to occur is a result of construction activity where soils may be exposed for some length of time.

RESPONSES TO CHECKLIST QUESTIONS

Response a.i): No impact. The trail planning area is not located within any of the Earthquake Fault Zones delineated by the Alquist-Priolo Earthquake Fault Zoning Act; no known active earthquake faults have been mapped as passing through the trail planning area. The nearest major faults are the Mohawk Valley Fault and Dog Valley Fault located approximately 20 miles

northwest and 20 miles northeast of the trail planning area, respectively. The closest location of ground disturbance as mapped by the California Geological Survey is located approximately 5 miles north of the trail planning area. The proposed project is not a dwelling unit or other structure inhabited by people, the proposed trail and bridge would meet current standards for earthquake stability, and the trail planning area is not located in a designated Alquist-Priolo Fault Zone. Implementation of the proposed project would have a **no impact** relative to this topic.

Responses a.ii): Less than Significant. Most structures, including trails and associated infrastructure, are potentially subject to damage from ground-shaking in the event of an earthquake. Ground motion during an earthquake is an unavoidable hazard for facilities in the Sierra Nevada region. The intensity of such an event would depend on the causative fault and the distance to the epicenter, the moment magnitude, and the duration of shaking. Ground-shaking within the trail planning area could cause significant damage to trail facilities, if not constructed in accordance with Uniform Building Code (UBC) requirements for Seismic Risk Zone 3.

Damage to the Truckee River Legacy Trail Phase 4 and associated infrastructure from a seismic event could occur; however, the design of the proposed project will conform to state requirements and Town of Truckee engineering standards, including UBC requirements for areas within Seismic Risk Zone 3, as well as all Placer County engineering standards. Overall, all State of California requirements and Town of Truckee and Placer County engineering standards would be met; therefore, the risk is minimized to the extent practicable. No additional mitigation is necessary. Consequently, this impact is expected to be **less than significant**.

Response a.iii): Less than Significant. Soil liquefaction is a phenomenon in which loose, saturated, cohesionless soils (silts and sands) below the water table are subject to a loss of strength associated with earthquake shaking. Subsidence is the gradual settling or sinking of the earth's surface with little or no horizontal motion, and is caused by groundwater withdrawal, gas withdrawal, hydrocompaction or peat oxidation. Given the soils types that exist within the trail planning area and the expected uses within the trail planning area, the risk of liquefaction and subsidence is low. In addition, the design of the project will conform to state requirements and Town of Truckee engineering standards, including UBC requirements. Therefore, this impact to this topic is considered **less than significant**.

Response a.iv): Less than Significant with Mitigation. There are steep slopes located immediately to the south and east of the trail planning area, and depending on the final trail alignment, some trail segments would cross relatively steep hillsides. In addition, the proposed soft surface trail would traverse steep terrain. The soil type is rocky in this steep area, which significantly reduces the risk of landslide/mudslide; however, given the slope steepness, rock slides are possible. Additionally, avalanches can be a winter risk for areas with steep slopes following large Sierra storms. This is especially true for steep north-facing slopes, which is the case for the steep slopes adjacent to the trail planning area. This area has been designated as an avalanche hazard zone by the Town of Truckee (i.e. trail segment K1, as shown in Figure 5a). The potential for either rock slides or avalanches poses a safety hazard and risk to people that could be using the trail. The following mitigation measure requires the Town to install signage to warn trail users of the potential for rock slides or avalanche as they travel through the area.

Implementation of the following mitigation measure would ensure that this impact is reduced to a **less than significant** level.

Mitigation Measure

Mitigation Measure GEO-1*: Install signage to warn trail users of the potential for rock slides or avalanches as they travel through the area. Signs should be placed at the following locations:*

- *Trail Head Parking Area: Install sign at the trailhead entrance.*
- *Trail segments that traverse steep slopes:*
  - *West bound trail lane located approximately 100 feet prior to entering the rock and avalanche hazard zones.*
  - *East bound trail lane approximately 100 feet prior to entering the rock and avalanche hazard zones.*

Response b): Less than Significant with Mitigation. Construction of the proposed project would require site preparation which would expose surface soil materials to rainfall and snowmelt, potentially resulting in the removal and transport of these materials to the Truckee River. The trail planning area is subject to the Lahontan Regional Water Quality Control Board (LRWQCB) water quality standards for the Truckee River Hydrologic Unit. To minimize construction related water quality impacts, the Town would obtain a Storm Water Construction General Permit, which requires that a Storm Water Pollution Prevention Plan (SWPPP) be prepared for the site in accordance with National Pollutant Discharge Elimination System (NPDES) requirements. The construction contractor would be required to protect surface water quality by preventing eroded material or contaminants from entering waterways during construction through the use of best management practices (BMPs). The SWPPP lists potential sources of impacts to surface waters and BMPs that are being used to minimize the likelihood of those impacts) (see Mitigation Measures HYD-1 through HYD-2 of this Initial Study). The following mitigation measure provides additional protection against impacts associated with erosion. Implementation of this mitigation measure would ensure the impact to this topic is **less than significant**.

Mitigation Measure

Mitigation Measure GEO-2*: The project applicant shall implement the following measures:*

- *Grading conducted within the trail planning area shall comply with the standards and requirements of the Town of Truckee and Placer County, and with these measures and other agency requirements. Grading shall incorporate best management practices for erosion and sediment control. The SWPPP prepared for the proposed project shall address temporary measures and facilities to control erosion and sediment during construction. Permanent Low Impact Development (LID) erosion and sediment control measures and facilities will be integrated into project design and will be part of the final construction plans, in accordance with the State Water Resources Board Storm Water Construction General Permit and subject to approval by the Town of Truckee and Placer County, as applicable.*

Response c): Less than Significant. Soil liquefaction is a phenomenon in which loose, saturated, cohesionless soils (silts and sands) below the water table are subject to a loss of strength associated with earthquake shaking. Lateral spreading, which is the lateral movement of saturated soils on slopes, is often induced by liquefaction. Subsidence is the gradual settling or sinking of the earth's surface with little or no horizontal motion, and is caused by groundwater withdrawal, gas withdrawal, hydrocompaction or peat oxidation. Given the soils types that exist within the trail planning area and the expected uses within the trail planning area, the risk of liquefaction, lateral spreading and subsidence is low. Therefore, this impact is considered **less than significant** to this topic.

The trail planning area is not located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site lateral spreading, subsidence, liquefaction or collapse. The project would be constructed according to all state, Town of Truckee, and Placer County requirements, including UBC building standards to protect the public and construction personnel from potential geologic hazards. As a result, the impact to this topic is considered **less than significant**.

The potential for landslide and/or avalanches is addressed under impact a.iv (above), which indicates that there are steep slopes located within portions of and immediately to the south and east of the trail planning area. The soil type is rocky in this steep area, which significantly reduces the risk of landslide/mudslide; however, given the slope steepness, rock slides are possible. Avalanches can be a winter risk for areas with steep slopes following large Sierra storms. This is especially true for steep north-facing slopes, which is the case for the steep slopes adjacent to and within portions of the trail planning area. Portions of this area have been designated as an avalanche hazard zone by the Town of Truckee. The potential for either rock slides or avalanches poses a risk to people that could be using the trail. However, as described under impact a.iv (above), Mitigation Measure GEO-1 would require the Town of Truckee to install signage to warn trail users of the potential for rock slides or avalanches as they travel through the area. Therefore, the impact to this topic would be reduced to a **less than significant** level.

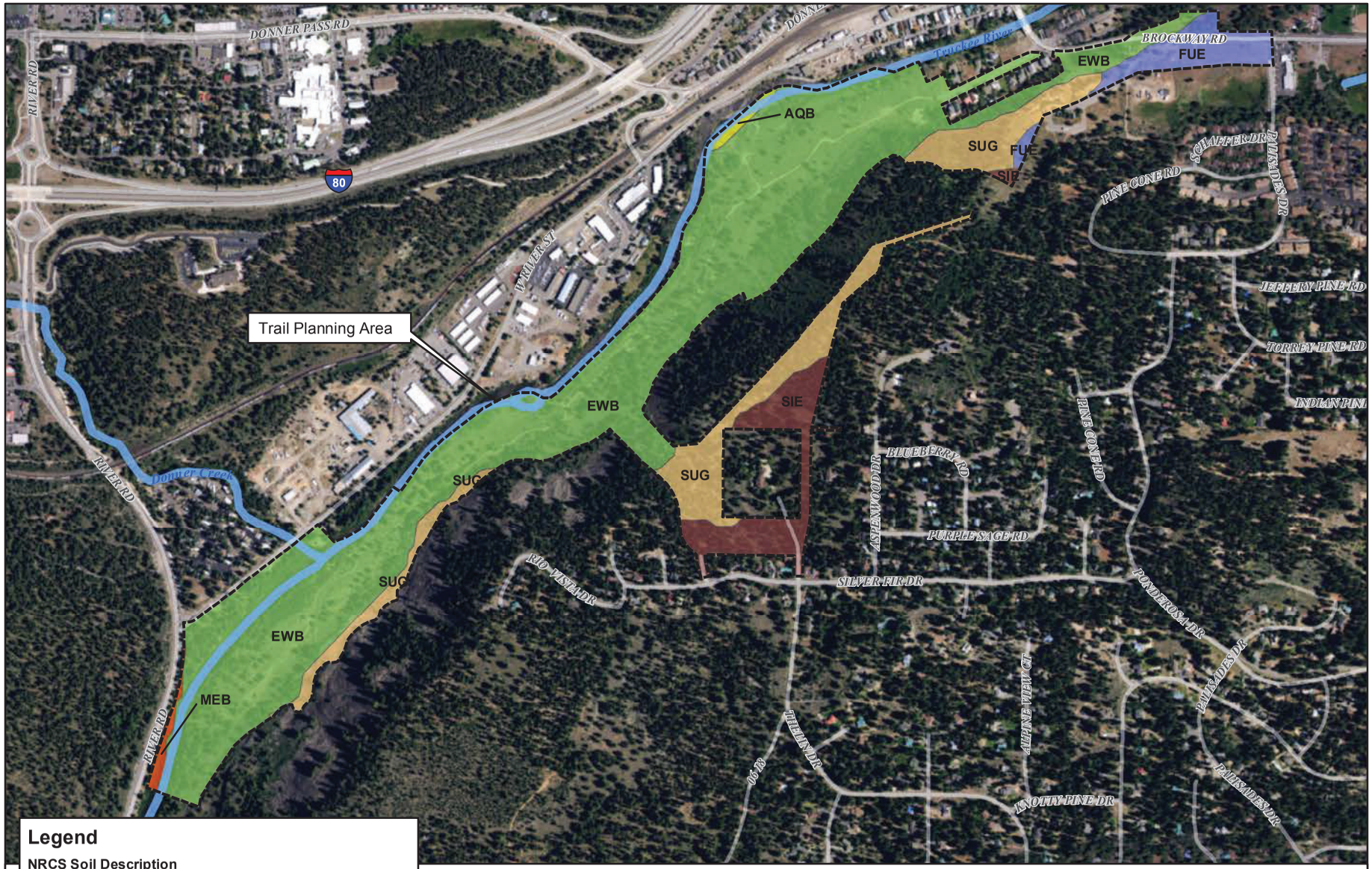
Response d): Less than Significant. Some of the soils types found onsite would be expected to contain a high clay content which elevates the potential for expansion. Expansion of these subsurface clay materials could damage paved trail surfaces. If the trail is improperly designed, any expansion and/or contraction could exert enough pressure on the trail to result in cracking, settlement, and uplift. However, compliance with all Town of Truckee, Placer County, and State of California standards and practices, as well as application of the existing regulations identified in the Uniform Building Code, would minimize the risk associated with development of the proposed project. Therefore, the impact to this topic is considered **less than significant**.

Response e): No Impact. The proposed project does not include a septic system. Therefore, **no impact** would occur related to soils incapable of adequately supporting the use of septic tanks.

Response f): Less than Significant with Mitigation. Paleontological resources are the fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved worldwide, preservation of plant or animal remains as fossils is an

extremely rare occurrence. Because of the infrequency of fossil preservation, fossils – particularly vertebrate fossils – are considered to be nonrenewable resources. Because of their rarity, and the scientific information they can provide, fossils are considered highly significant records of ancient life.

No known paleontological resources or unique geologic features exist within the trail planning area. Therefore, the proposed project is not likely to destroy, either directly or indirectly, a unique paleontological resource or site, or geological feature. As described in Mitigation Measure CLT-1, if such a resource should be encountered during construction, work would stop until the resource can be evaluated and a determination made of its significance and need for recovery, avoidance, and/or mitigation. Additionally, as described under Mitigation Measure CLT-2, trailheads will contain signage consistent with the ARPA language to notify trail users that cultural resources are not to be disturbed, and performance standards would be required for the soft surface trail (if it is constructed). Therefore, the proposed project would result in a less than significant impact on paleontological resources or unique geologic features.



Legend

NRCS Soil Description

- AQB: Aquolls and Borolls, 0-5% slopes
- EWB: Inville-Riverwash-Aquolls complex, 2-5% slopes
- FUE: Kyburz-Trojan complex, 9-30% slopes
- SUG: Rubble land-Rock outcrop complex
- MEB: Martis-Euer variant complex, 2-30% slopes
- SIE: Sierraville-Trojan-Kyburz complex, 2-30% slopes

0 500 1,000
Feet
1:12,000

Data source: Placer County GIS; City of Truckee; NRCS Soil Survey, Tahoe National Forest Area CA719) accessed 10/24/2017; ArcGIS Online Aerial Imagery Service. Map date: October 24, 2017.

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 8: Soils Map

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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VIII. GREENHOUSE GAS EMISSIONS

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?			X	

EXISTING SETTING

Greenhouse Gases and Climate Change Linkages

Various gases in the Earth's atmosphere, classified as atmospheric greenhouse gases (GHGs), play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring greenhouse gases include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, solely a product of industrial activities. Although the direct greenhouse gases CO_2, CH_4, and N_2O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three greenhouse gases have increased globally by 40, 150, and 20 percent, respectively (IPCC, 2013).

Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by the industrial sector (California Energy Commission, 2018).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced 440 million gross metric tons of carbon dioxide equivalents (MMTCO2e) in 2016 (California Energy Commission, 2018). By 2020, California is projected to produce 509 $MMTCO_2e$ per year (California Air Resources Board, 2015).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2016, accounting for 41% of total GHG emissions in the state. This category was followed by the industrial sector (23%), the electricity generation sector (including both in-state and out of-state sources) (16%) the agriculture sector (8%), the residential energy consumption sector (7%), and the commercial energy consumption sector (5%) (California Energy Commission, 2018).

Effects of Global Climate Change

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state. The snowpack portion of the supply could potentially decline by 70% to 90% by the end of the 21st century (National Resources Defense Council, 2014). This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the state; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately seven inches during the last century and it is predicted to rise an additional 22 to 35 inches by 2100, depending on the future GHG emissions levels (California Environmental Protection Agency, 2010). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion and disruption of wetlands. As the existing climate throughout California changes over time, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result. Under the emissions scenarios of the Climate Scenarios report (California Environmental Protection Agency, 2010), the impacts of global warming in California are anticipated to include, but are not limited to, the following.

Public Health

Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation are projected to increase from 25% to 35% under the lower warming range and to 75% to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures will increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts capture and transport water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

The state's water supplies are also at risk from rising sea levels. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta, a major state fresh water supply. Global warming is also projected to seriously affect agricultural areas, with California farmers projected to lose as much as 25% of the water supply they need; decrease the potential for hydropower production within the state (although the effects on hydropower are uncertain); and seriously harm winter tourism. Under the lower warming range, the snow dependent winter recreational season at lower elevations could be reduced by as much as one month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing, snowboarding, and other snow dependent recreational activities.

If GHG emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snow pack by as much as 70% to 90%. Under the lower warming scenario, snow pack losses are expected to be only half as large as those expected if temperatures were to rise to the higher warming range. How much snow pack will be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snow pack

would pose challenges to water managers, hamper hydropower generation, and nearly eliminate all skiing and other snow-related recreational activities.

Agriculture

Increased GHG emissions are expected to cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures are likely to worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts, and milk.

Crop growth and development will be affected, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

In addition, continued global warming will likely shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps. Continued global warming is also likely to alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global warming is expected to alter the distribution and character of natural vegetation thereby resulting in a possible increased risk of large wildfires. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. For example, if precipitation increases as temperatures rise, wildfires in southern California are expected to increase by approximately 30% toward the end of the century. In contrast, precipitation decreases could increase wildfires in northern California by up to 90%.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the state. For example, alpine and sub-alpine ecosystems are expected to decline by as much as 60% to 80% by the end of the century as a result of increasing temperatures. The productivity of the state's forests is also expected to decrease as a result of global warming.

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the state's coastal regions. Under the higher warming scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant. Implementation of the proposed project could contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to future development would be primarily associated with increases of carbon dioxide (CO_2) and, to a lesser extent, other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O). Sources of proposed project GHG emissions would include on-road and off-road vehicles during project construction, and off-road vehicles used during project operation (for trail maintenance). The common unit of measurement for GHG is expressed in terms of annual metric tons of CO_2 equivalents ($MTCO_2e$/year). Greenhouse gas emissions would temporarily increase during project construction; during proposed project operation, it is expected that the proposed project would be responsible for a net decrease in greenhouse gas emissions, due to an increase in individuals commuting by bicycle (in place of automobile travel), compared with existing conditions.

Table GHG-1 shows unmitigated construction-related greenhouse gases that would be generated by the proposed project. These results are conservative since the modeling does not take into account all NSAQMD requirements, including those identified under Mitigation Measure AIR-1. Greenhouse gas emissions associated with project operation would be minimal, and would only occur during periodic maintenance activities (such as deicing during the winter), and would generate minimal (below threshold) emissions.

TABLE GHG-1: PROJECT CONSTRUCTION GREENHOUSE GAS EMISSIONS (POUNDS PER DAY)

EMISSIONS YEAR	*TOTAL CO_2*	*CH_4*	*N_20*	*CO_2E*
2021	2,391.79	0.74	0.00	2,410.25
Total	**2,391.79**	**0.74**	**0.00**	**2.410.25**

Source: CalEEMod v.2016.3.2.

As with other individual and relatively small projects, the specific emissions from the proposed project would not be expected to individually have an impact on global climate change. It should also be noted that the NSAQMD has not developed any specific greenhouse gas thresholds for projects within its jurisdiction. Given the short-term and very limited nature of greenhouse gas emissions that would be emitted during construction, and given the expected net decrease in emissions from the operational phase of the proposed project, this is a **less than significant** impact.

The proposed project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and impacts associated with the generation of GHG emissions would be considered **less than significant**.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				X
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the trail planning area?			X	
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.			x	

EXISTING SETTING

Hazardous Materials

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. Hazardous waste is any hazardous material that is discarded, abandoned, or to be recycled. The criteria that render a hazardous material also applies to wastes that are determined to be hazardous. Factors that influence the health effects of exposure to hazardous materials include the dose to which the person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility.

Airport Operations Hazards

Hazards associated with airport operations are generally associated with aircraft accidents. Aircraft accidents of most concern occur during takeoff and landing operations during which

aircraft are operated close to the ground and within close proximity to one another. Potential hazards around an airport can be increased due to many external factors, such as incompatible land uses in the vicinity of the airport, installation of power transmission lines, wildlife hazards (i.e., bird strikes, migrating wildlife, etc.), and construction of tall structures.

Fire Hazards

Wild fires are a major hazard in the State of California. Wild fires burn natural vegetation on developed and undeveloped lands and include timber, brush, woodland, and grass fires. While low intensity wild fires have a role in the region's ecosystem, wild fires put human health and safety, structures (e.g. homes, schools, business, etc.), air quality, recreation areas, water quality, wildlife habitat and ecosystem health, and forest resources at risk.

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): No Impact. The proposed project does not include demolition activities. Off-road and on-road vehicles used during construction activities would be subject to regulations that would ensure any hazardous materials are properly handled, stored, and transported during the construction phase. Operation of the proposed project would not include the routine transport, use, or disposal of hazardous materials, or otherwise create a significant hazard through reasonably foreseeable upset and accident conditions. Other than the use of petroleum-based products, there are no significant hazards that would be used during proposed project construction or operation that could cause a significant hazard to the public or the environment. Implementation of the proposed project would have **no impact** relative to this topic.

Response c): Less than Significant. The nearest school facility is the Twin Ridges Home Study Charter School, located approximately 0.20 miles north of the trail planning area. However, the proposed project would not emit or handle hazardous materials or substances. Therefore, there is **less than significant** impact relative to this topic.

Response d): No impact. The proposed project is the development of a single phase of the Truckee River Legacy trail system (including soft surface trails). The trail planning area is not located on a site that is currently identified on the California Hazardous Wastes and Substances List. Additionally, no Federal Superfund, State Response, or School Cleanup sites are located on or near to the trail planning area (DTSC, 2016). The closest identified cleanup site to the trail planning area is a voluntary cleanup site located at 10470 Jibboom Street (formerly known as the Truckee Junction Property), approximately 0.2 miles north of the trail planning area, north of the Truckee River. Past uses at this site include hazardous waste treatment, with lead in the soil as a potential concern. However, preliminary soil sampling conducted at this site during a 1993 investigation found no elevated concentrations of metals typically associated with historical landfill or burn dump operations. Given the lack of environmental hazards identified at this site, there is no impact to the proposed project. Implementation of the proposed project would have **no impact** relative to this project.

Response e): Less than Significant. The proposed project would be within two miles of a public use airport. The nearest airport, the Truckee Tahoe Airport, is a (public) community airfield located approximately one mile east of the easternmost portion of the trail planning area.

Nevertheless, given that the proposed project is a public multi-use (e.g. bicycle and pedestrian) trail, and given the distance between the airport and the trail planning area, the Truckee Tahoe Airport would not pose a safety hazard or generate excessive noise for people within the trail planning area. Therefore, this is a **less than significant** impact.

Response f): No impact. Implementation of the proposed project would not result in any modifications to the existing roadway system and would not interfere with potential evacuation or response routes used by emergency response teams. Therefore, **no impact** would occur.

Response g): Less than Significant. The California Department of Forestry has defined the Truckee area as in a high fire hazard severity zone, and the *Town of Truckee 2025 General Plan* designates the trail planning area as being in a "High Risk" area for "Community Threat from Wildfire". However, the proposed project does not include dwellings or other building structures that would be exposed to wildland fire risk. Additionally, given the open layout of the trail planning area and adjacent terrain, and the proximity of the trail to the Truckee River, people traversing the trail would become aware of and have the ability to avoid a potential wildfire occurring within or adjacent to the trail planning area. Therefore, this is a **less than significant** impact.

X. HYDROLOGY AND WATER QUALITY

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?		X		
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;		X		
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite		X		
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or		X		
iv) impede or redirect flood flows		X		
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.		X		
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				X

EXISTING SETTING

The proposed trail planning area is located within the southern portion of the Town of Truckee, located within the Sierra Nevada Mountains of California. The trail planning area is found within the watershed of the Truckee River. The Truckee River is the sole outlet of Lake Tahoe and flows generally northeast to Truckee, then turns sharply to the east and flows down the mountain slope into Nevada, through Reno and Sparks, and along the northern end of the Virginia Range. At Fernley it turns north, flowing along the east side of the Pah Rah Range and ultimately emptying into the southern end of Pyramid Lake. The Truckee River is approximately 105 miles in length as it extends downstream between its origin (outlet) at Lake Tahoe and its terminal discharge into Pyramid Lake. The Truckee River Watershed is a closed system, having Pyramid Lake as the point of terminal discharge, and it does not have a natural outlet.

The overall watershed area for the Truckee River at its outfall at Pyramid Lake is about 3,115 square miles. Roughly 25% of the overall watershed is found in California and includes the higher elevations within the watershed. The middle and lower elevations of the watershed reside in Nevada and represent about 75% of the overall watershed area. The U.S. Geological Survey has subdivided the Truckee River Watershed into three (3) primary sub-basins (or regions with separate Hydrologic Unit Codes). These primary sub-basins are referred to as the Lake Tahoe sub-basin, the Middle Truckee River sub-basin, and the Pyramid-Winnemucca Lake sub-basin. Figure 9 depicts these lower-level watersheds. The trail planning area lies within the Middle Truckee River sub-basin, within the Trout Creek-Truckee River and Squaw Creek-Truckee River sub-watersheds.

Major tributaries to the Truckee River include the Little Truckee River, Martis Creek, Donner Creek and Prosser Creek in California and Hunter Creek, Steamboat Creek and the North Truckee Drain in Nevada. Watershed elevations range from about 9,000 feet at mountain peaks, to about 5,700 feet in the Truckee River valley north of the trail planning area, to about 4,500 feet at Reno and about 3,800 feet at Pyramid Lake. Additionally, rainfall within the trail planning area generally drains into the Truckee River.

There are two (2) dams that discharge to the Truckee River upstream of the trail planning area. These dams are Lake Tahoe Dam and Donner Lake Dam. Given that these dams do not have a significant height or width at their outlets and given the magnitude of the elevation difference between the trail planning area and the Truckee River, neither dam would pose a flood risk to the trail planning area in the event of a dam failure.

The Federal Emergency Management Agency (FEMA), through its Flood Insurance Rate Mapping program, designates areas where flooding could occur during 100-year and 500-year flood events. The 100-year floodplain boundary is the basic planning criteria used to distinguish areas where the danger of floods justifies the establishment of floodplain management regulations. Outside this boundary, the risk of flooding is generally not considered sufficient to require floodplain management regulations. According to Placer County GIS, the Town of Truckee, and FEMA's National Flood Hazard Layer (accessed on February 14, 2019), portions of the trail planning area would be located within the FEMA-designated 100-year flood hazard zone. This flood hazard zones exists primarily within the central and southern portion of the trail planning area. Figure 10 depicts the FEMA flood hazard zones within the proposed project trail planning area.

Truckee Development Code Section 18.24.050 prohibits construction within a Flood Hazard area as defined by the Federal Emergency Management Agency (FEMA) or the Federal Insurance Administration (FIA) maps. However, trails, sidewalks, and paths are exempt from this prohibition and so the project is consistent with the Development Code.

REGULATORY SETTING

Under the Clean Water Act (CWA) of 1977, the U.S. Environmental Protection Agency (EPA) seeks to restore and maintain the chemical, physical, and biological integrity in the nation's waters. The statute employs a variety of regulatory and non-regulatory tools to reduce direct pollutant

discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The CWA authorizes the USEPA to implement water quality regulations. The National Pollutant Discharge Elimination System (NPDES) permit program under Section 402(p) of the CWA controls water pollution by regulating stormwater discharges into the waters of the U.S. California has an approved state NPDES program. The EPA has delegated authority for water permitting to the California State Water Resources Control Board (SWRCB), which has nine regional boards. The Lahontan Regional Water Quality Control Board (LRWQCB) regulates water quality in the trail planning area. The LRWQCB allows for exemptions to discharge prohibitions in the floodplain for essential transportation facilities. This multi-use path is considered an essential regional alternative transportation facility that would connect the existing Legacy Trail Phases as well as provide a vital link to the future Placer County trail to Squaw Valley and the existing trail between Squaw Valley and Tahoe City.

Section 303(d) of the CWA requires that each state identify water bodies or segments of water bodies that are "impaired" (i.e., not meeting one or more of the water quality standards established by the state). These waters are identified in the Section 303(d) list as waters that are polluted and need further attention to support their beneficial uses. Once the water body or segment is listed, the state is required to establish Total Maximum Daily Load (TMDL) for the pollutant causing the conditions of impairment. TMDL is the maximum amount of a pollutant that a water body can receive and still meet water quality standards. Typically, TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The intent of the 303(d) list is to identify water bodies that require future development of a TMDL to maintain water quality.

The Federal Emergency Management Agency (FEMA), through its Flood Insurance Rate Mapping program, designates areas where flooding could occur during 100-year and 500-year flood events. The 100-year floodplain boundary is the basic planning criteria used to distinguish areas where the danger of floods justifies the establishment of floodplain management regulations. Outside this boundary, the risk of flooding is generally not considered sufficient to require floodplain management regulations. A large portion of the trail planning area is within the 100-year floodplain (Zone A) of the Truckee River (FEMA, 2019). Zone A refers to areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies.

The proposed alignment(s) include trail segments that traverse through the 100-year floodplain. There were several alternative trail alignments that were considered, each varying to the extent that they are located within the 100-year floodplain. The preferred alignment is located within the 100-year floodplain between approximate stations 112 and 119 and most of this trail would be constructed at grade. At the base of the talus slope, culverts would be installed to allow seasonal snow melt to pass below the trail, resulting in fill in the floodplain in the low point. Otherwise, the trail would be designed to allow the 100-year flood to pass over the trail.

The preferred alignment does not include new utility access roads. However, the Middle Bridge and the Donner Creek Bridge alternatives do propose new unpaved access roads that connect existing utility access roads to the paved trail. Portions of these new access points would be

located in the floodplain in order to access the existing dirt road which crosses the floodplain in many areas.

The proposed project would also include a bridge over the Truckee River and the adjacent riparian area. The preferred bridge crossing is the West Bridge. The trail crosses private property which limits options for the trail. Therefore, two other bridge options are included in case of property owner issues; 1) Middle Bridge; and 2) Donner Creek Bridge. All three bridge segments are designed to span over the Truckee River, with limited piles supporting the bridge. The bridges are designed to minimize/eliminate any direct physical impact to wetlands, and the installation of the abutments and piles will have very limited impact to the floodplain. Additionally, the boardwalks are designed to span the wetland areas. The wetland and riparian areas under the bridges/boardwalks, however, are classified as permanent impacts within this study because they will result in some loss of natural light on the underside of the bridge/boardwalk and vegetated areas would become largely barren. The bridge crossing alignments may have pop-outs that jut over the river to allow fishing and standing outside of the travel corridor. Separately, if the Donner Creek bridge crossing is constructed, an additional 100-foot long bridge over Donner Creek, (parallel to west River Street) would also be developed to connect the trail to the parking lot.

RESPONSES TO CHECKLIST QUESTIONS

Responses a): Less than Significant with Mitigation. Construction of the project would impact between approximately 11.4 and 12.6 acres, depending on the exact alignment and bridge that is constructed. This would include between approximately 5.0 and 5.9 acres of permanent impact and between 6.6 and 6.7 acres of temporary disturbance (note: values would depend on the alignment selected).

The trail segments were designed to minimize impacts to riparian, floodplain, and wetlands to the extent feasible and the design includes a boardwalk and a bridge that spans these areas with limited piles to support the structure. The boardwalk and bridge would still result in some loss of natural light on the underside of the boardwalk and vegetated areas would become largely barren. As such the boardwalk and bridge areas are classified as permanent impact within this study.

In addition to the bridge and boardwalk, portions of the trail are located in the floodplain. Alternative alignments were reviewed but were dismissed due to safety concerns. In order to avoid the floodplain, the alternative traversed an extremely steep talus slope that would be difficult to construct as well as dangerous for trail users due to the rockfall and avalanche danger. The preferred alternative uses an existing dirt road and will be placed at existing grade. Where the trail crosses between the 'island' and the talus slope, new grade will be cut and culverts placed at the base of the talus slope to allow seasonal snow melt to pass below the trail. The trail would be designed in this area to allow the 100-year flood flows over the top of the trail. The trail segments portion of the project would include approximately 0.0073 acres of impacts to wetlands (0.0035 permanent impact and 0.0038 temporary impact). The bridge and boardwalk portion of the project would include impacts that range from between 0.0425 to 0.0680 acres of

impacts to wetlands, depending on the bridge that is selected Therefore, the total wetland impact (to the trail segments and bridges) is anticipated to range between approximately 0.0498 to 0.0753 acres. Tables PD-5 and -6 provides a summary of the area of impact to wetlands from the trail segments/boardwalk and bridges, respectively. These permanent and temporary disturbances have the potential to impact water quality if specific best management practices are not implemented. In addition, the proposed project would generate a small amount of fill in the floodplain from the bridge piers and from trail alignments that are located within the floodplain. The permanent and temporary proposed project area (i.e. trails, bridges, parking lot, and access roads) within the 100-year floodplain is provided in Table BIO-3. The proposed project would have the least amount of area within the floodplain (0.502 acres) compared with the alternatives. The Middle Bridge Alternative would have the second least amount of area within the floodplain (0.586 acres), followed by the Donner Bridge Alternative (0.738 acres).

The Truckee River is listed as an impaired water body under Section 303(d) of the CWA, with sedimentation/siltation listed as the (only) pollutant of concern (SWRCB, 2014). This pollutant is being addressed by the U.S. EPA-approved TMDL, first adopted by the Lahontan Water Board in May 2008. The State Water Board approved the TMDL in March 2009. Nevada County and Placer County share the applicable TMDL permit and also share monitoring.

The proposed project would be required to obtain a Storm Water Construction General Permit (General Permit 2009-0009-DWQ) from the SRWQCB, which requires a SWPPP be prepared for construction sites in accordance with NPDES requirements. The construction contractor would be required to protect surface water quality by preventing eroded material or contaminants from entering waterways during construction through use of best management practices (BMPs). This includes protecting the surface water quality in the event of an accidental rupture of a sewer line during construction.

The proposed project would also be required to comply with the Town of Truckee's drainage/stormwater runoff regulations, as described in Section 18.30.050 of the Development Code In addition, the proposed project would comply with all LRWQCB water quality and waste discharge requirements. Furthermore, any portable toilet or vault toilet, if needed, would be self-contained and sealed.

Mitigation Measure HYD-1 would restrict the construction schedule to avoid water quality impacts and disturbances to riparian habitat adjacent to the Truckee River. Mitigation Measure HYD-2 would prevent construction activities from encroaching on the ordinary high-water mark of the Truckee River, except through USACE, LRWQCB, and CDFW authorization. Furthermore, Mitigation Measure GEO-2 (as contained with the Geology and Soils discussion of this Initial Study) would require site-specific erosion control and bank stability measures to be implemented. The improvement plans must be consistent with the requirements of the LRWQCB. The proposed project stormwater design considerations would ensure that the proposed project surface runoff would not result in flooding, or substantial erosion or siltation.

Although sedimentation and/or siltation risk to the Truckee River has the potential to temporarily or permanently increase due to the development of the proposed project,

conformance with the aforementioned water quality standards, as well as Mitigation Measures HYD-1 through HYD-2, and Mitigation Measure GEO-2 (as provided in Section VI. Geology and Soils, of this Initial Study), would reduce risk of violating any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality, to a **less than significant** level.

> ***Mitigation Measure HYD-1:*** *All construction activity within the 100-year floodplain zone and/or jurisdictional wetlands shall be restricted to May 1st to October 15th in order to avoid water quality impacts and disturbance to riparian habitat adjacent with the Truckee River. Restricting work to this timeframe shall limit work to the driest period of the year, thereby avoiding excessive runoff and erosion. Any construction activity outside of this time frame shall be subject to Town of Truckee and LRWQCB approval.*
>
> ***Mitigation Measure HYD-2:*** *Proposed project construction activities shall avoid contact with the ordinary high-water mark of the Truckee River and nearby wetland habitat to the extent feasible. The ordinary high-water mark shall be defined by the "…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [Federal regulations (33 CFR 328.3(e))], equivalent to a biological vegetation mark. Any encroachment into these areas must be authorized through a regulatory permit issued by the applicable regulatory bodies (e.g. the USACE, LRWQCB, and CDFW) prior to implementation.*

Response b), e): No impact. The proposed project would not directly withdraw any water from the local groundwater supply, and therefore it would not deplete groundwater supplies or interfere substantially with groundwater recharge, or conflict with or obstruct implementation of any water quality control plan or sustainable groundwater management plan. Implementation of the proposed project would have **no impact** on the local groundwater table.

Responses c.i), c.ii): Less than Significant with Mitigation. The Truckee River is listed as an impaired water body under Section 303(d) of the CWA, with sedimentation/siltation listed as a pollutant of concern (SWRCB, 2014). Proposed project construction could involve activities that would generate additional loose erodible soils if not managed appropriately, which could alter the existing drainage pattern of the site, thereby affecting the course of the Truckee River. This is particularly likely during the construction of any bridge alignment or boardwalk facilities that are selected. As described previously, the Town would obtain a Storm Water Construction General Permit from the SRWQCB and comply with the Town's drainage/stormwater runoff regulations. In addition, the proposed project would be required to prepare a SWPPP, have a restricted construction schedule, and require regulatory permits to authorize any encroachment of the Truckee River's high-water mark, as provided in Mitigation Measures HYD-1 through HYD-2, and Mitigation Measure GEO-2. In addition, Mitigation Measure HYD-3 requires the proposed project to obtain an exemption to discharge prohibitions, as outlined in the Lahontan Basin Plan for essential transportation facilities. Implementation of these mitigation measures would reduce the potential impact to a **less than significant** level.

As previously described, in addition to the bridge and boardwalk, portions of the trail are located in the floodplain. Alternative alignments were reviewed but were dismissed due to safety concerns. The preferred alternative uses an existing dirt road and will be placed at existing grade. Where the trail crosses between the 'island' and the talus slope, new grade would be cut and culverts placed at the base of the talus slope to allow seasonal snow melt below the trail. The trail would be designed in this area to allow the 100-year flood flows over the top of the trail. The proposed project would generate a small amount of fill in the floodplain from the bridge piers and from trail alignments that are located within the floodplain.

The drainage pattern of the trail planning area would not be substantially altered after development of the proposed project. The paved trail would be 10-foot wide along its entire 1.9-mile length with 2-foot shoulders on either side. The new trail will result in some new runoff, but the final design would include storm drainage design to ensure that the increased runoff is appropriately handled to prevent flooding. The design considerations for stormwater would ensure that the proposed bridge would not generate surface runoff that would result in flooding, or substantial erosion or siltation, on- or off-site. Additionally, the design considerations would ensure that the proposed bridge would be constructed in such a way as to minimize the potential for localized flooding. These design considerations, along with implementation of the mitigation measures discussed herein, would reduce the potential for the substantial alteration of the existing drainage pattern of the site and area during project operational activities to a **less than significant** level.

> ***Mitigation Measure HYD-3****: The proposed project applicant shall require issuance of an exemption to discharge prohibitions, as outlined in the Lahontan Basin Plan for essential transportation facilities.*

Response c.iii): Less than Significant with Mitigation. The proposed project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. The proposed paved trail would be approximately 10-foot in width with two-foot shoulders on either side, and the storm drainage design accounts for the impermeable materials and slopes to ensure that it would not create substantial new runoff. Implementation of Mitigation Measures HYD-1 through HYD-2, and Mitigation Measure GEO-2, would ensure that project construction activities do not substantially degrade the water quality of the Truckee River or otherwise generate substantial sources of polluted runoff. With implementation of these mitigation measures, this is a **less than significant** impact.

Response c.iv): Less than Significant with Mitigation. As shown in Figure 10, the 100-year flood hazard area extends into portions of the trail planning area immediately adjacent to the Truckee River. The majority of the trail segments were able to be designed to completely avoid encroachment into the 100-year floodplain. The trailhead parking area is also outside the 100-year floodplain, except for an area of approximately 0.003 acres (see Table BIO-3). While most segments could completely avoid the 100-year floodplain, the trail system requires a crossing over the Truckee River flood bypass area on the south side of the island, which requires encroachment into the 100-year floodplain (see Table BIO-3 for a calculation of the approximate

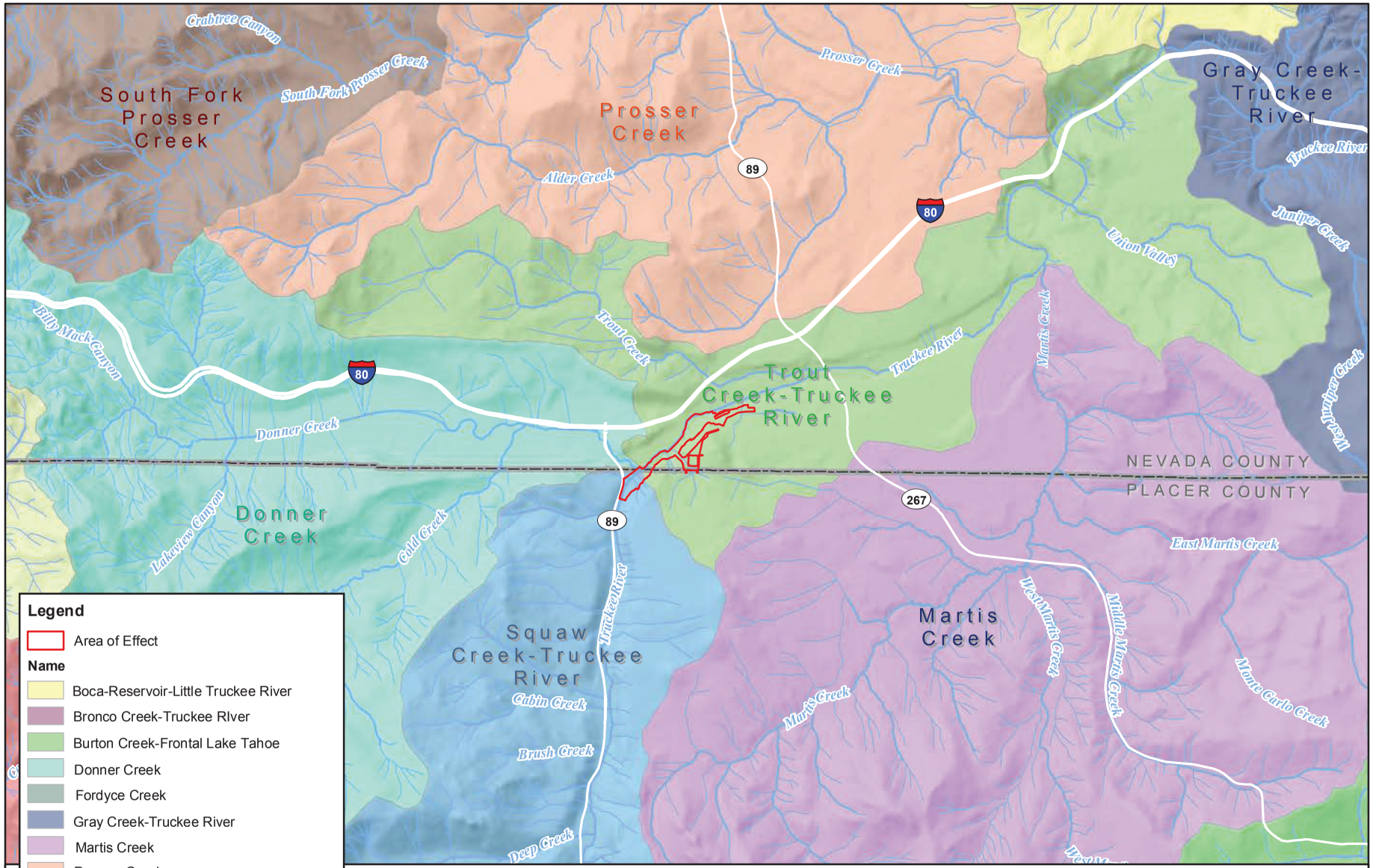
area of the trails and bridges within the floodplain). There are three alternative river crossing locations that are being considered (the West, Middle, and Donner Creek bridge crossings)[3]. All three bridge crossing alternatives span the Truckee River with limited piles to support the structure, which means the structure is elevated above the 100-year flood elevation. The Middle Bridge and Donner Creek Bridge crossing alternatives have abutments on a high spot (island) above the Truckee River floodplain on the south side of the river, and have abutments on the north side of the river (outside of the floodplain). The West bridge crossing alternative has abutments on the north side of the river and on the south side of the river outside of the floodplain. The Middle Bridge and Donner Creek Bridge crossing alternatives have a second bridge to cross the floodplain/riparian area that is separated by an island from the main channel of the Truckee River; these alternative crossings would also require a graded access road for utility access to the existing dirt road. This utility access would be located within the 100-year floodplain. The proposed project would be required to comply with the Town provisions for flood hazard reduction, as described in Section 18.30.050 of the Development Code.

Portions of the trail are located in the floodplain. Alternative alignments were reviewed but were dismissed due to safety concerns. The preferred alternative uses an existing dirt road and will be places at existing grade. Where the trail crosses between the 'island' and the talus slope, new grade would be cut and culverts places at the base of the talus slope to allow seasonal snow melt below the trail. In addition, the preferred alignment (West Bridge alignment) would have the least area within the floodplain, compared with the other alternatives, since the preferred alignment would have approximately 0.233 acres of permanent area and 0.269 acres of temporary area within the 100-year floodplain (see Table BIO-3 for further detail). The trail would be designed in this area to allow the 100-year flood flows over the top of the trail. The proposed project would not place structures that would impede or redirect flood flows during a 100-year flood event. In addition, the proposed project would implement Mitigation Measure HYD-3, which requires the proposed project to obtain an exemption to discharge prohibitions (as outlined in the Lahontan Basin Plan for essential transportation facilities). With the design considerations for the floodplain, and with implementation of Mitigation Measure HYD-3, implementation of the project would have a **less than significant** impact.

Response d): Less than Significant with Mitigation. The trail planning area does not include and is not adjacent to any lake, reservoir, or other large body of water and therefore would not be susceptible to the effects of a seiche. Additionally, the trail planning area is not near any tidally-influenced river or water body, and therefore would not be subject to inundation by a tsunami. Although portions of the trail planning area are located in the 100-year floodplain, including portions of the trails and bridges (as calculated in Table BIO-3), there would be a very limited level of pollutants located on the trail. In addition, the proposed project would implement Mitigation Measure HYD-3, which requires the proposed project to obtain an exemption to discharge prohibitions (as outlined in the Lahontan Basin Plan for essential transportation facilities). Finally, the trail planning area is not located in an area prone to flash mudflows, and is

[3] The West Bridge (crossing) Alternative is the proposed project's preferred alignment/alternative.

not anticipated to be affected by mudflows. With implementation of Mitigation Measure HYD-3, there would be a **less than significant** impact to this topic.



TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 9: Watersheds

Data source: Placer County GIS; City of Truckee; USGS National Hydrography Dataset; USGS Watershed Boundary Dataset.
Map date: October 24, 2017.

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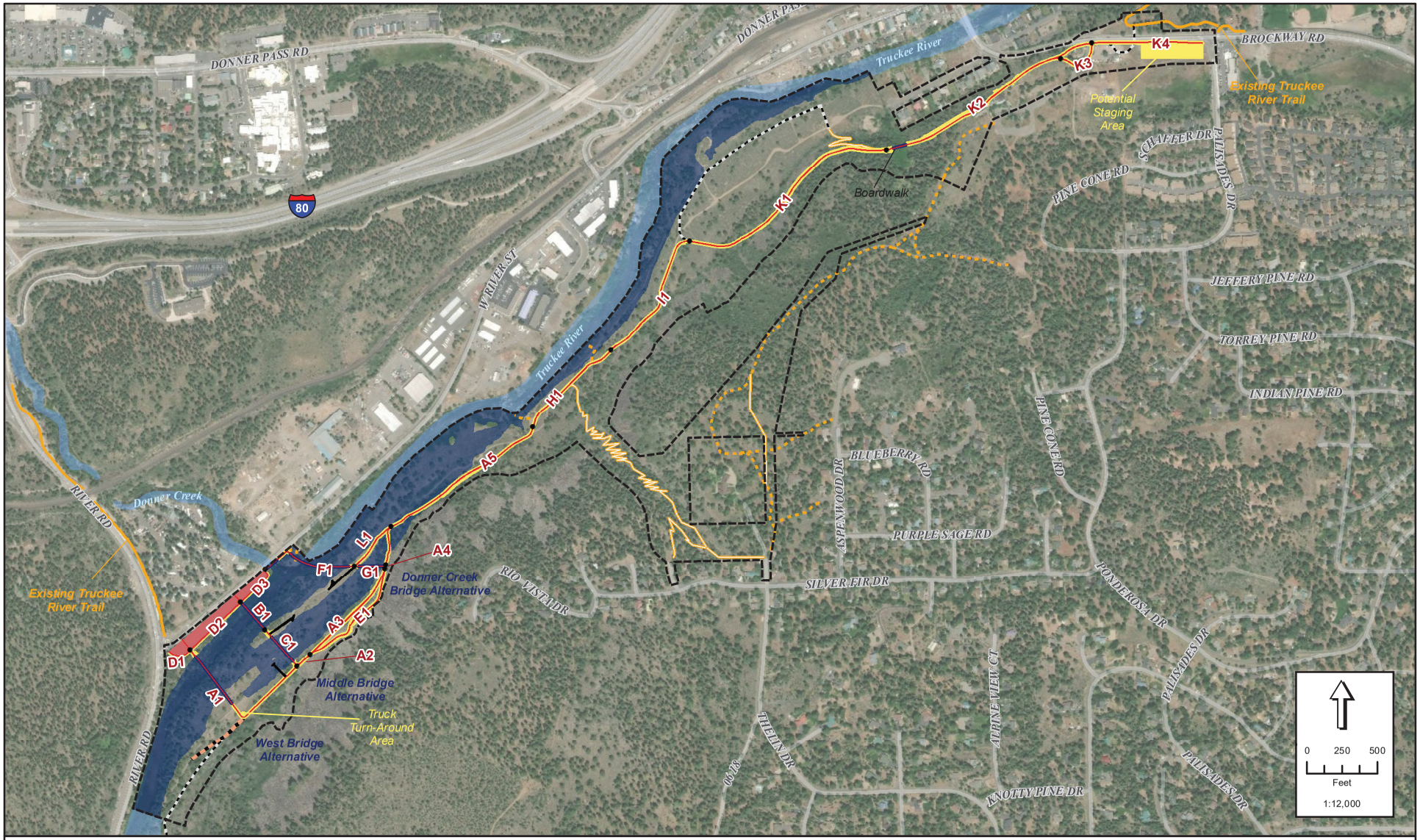

Existing Features

- Area of Potential Effects (APE)
- 100-year Flood Plain
- Truckee River and Donner Creek
- Existing Trail - Paved
- Existing Trail - Soft Surface
- TTSD Access Road

Project Features

- Trail Segment Start/End Stations
- Trail Alignment - Paved
- Boardwalk/Bridge
- Access Road
- Paved Parking Lot
- Paved Trail and Access Road Temporary Impacts

Future/Proposed Features

- Future Trail Phases/Trails
- Proposed Soft Trail

Data source: Mark Thomas and Company, TRL_Denovo_12-11-2018; TRL_Flood Plain Merge.dwg; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: April 25, 2019.

TRUCKEE LEGACY TRAIL PHASE IV

Figure 10: Flood Plain Map

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XI. LAND USE AND PLANNING

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Physically divide an established community?			X	
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?			X	

EXISTING SETTING

The proposed trail planning area consists of mostly vacant/undeveloped land. The trail planning area includes the following *Town of Truckee 2025 General Plan* land uses: Downtown Specific Plan Area (along the alignment of the Truckee River), Residential Cluster Average Density 1 du/5 acres (RC-5) (in the south-central portion of the trail planning area), and a small amount of Commercial (in the far eastern portion of the trail planning area). Additionally, the southwestern portion of the trail planning area, located in unincorporated Placer County, is currently primarily designated Agriculture/Timberland (AG/T) by the Placer County General Plan Land Use Map, with a small portion of this area designated Low Density Residential 1 – 5 du/acre (LDR). See Figure 3 for the respective General Plan land uses for the trail planning area.

The trail planning area traverses the following Town of Truckee zoning districts: Downtown Master Plan (DMP), Downtown Mixed Use (DMU), Public Facilities (PF), Downtown Single Family Residential (DRS), Rural Residential (RR), and General Commercial (CG). The trail planning area also traverses the following Placer County zoning districts (for the portion of the trail planning area located in Placer County): Forestry (FOR), Water Influence (W), and Residential Single Family (RS). See Figure 4 for the respective zoning for the trail planning area.

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. There is an existing community (Sierra Meadows) and planned development (e.g. the Hilltop Master Plan Area and the Truckee Springs Master Plan Area) in the vicinity of the trail planning area. The proposed trail serves to provide a new linkage for the community and provide improved access in the area. The proposed project would not substantially interfere with and would not physically divide an existing established community. Implementation of the proposed project would have a **less than significant** impact related to physically dividing an established community.

Responses b): Less than Significant. The proposed project would comply fully with the Town of Truckee and Placer County General Plans, Municipal Codes, and be consistent with all nearby Master Plans, including those plans for trails and recreational facilities, as well as the Truckee Downtown Specific Plan. The proposed project is a recreational trail, and would not result in the development of residential, commercial, or industrial properties. The proposed project is consistent with the Hilltop Master Plan and draft Truckee Springs Plan development standards, which would be applicable in the eastern and central portions of the proposed trail planning area,

respectively. Implementation of the proposed project would have a **less than significant** impact related to conflicting with land use plans, policies, regulations, or surrounding uses.

XII. MINERAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			X	

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b): Less than Significant. Goal COS-6 of the *Town of Truckee 2025 General Plan* requires the Town to protect economically viable mineral resources and related industries in Truckee while avoiding land use conflicts and environmental impacts from mining activities. There are several policies and actions in support of this. For example, Policy 6.1 calls for recognition, acceptance, and adoption by reference those State Classification Reports that provide information on the location of significant mineral deposits in and around Truckee. Additionally, General Plan Action 6.1 requires that the Town amend the Map of Important Mineral Resources, when a new or revised Mineral Resource Classification Report is presented to the Town.

The *Town of Truckee 2025 General Plan* identifies a portion of the trail planning area as being within an Important Mineral Resources area. Although most of the trail planning area is not within this zone, some portions of trail planning area that lie adjacent to the Truckee River would be within this zone (see Figure COS-2 of the *Town of Truckee 2025 General Plan*). However, the proposed project would be a paved trail and bridge that would generate a minimal footprint (approximately 10-14 feet wide over its linear course). Access to mineral resources that may underlie the trail planning area would remain easily accessible. Therefore, development of the proposed project would not result in the loss of a known resource or results in the loss of availability of an important mineral resource. This is a **less than significant** impact.

XIII. NOISE

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		X		
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the trail planning area to excessive noise levels?				X

EXISTING SETTING

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

The effects of noise on people can be placed into three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Existing Nearby Land Uses

Areas north of the trail planning area include residential and commercial uses, and the land directly to the east includes residential uses. The area directly to the south of the trail planning area includes open space and residential uses.

Ambient Noise

Table 6.1 (Standards for Land Use Compatibility with Noise) of the *Town of Truckee 2025 General Plan* Noise Element has established compatible exterior noise levels for various land use types.

The following table (NOISE-1) (below) provides the Town of Truckee's noise compatibility standards in A-weighted decibels (dBA):

TABLE NOISE-1: TOWN OF TRUCKEE NOISE COMPATIBILITY GUIDELINES

LAND USE CATEGORY	*EXTERIOR NOISE EXPOSURE (CNEL, DBA)*			
	Normally Acceptable	***Conditionally Acceptable***	***Normally Unacceptable***	***Clearly Unacceptable***
Residential, Mobile Homes	Up to 60	60-65	65-75	Above 75
Residential in Mixed Use Development	Up to 65	65-70	70-75	Above 75
Hospitals, Schools, Congregate Care	Up to 65	65-70	70-75	Above 75
Office; Medical; Light Industrial	Up to 70	70-75	75-80	Above 80
Hotel; Commercial	Up to 70	70-75	75-80	Above 80
Neighborhood Parks; RV Parks	Up to 65	65-75	--	Above 75
Other Recreation; Community and Regional Parks	Up to 70	70-75	75-80	Above 80

Source: Town of Truckee 2025 General Plan (Town of Truckee, 2006).

Additionally, Table 9-1 of the *Placer County General Plan* provides allowable noise levels within specified Placer County zone districts. The following table (NOISE-2) provides these levels:

TABLE NOISE-2: PLACER COUNTY ALLOWABLE LDN NOISE LEVELS WITHIN SPECIFIED ZONE DISTRICTS

ZONE DISTRICT OR RECEPTOR	*PROPERTY LINE OF RECEIVING USE*	*INTERIOR SPACES*
Residential Adjacent to Industrial	60	45
Other Residential	50	45
Office/Professional	70	45
Transient Lodging	65	45
Neighborhood Commercial	70	45
General Commercial	70	45
Heavy Commercial	75	45
Limited Industrial	75	45
Highway Service	75	45
Shopping Center	70	45
Industrial	--	45
Industrial Park	75	45
Industrial Reserve	--	--
Airport	--	45
Unclassified	--	--
Farm	*	--
Agricultural Exclusive	*	--
Forestry	--	--
Timberland Preserve	--	--
Recreation & Forestry	70	--
Open Space	--	--
Mineral Reserve	--	--

Source: Placer County General Plan (Placer County, 2013).

**Normally, agricultural uses are noise insensitive and will be treated in this way. However, conflicts with agricultural noise emissions can occur where single-family residences exist within agricultural zone districts. Therefore, where effects of agricultural noise upon residences located in these agricultural zones is a concern, an Ldn of 70 dBA will be considered acceptable outdoor exposure at a residence (Placer County, 2013).*

Project-Related Noise Level Increase Criteria

Besides the Town of Truckee Noise Element, the significance of project-related noise level increases may be determined by comparison of existing condition (i.e. no-project) noise levels to the expected changes in noise levels which would occur because of the project. It is generally recognized that an increase of 3 dBA is usually required before most people will perceive a change in noise levels, and an increase of 5 dBA is required before the change will become clearly noticeable. A common practice is to assume that a minimally perceptible increase of 3 dBA represents a significant increase in ambient noise levels.

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant with Mitigation. The main source of noise in the area is noise from the nearest roadways, including West River Street (along the length of the trail planning area), SR 89 at the western end of the proposed project, Brockway Road at the eastern end of the project, and the Silverfir Circle/Aspenwood Road area at the end of the soft surface

trail. However, noise from these roadways would be limited. The greatest sources of ambient noise in the trail planning area are traffic noise from I-80 and the Union Pacific Railroad (UPRR) mainline, which are located to the north across the Truckee River. According to a noise analysis conducted in 2015 for the proposed Truckee Springs project (which is currently planned to overlap a portion of the trail planning area), no area within the central portion of the trail planning area would be exposed to combined railroad and I-80 traffic noise levels in excess of 65 dBA (J.C. Brennan & Associates, 2015). The central portion of the trail planning area is the portion of the trail planning area located closest to the railroad and I-80. As described by the Town of Truckee Noise Compatibility Guidelines (as shown in Table NOISE-1), the normally acceptable limit for exterior noise exposure for Recreation/Park/Open Space uses in Truckee is 70 dBA. Additionally, as described by Table NOISE-2, the allowable noise level within the Placer County Recreation and Forestry Zone district is 70 dBA. Given that the Truckee Springs noise analysis analyzed the portion of the trail planning area that would be most exposed to I-80 and railroad noise, and did not find Ldn levels in excess of 65 dBA, the proposed project is not expected to expose individuals within the trail planning area to noise levels in excess of the established standards.

Additionally, there are commercial uses to the north of the trail planning area. These may generate noise that would be typical for commercial uses. However, individuals traversing the trail planning area would be at a sufficient distance from these uses that commercial activity within this area would not expose persons to excess noise levels. In addition, it is not expected that the proposed project would generate any significant net new sources of on-road vehicle traffic that could contribute noise to the trail planning area or nearby communities. Finally, no motor vehicles or motorcycles would be allowed on the proposed project trails.

Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed that state a noise impact may be considered significant if it would generate noise that would conflict with local planning criteria or ordinances, or substantially increase noise levels at noise-sensitive land uses. The proposed project would not directly generate increased operational noise beyond the noise associated with human conversation and noise from periodic trail maintenance activities (i.e., de-icing). Motorized vehicles are prohibited from both the paved and soft surface trails except for maintenance activities and access for utility vehicles. Motorcycles may generate noise of around 100 dB. Motorized vehicles are prohibited on other areas of the Legacy Trail system and will be prohibited within Phase 4 (i.e. the APE). The noise directly generated by the proposed project would not differ substantially from the existing ambient noises currently generated by the surrounding commercial uses. Furthermore, the proposed project would implement Mitigation Measure NOISE-1, which would reduce impacts related to permanent ambient noise level increases from the proposed project.

The proposed project would also generate a temporary increase in noise during project construction. During the construction phase, the proposed project would require construction activities that include the use of some heavy equipment. Construction activities create a wide

variety of noise levels depending on the activity and equipment required. For instance, most heavy equipment use would typically generate maximum noise levels ranging from 85 to 90 dB at a distance of 50 feet. The nearest residential receptors would be located 25-50 feet or more from the majority of project construction activities.

As stated above, noise sensitive receptors near the trail planning area would, at times, experience elevated noise levels from construction activities. The temporary increase in construction noise is considered potentially significant. Implementation of Mitigation Measure NOISE-2 would limit construction activity hours and includes additional techniques to reduce noise levels at adjacent residences during construction activities.

The implementation of the following mitigation measures would reduce this generation of temporary and permanent noise in the vicinity of the proposed project to levels that would not be levels in excess of standards established in the local general plan or noise ordinance or any other applicable standard. There would be a **less than significant** impact to this topic.

Mitigation Measures
Mitigation Measure NOISE-1*: Motorized vehicles, as defined in the Town of Truckee Municipal Code, shall be prohibited from both the paved and soft surface trails except for maintenance activities, emergency vehicles, and access for utility vehicles.*

Mitigation Measure NOISE-2*: The contractor shall implement the following:*

- *Limit construction activities to between the hours of 7:00 am and 9:00 pm on any day except Sundays, and between 9:00 am and 6:00 pm on Sundays.*
- *Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.*
- *Utilize "quiet" air compressors and other stationary noise generating equipment where appropriate technology exists.*

Response b): Less than Significant. No major stationary sources of groundborne vibration were identified in the trail planning area that would result in the long-term exposure of proposed onsite land uses to unacceptable levels of ground vibration. In addition, during project operation, the proposed project would not involve the use of any major equipment or processes that would result in potentially significant levels of ground vibration that would exceed these standards at nearby existing land uses. However, construction activities associated with the proposed project would require the use of various off-road vehicles (e.g. pavers) that could result in intermittent increases in groundborne vibration levels. Additionally, pile driving could be used during the installation of the proposed bridge (during construction activities), which could cause groundborne vibration and/or groundborne noise. No other sources of major groundborne vibration-generating construction equipment/processes are anticipated to be required for construction of the proposed project.

Sensitive receptors (e.g. residences) which could be impacted by construction related vibrations are located approximately 25-50 feet or farther from the trail planning area, at the closest point (located at the eastern end of the trail planning area). However, the closest residences to the

location of the proposed bridge alternatives would be approximately 150-400 feet away, at the closest point (dependent on the final location chosen for the bridge). Given the distances involved and the short-term nature of construction activities, sensitive receptors would not be exposed to excessive levels of groundborne vibration of groundborne noise levels. Therefore, this impact would be considered **less than significant.**

Responses c): No Impact. The proposed project is within the influence area for the Truckee Tahoe Airport (a public airport); however, according to the *Truckee Tahoe Airport Land Use Compatibility Plan*, the trail planning area lies outside of the 55 CNEL noise contour. The 55 CNEL contour of the airport will not expose people residing or working on the trail planning area to excessive noise levels. The proposed project would not expose people residing or working in the trail planning area to excessive noise levels, including from overhead aircraft or airport operations. Persons within the trail planning area would not be exposed to aircraft levels which exceed the Town of Truckee Noise Compatibility Guidelines. There is **no impact**.

XIV. POPULATION AND HOUSING

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. The proposed project would not add any residential housing or major infrastructure. The project would not facilitate future residential development as no major infrastructure is proposed such as utilities or roadways which could indirectly induce growth. Therefore, the proposed project would not induce population growth in the area. This is a **less than significant** impact.

Responses b): No Impact. The proposed project is the development of a recreational trail and bridge. No existing housing or persons would be displaced by the development of the proposed project. There is **no impact**.

XV. PUBLIC SERVICES

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?				X
d) Parks?			X	
e) Other Public Facilities?			X	

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. The Truckee Fire Protection District and the State of California Forestry and Fire Protection Department currently provide fire protection service. The proposed project could increase demand for fire protection services, since the proposed project would add additional utilized land area to the Town. This increase in demand for fire services is relatively small and would not overburden the Truckee Fire Protection District and the State of California Forestry and Fire Protection Department. No new or altered fire facilities would be necessary. Further, the Truckee Fire Protection District and the State of California Forestry and Fire Protection Department would be able to serve the project and its residents with existing facilities, equipment, and staffing. This is a **less than significant** impact.

Response b): Less than Significant. The Town of Truckee Police Department would be responsible for law enforcement services within the Truckee portion in the trail planning area. The Police Department operates out of its headquarters at 10183 Truckee Airport Road. The Town is under contract with the Nevada County Sheriff's Office for dispatch services. All calls are responded to from the Truckee Police Department headquarters.

The Placer County Sheriff's Department would be responsible for law enforcement services within Placer County portion of the trail planning area. The nearest Sheriff's Office substation operates out of a Sub Station at 2501 North Lake Boulevard, Tahoe City. Staffing at this Sub Station includes 1 field operations lieutenant, 18 patrol deputy positions, 6 patrol sergeants, 4 detectives, 1 detective sergeant, 1 problem-oriented deputy (neighborhood disputes and Placer County code violations), 1 administrative sergeant, 2 jail deputies, 1 evidence technician, 2 community services officers and 5 professional staff. Some of the services provided by the Tahoe

Station include: 24/7 patrol coverage, and search and rescue coordination with various highly trained search and rescue teams such as the Tahoe Nordic Search and Rescue Team.

The proposed project could increase demand for police protection services, since the proposed project would add additional utilized land area to the Town and Placer County. This increase in demand for police services is relatively small and would not overburden the Town of Truckee Police Department or the Placer County Sheriff's Department. No new or altered police facilities would be necessary. Further, the Town of Truckee Police Department and the Placer County Sheriff's Department would be able to serve the project and its residents with existing facilities, equipment, and staffing. This is a **less than significant** impact.

Response c): No impact. The trail planning area is located within the Tahoe-Truckee Unified School District (TTUSD), which covers an area of approximately 720 square miles, encompassing portions of Nevada, Placer, and El Dorado Counties. The proposed project would not generate any additional residential population; therefore, there would be no increase in demand for school services. Implementation of the proposed project would have **no impact** relative to this topic.

Response d): Less than Significant. The proposed project is a recreational trail. It is possible that, given the planned connection of the Truckee River Legacy Trail system to nearby recreational facilities, the use of nearby regional parks would increase based on the development of the proposed project. However, the addition of the proposed project would provide for enhanced recreational area and any such facilities would not be expected to deteriorate substantially or accelerate deterioration, given existing and planned park maintenance programs. This is a **less than significant** impact.

Response e): Less than Significant. There would be no (or a negligible) net increase in traffic from the trail planning area on Town of Truckee or Placer County roads and there would be no (or a negligible) additional maintenance and snow removal demands on the road network. Other government services that would be applicable to other public services would not be impacted by the proposed project. However, the proposed project would require trail maintenance activities, which would represent an increased demand on the Town of Truckee and/or Placer County budget. This could include trash pick-up, de-icing, snow removal, and restroom maintenance. The Town estimates trail maintenance at approximately $25,000 per year per mile of trail (Town of Truckee, 2019). Funding for trail maintenance is obtained through Measure R in Truckee. Additionally, there is potential for increase in emergency medical services provided by nearby hospitals, since accidents or crimes could occur within the trail planning area. These minor public service demands would not overburden public agencies. This is a **less than significant** impact.

XVI. RECREATION

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. The proposed project is a recreational trail. It is possible that, given the planned connection of the Truckee River Legacy Trail system to nearby recreational facilities (e.g. Donner Memorial State Park), the use of nearby regional parks and/or recreational facilities would increase based on the development of the proposed project. However, the addition of the proposed project would provide for an enhanced recreational area. Furthermore, regardless of whether the proposed project would increase or decrease the use of existing regional parks, any such facilities would not be expected to deteriorate substantially or accelerate deterioration, given existing and planned park maintenance programs (i.e. as described by the *Donner State Park General Plan*). This is a **less than significant** impact.

Response b): Less than Significant. The proposed project is a recreational trail, which would provide additional recreational opportunities in the trail planning area. Its construction and implementation would have some 'potentially significant' and 'less than significant' effects on the environment, as provided throughout this document. However, all potential environmental impacts would be mitigated to a less than significant level. This is a **less than significant** impact.

XVII. TRANSPORTATION

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Conflict with an program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Would the project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?				X

EXISTING SETTING

Regional access to the Truckee River Legacy Trail Phase 4 is provided by I-80, Brockway Road, State Route 267, and State Route 89 South. Local trail access is provided at several points throughout Truckee, including the Truckee River Regional Park on Brockway Road, the Riverview Sports Park on Joerger Drive, East River Street, Ranch Way, and Glenshire Drive. The proposed project would construct a new trailhead parking lot on the west side of the trail on West River Street, near the intersection with SR 89 South, and would provide direct access to the proposed trail. The Truckee River Regional Park is at the eastern end of the trail segment, which would provide an additional access point. The Phase 4 segment is a missing link between previously built trail segments, Phases 1-3 to the east, and the Mousehole trail (segment of Phase 5) located on SR 89 South to the west. Upon development of the proposed project, the trail system would provide Class I bikeway and pedestrian access across the Town of Truckee, from Glenshire Drive to Deerfield Drive.

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b), c): Less than Significant.

Construction Traffic: Construction-related activities resulting from the proposed project would result in short-term increases in traffic volumes (a combination of workers, haul vehicles, and off-road construction equipment travelling to and from the construction site). Traffic volume levels on area roadways during project construction would vary depending on the particular type and duration of activities. Construction activities would include ground clearing, grading, earth movement, bridge construction, and paving. Construction-generated traffic would be temporary, and therefore, would not result in any significant degradation in operating conditions on any project roadways.

The existing configuration of the trail planning area would be able to accommodate the temporary staging of construction vehicles as well as provide sufficient on-site parking for workers; therefore, there would be minimal disruption to the existing roadway network and displacement of existing parking due to construction-related activities. Proposed project-generated trips would be dispersed throughout the day and although individual drivers could experience delays if traveling behind a construction truck and/or vehicle, given the size and complexity of the proposed project, the level of construction project traffic on area roads would be minimal. The potential for impacts to this topic during the construction phase of the proposed project would be **less than significant**.

Trail Users: The Town of Truckee collects usage data on the Truckee River Legacy Trail system using an automated count system at various locations and trail user surveys. One of the count locations, the East River Street trailhead, provides a good reference for the proposed trail in that it has river access and is centrally located. It is also the busiest existing trailhead within Truckee. The trail counters "count" a user every time they pass the counter and so an out and back trip would be counted as two "counts." Therefore, the count data collected is reduced by half to estimate the number of users. The trail user surveys have been used to evaluate more specific data such as mode of travel on and to the trail; frequency of trail use; size of user groups; and user origins and destinations.

The East River Street trail counter registers an average of 140 daily users (over the course of the year). This is estimated by dividing the total trail count in half (assuming most trips are round trips over the course of the day). Note that the Truckee River Legacy Trail is plowed over the winter and so winter user numbers are comparable to other times of the year. The maximum daily use recorded was 388 users on June 4, 2017, which was a Sunday. The maximum daily use on a weekday was March 13, 2017 with 250 daily users. On this day, 27 trail users were recorded in the p.m. peak hour (4:00-5:00 p.m.).

The Town of Truckee has collected User Survey data for the Truckee River Legacy Trail since 2008. The most recent available user survey data (2015) shows the following:

- The majority of users are permanent residents.
- The average number of people in a group is 1.7.

- 65% of the people drive to the trailhead.
- 35% of the people leave from their house/business.

Operational Roadway Traffic: The trail surveys have indicated that approximately 65% of the trail users drive to the trail, and that the group size is an average of 1.7 people. Using the maximum daily weekday p.m. peak-hour trail count of 27 users, and applying these reduction factors, the trail is anticipated to generate approximately 21 vehicle trips during the summer p.m. peak hour (27 users during pm peak hour X 2 trips per user (one in, one out) X 65% driving to the trail / 1.7 people per vehicle = 21 trips. While the peak weekday count date (March 13, 2017) does not technically represent summer, it represents the highest weekday user count, which is considered a conservative estimate.

The proposed trail segment has two trailheads: one proposed at West River Street and an existing parking lot at the Regional Park on Brockway Road. For purposes of this discussion, it is assumed that half of the trail users will use each trailhead. Therefore, an estimated 10 vehicles will access either trailhead parking area during the p.m. peak hour.

Based upon the low trip generation from the trail, the proposed project would not generate a noticeable deterioration of level of service standards, delay, or other travel demand measures, and would not conflict with any applicable plan, ordinance, or policy.

Additionally, the proposed project would enhance pedestrian and bicycle access across town, to the region, and connections to nearby recreational areas (including Phases 1-3B and the existing portions of Phase 5 of the Truckee River Legacy Trail). This has the potential to divert some vehicle trips that might otherwise occur. Overall, although there is expected to be a minor increase in vehicle trips to either trailhead, the impact of such an increase during the operational phase would be a **less than significant** impact relative to this topic.

***Transit, bicycle, and pedestrian facilities*:** The proposed project qualifies as an alternative transportation project and would not conflict with any existing plans or policies related to alternative transportation, including transit, bicycling, and walking modes of transportation. The proposed project would construct a portion of the Truckee River Legacy Trail, as described in the *Town of Truckee 2025 General Plan* and the T*ruckee Trail and Bikeways Master Plan*. Lastly, the proposed project would not be expected to reduce usage of buses or other alternative forms of transportation. There would be a **less than significant** impact relative to this topic.

Conclusion: The proposed project would not conflict with any program plan, ordinance, or policy addressing the circulation system, and would not conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Implementation of the proposed project would have a **less than significant** impact relative to this topic.

Response c): Less than Significant. The proposed project would result in pedestrian and/or bicycle crossings at existing roadways (i.e. at Brockway Road and West River Street), which could pose safety hazards if not designed appropriately. However, the design considered the potential for safety hazards and is consistent with roadway design standards for the Town of Truckee. Signals and crosswalks at intersections are existing and are considered adequate, although trail

connections at intersections may be improved with detectible warning surfaces and ramps, as part of the proposed project. Implementation of the proposed project would have a **less than significant** impact relative to the potential for substantially increasing hazards due to a geometric design feature.

Response d): **No impact.** Access to the trail planning area would be provided via nearby roadways, dirt roads, and the proposed paved trail. The site access is adequate and includes emergency access for police or fire. The proposed project does not alter the existing emergency access to the trail planning area in a way that would obstruct access. At completion, the proposed trail, bridge and access routes to the trail are designed to accommodate emergency vehicles (HS20 loading) within the proposed trail area, which will improve emergency access to the trail areas and adjacent properties by providing a bridge across the Truckee River. Emergency access during construction may be provided along the trail, which will be designed to accommodate fire or emergency access and snow removal equipment. There is no **impact** relative to this topic.

XVIII. TRIBAL CULTURAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object of cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or		X		
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

RESPONSES TO CHECKLIST QUESTIONS

Responses a) i), ii): Less than Significant with Mitigation. As part of the effort to identify significant and historical resources that may fall within the trail planning area, a form was submitted to the Native American Heritage Commission (NAHC) requesting a search on the Sacred Lands file and contacts with individuals of Native American descent who might hold information concerning the trail planning area and its vicinity. Several tribes and individuals were identified both in a response sent by the NAHC and through conversations with the Town of Truckee and Tahoe National Forest. Letters were sent to individuals identified by the NAHC and the other sources and follow-up calls were made.

The *Cultural Resources Inventory* (PAR Environmental Services, 2019) identified several cultural sites. The project has been designed to avoid impacts to eligible cultural features, which effectively mitigates the potential for impacts. Mitigation Measures CLT-1 through CLT-4 provide measures to follow to mitigate indirect impacts to known cultural resources and in the event that an unknown cultural resource is uncovered during construction activities. With the avoidance by design, and the implementation of Mitigation Measures CLT-1 through CLT-4, the proposed project would have a **less than significant impact** relative to this topic.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the projects projected demand in addition to the providers existing commitments?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?				X

RESPONSES TO CHECKLIST QUESTIONS

Responses a), b), c): Less than Significant. The proposed project is Phase 4 of the Truckee River Legacy Trail system, and would include a paved Class 1 bike and multi-use trail, the construction of a bridge across the Truckee River, the potential construction of a bridge across Donner Creek, a parking lot at the trailhead, and soft surface trails. The proposed project may include a permanent restroom facility at the trailhead. The restroom facility would utilize the current utility connections for sewer and water (and possibly electric power) at the trailhead parcel site. The proposed project also may require relocation of power poles that are located on the site. However, any relocation of power poles would not cause any new significant environmental effects. There would not be any relocation or construction of natural gas or telecommunications facilities. Stormwater drainage would be handled on-site. Drainage along Brockway Road would tie into the existing Town's storm drain system.

Demand for water, wastewater, and electric power from the permanent restroom facility would be minimal; there would be sufficient water supplies available to serve the facility from existing entitlements and resources, and would not result in a determination by the wastewater treatment provider that it does not have adequate capacity. Additionally, any temporary portable toilets that would be utilized during construction activities would be self-contained, sealed, and regularly emptied. The amount of wastewater from a trailhead restroom facility would not

require the construction or expansion of wastewater treatment facilities and would not exceed the wastewater treatment requirements of the LRWQCB. There is a **less than significant** impact relative to this topic.

Response d): Less than Significant. Pedestrians and cyclists using the trail could generate a very small volume of trash (e.g. beverage and food packaging), which would require appropriate trash containers and disposal services. Eastern Regional Landfill, which serves the Town of Truckee and the neighboring portion of Placer County, has adequate capacity for solid waste that would be generated by the proposed project. The Town of Truckee and Placer County have maintenance crews that would conduct trash collection on the trail weekly. It is estimated that the amount of trash that would be collected from the trailhead areas would be less than one to two garbage bags per week. Additionally, bear-proof recycling containers at trailhead areas would substantially reduce the amount of trash deposited within on-site trash containers. Given that the expected volume of trash is minimal, and adequate capacity at the nearby landfill, there is a **less than significant** impact relative to this topic.

Response e): No impact. The proposed project would comply with all federal, state, and local statutes and regulations related to solid waste. There would be a minimal amount of solid waste generated by the proposed project. There is **no impact** to this topic.

XX. WILDFIRE

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?			X	
d) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?			X	
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?			X	
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?			X	

RESPONSES TO CHECKLIST QUESTIONS

Response a), b), d): Less than Significant. The proposed project is a recreational trail. The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The project will improve access to the project area as the trail is designed to accommodate emergency vehicles.

The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point. The elevated slopes to the south of the proposed trail have areas with a relative abundance of flashy fuels.

The California Department of Forestry has defined the Truckee area as in a high fire hazard severity zone, and the *Town of Truckee 2025 General Plan* designates the trail planning area as being in a "High Risk" area for "Community Threat from Wildfire". However, the proposed project does not include dwellings or other building structures that would be exposed to wildland fire risk. Additionally, given the open layout of the trail planning area and adjacent terrain, and the proximity of the trail to the Truckee River, people traversing the trail would become aware of and have the ability to avoid a potential wildfire and associated pollutant concentrations occurring within or adjacent to the trail planning area. This is a **less than significant** impact.

Response c): Less than Significant. The project includes development of some water and wastewater infrastructure (i.e. for the proposed permanent restroom facility within the trailhead parking area). The proposed infrastructure improvements would allow for decreased fire risk

relative to existing conditions. The infrastructure that is proposed as part of the project would not exacerbate fire risk or result in temporary or ongoing impacts to the environment. Therefore, this is a **less than significant** impact.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE --

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			X	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

RESPONSES TO CHECKLIST QUESTIONS

Response a): Less than Significant. Based upon the current land cover types found on-site, special- status wildlife species and/or federally- or state-protected birds could occupy the trail planning area at times. In addition, the possibility exists that during grading and other construction activities, objects of cultural significance could be located or unearthed. However, this IS/MND includes mitigation measures that would reduce any potential impacts to less than significant levels, as previously identified within this document. Therefore, with implementation of the mitigation measures as previously identified, the proposed project would have **less than significant** impacts related to degradation of the quality of the environment, reduction of habitat, threatened species, and/or California's history or prehistory.

Response b): Less than Significant. The proposed project in conjunction with other development within the Town of Truckee and/or Placer County could incrementally contribute to cumulative impacts in the area. However, mitigation measures for all potentially significant project-level impacts identified for the proposed project in this IS/MND have been included that would reduce impacts to less than-significant levels. As such, the project's incremental contribution towards cumulative impacts would not be considered significant. In addition, all future discretionary development projects in the area would be required to undergo the same environmental analysis and mitigate any potential impacts, as necessary. Therefore, the proposed project would not have any impacts that would be cumulatively considerable, and impacts would be **less than significant**.

Response c): Less than Significant. The proposed trail planning area is located primarily in an undeveloped/open space area, and is consistent with the land use designation for the site. Due to the consistency of the proposed land use, substantial adverse effects on human beings are not anticipated with implementation of the proposed project. It should be noted that during construction activities, the project could result in potential impacts related to soil or groundwater contamination, erosion and surface water quality impacts, and noise. However, this IS/MND includes mitigation measures that would reduce any potential impacts to a less-than-significant level. In addition, the proposed project would be designed in accordance with all applicable geological standards and codes, and additional safety features would be implemented, to ensure adequate safety is provided for those transiting the proposed project. Therefore, impacts related to environmental effects that could cause adverse effects on human beings would be **less than significant**.

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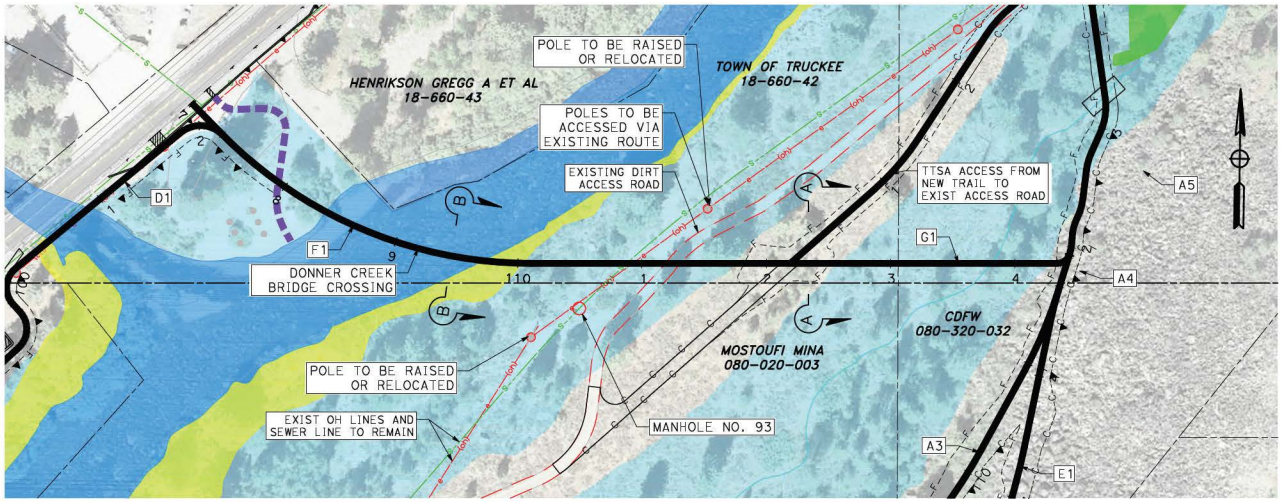
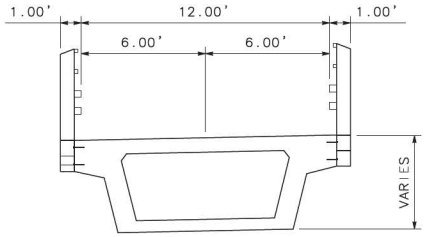
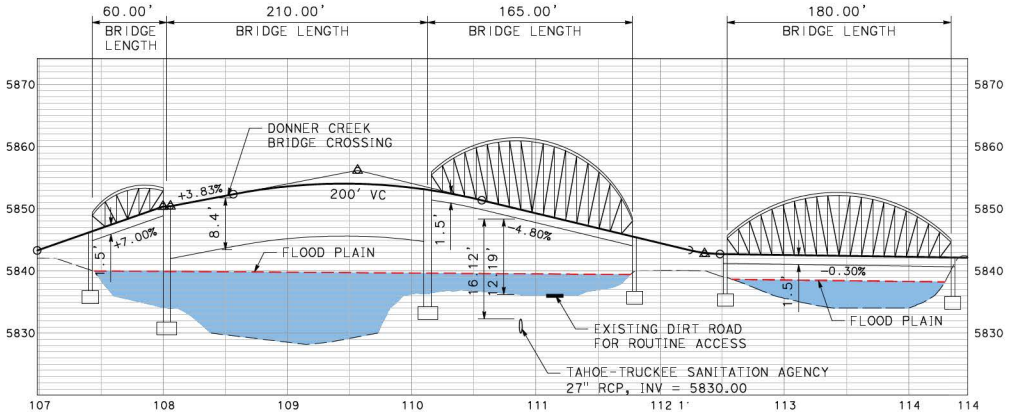
Appendix A: Plan and Profile



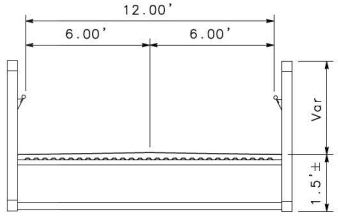
PLAN
SCALE: 1" = 100'



SECTION B-B
SCALE: 1" = 6'



PROFILE - DONNER CREEK BRIDGE CROSSING ALTERNATIVE (F1, G1)
SCALE: Horiz 1" = 100'
Vert 1" = 20'



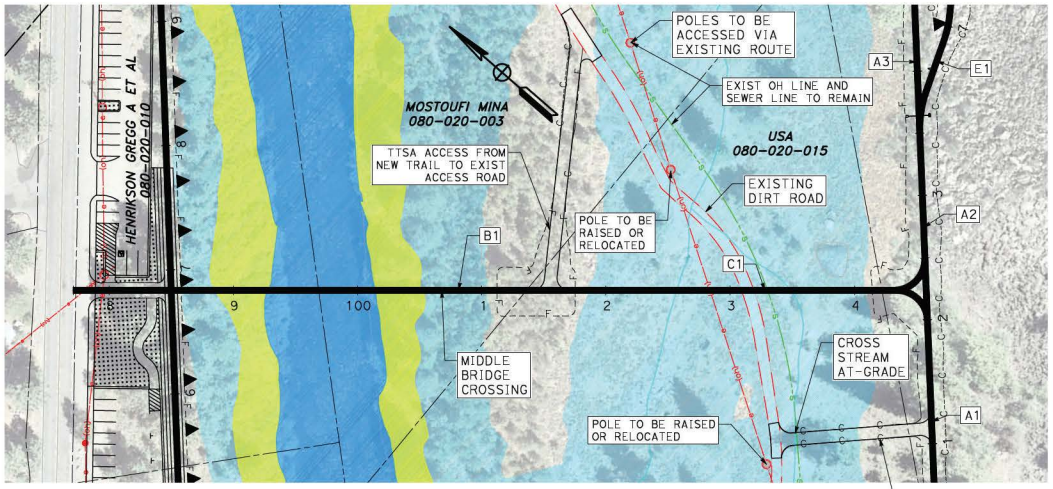
SECTION A-A
NO SCALE

LEGEND

OH ELECTRIC LINE AND POLE
SEWER LINE

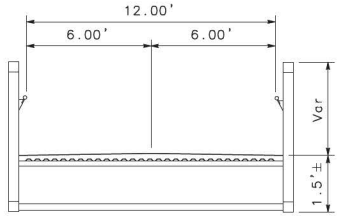
TRUCKEE LEGACY TRAIL
BRIDGE ALTERNATIVE

MARK THOMAS



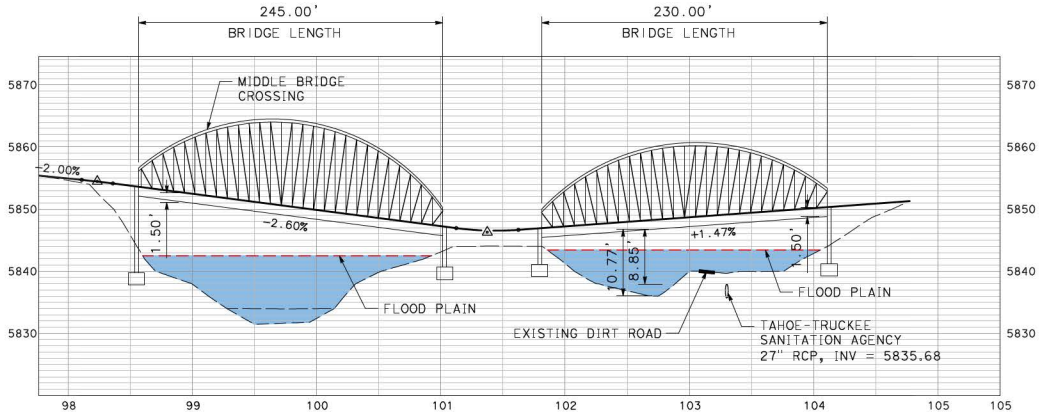
PLAN

SCALE: 1" = 100'



TYPICAL SECTION

SCALE: 1" = 6'



PROFILE - MIDDLE BRIDGE CROSSING ALTERNATIVE (B1, C1)

SCALE: Horiz 1" = 100'
Vert 1" = 20'

LEGEND

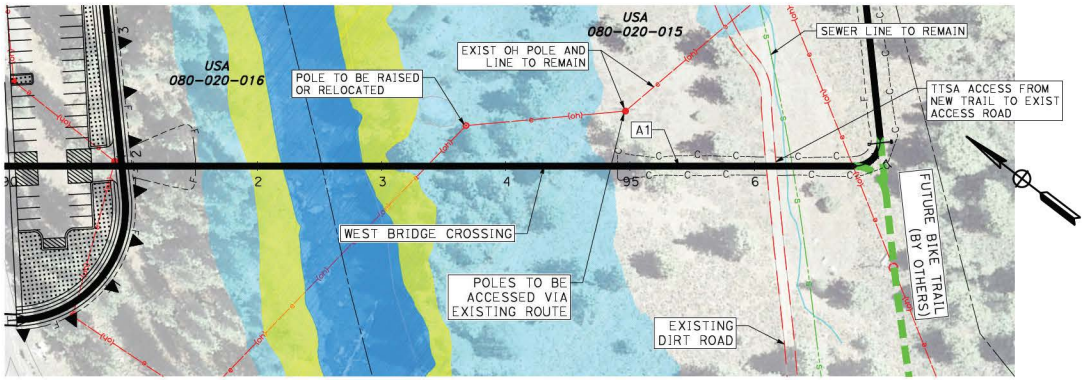
OH ELECTRIC LINE AND POLE
SEWER LINE

TRUCKEE RIVER LEGACY TRAIL

BRIDGE ALTERNATIVE

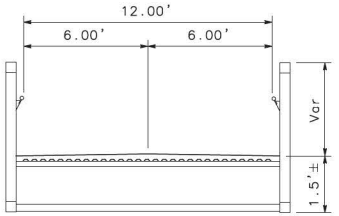
TOWN OF TRUCKEE

MARK THOMAS



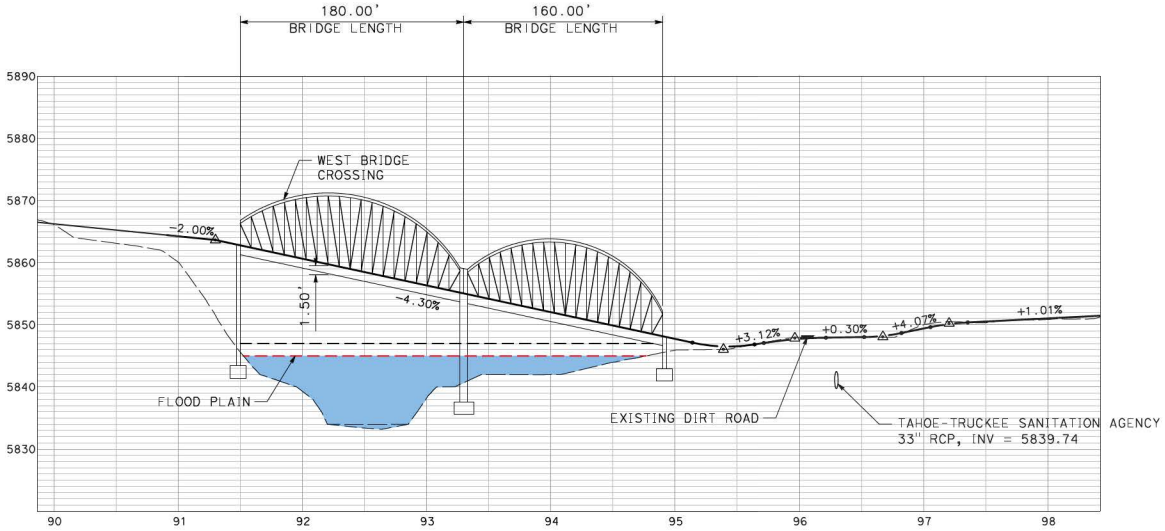
PLAN

SCALE: 1" = 100'



TYPICAL SECTION

SCALE: 1" = 6'



PROFILE - WEST BRIDGE CROSSING ALTERNATIVE (A1)

SCALE: Horiz 1" = 100'
Vert 1" = 20'

LEGEND

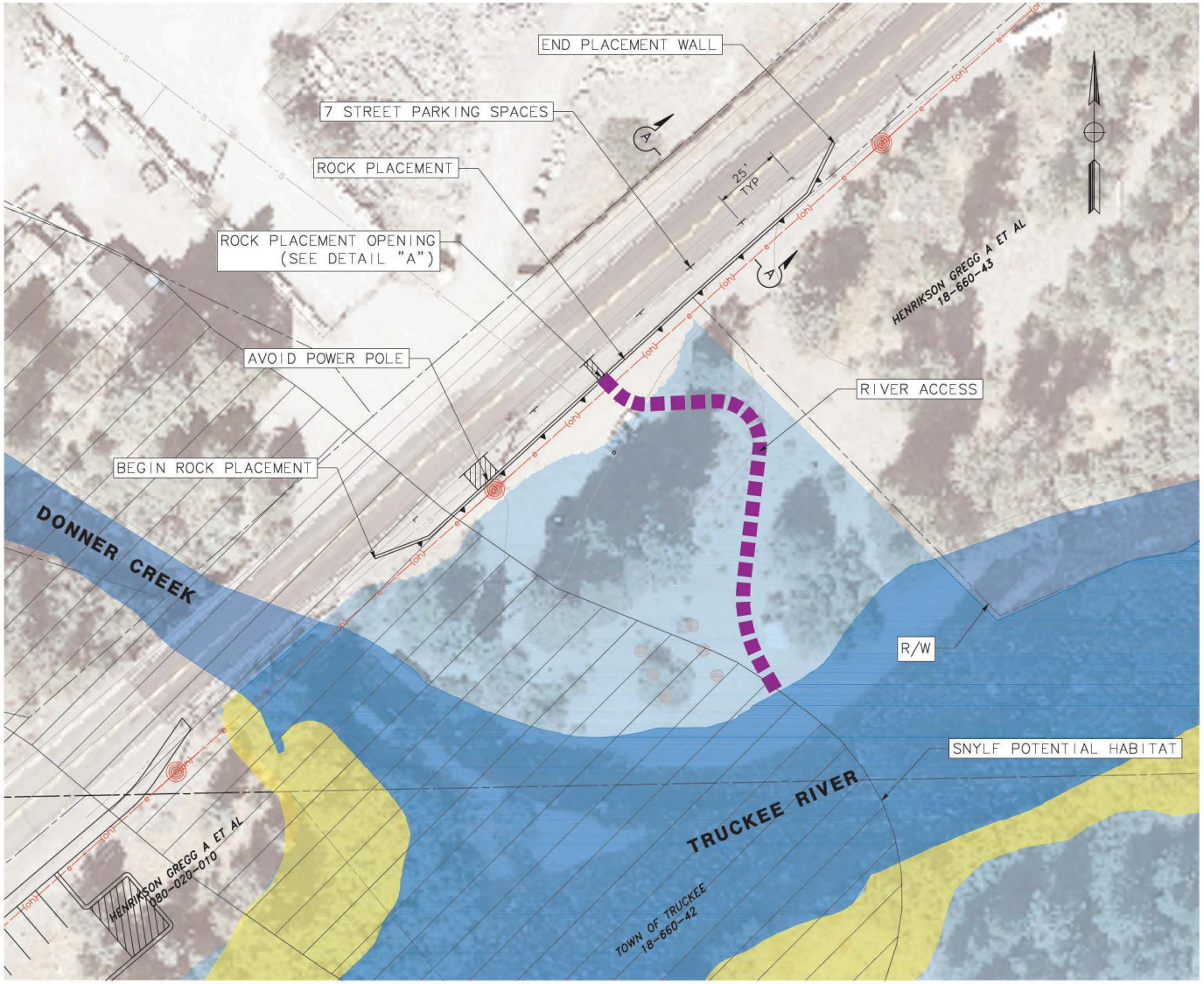
OH ELECTRIC LINE AND POLE

SEWER LINE

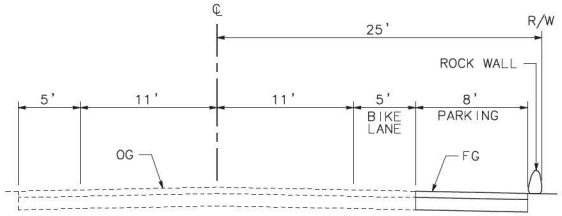
TRUCKEE RIVER LEGACY TRAIL

BRIDGE ALTERNATIVE

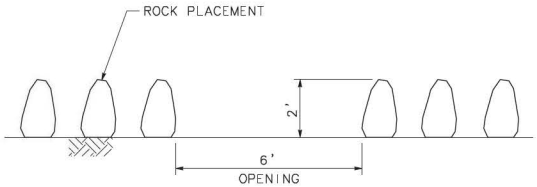
MARK THOMAS



PLAN
SCALE: 1" = 20'



SECTION A-A
NO SCALE



DETAIL "A"
NO SCALE

LEGEND

SNYLF (SIERRA NEVADA YELLOW-LEGGED FROG) POTENTIAL HABITAT

EXISTING OVERHEAD POWER LINE

0 20 40 80
Graphic Scale

TRUCKEE RIVER LEGACY TRAIL
RIVER ACCESS EXHIBIT

MARK THOMAS

Appendix B: Air Quality and Greenhouse Gas Emissions Modeling

Truckee River Legacy Trail - Phase IV

Nevada County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	6.80	Acre	6.80	296,208.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	80
Climate Zone	14			**Operational Year**	2022
Utility Company	Sierra Pacific Resources				
CO2 Intensity (lb/MWhr)	1328.16	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Truckee Donner Public Utility District unavailable to select for this model. Sierra Pacific Resources selected as a proxy. Project construction start date assumed to be January 1, 2021 (conservatively). Operational Year 2022.

Land Use -

Construction Phase - Assumed schedule (based on a start date of January 1, 2021 and an operational Year of 2022).

Off-road Equipment -

Off-road Equipment - Only 1 tractor/loader/backhoe, and 1 excavator, and 1 grader assumed for grading.

Off-road Equipment - 1 Paver, 1 paving equipment, and 1 roller assumed (given the size and type of the project).

Off-road Equipment - Only need for 1 rubber tired dozer and 1 tractor/loader/backhoe assumed required for site preparation.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0329	0.3395	0.2275	4.3000e-004	0.0981	0.0160	0.1141	0.0509	0.0147	0.0656	0.0000	37.8356	37.8356	0.0116	0.0000	38.1263
Maximum	**0.0329**	**0.3395**	**0.2275**	**4.3000e-004**	**0.0981**	**0.0160**	**0.1141**	**0.0509**	**0.0147**	**0.0656**	**0.0000**	**37.8356**	**37.8356**	**0.0116**	**0.0000**	**38.1263**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0329	0.3395	0.2275	4.3000e-004	0.0981	0.0160	0.1141	0.0509	0.0147	0.0656	0.0000	37.8356	37.8356	0.0116	0.0000	38.1262
Maximum	**0.0329**	**0.3395**	**0.2275**	**4.3000e-004**	**0.0981**	**0.0160**	**0.1141**	**0.0509**	**0.0147**	**0.0656**	**0.0000**	**37.8356**	**37.8356**	**0.0116**	**0.0000**	**38.1262**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	0.3726	0.3726
		Highest	0.3726	0.3726

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.7900e-003	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0201	0.1361	0.2170	6.5000e-004	0.0434	6.4000e-004	0.0440	0.0117	6.0000e-004	0.0123	0.0000	60.2063	60.2063	3.4000e-003	0.0000	60.2913
Waste						0.0000	0.0000		0.0000	0.0000	0.1177	0.0000	0.1177	6.9600e-003	0.0000	0.2917
Water						0.0000	0.0000		0.0000	0.0000	0.0000	17.0836	17.0836	3.7000e-004	8.0000e-005	17.1160
Total	**0.0229**	**0.1361**	**0.2171**	**6.5000e-004**	**0.0434**	**6.4000e-004**	**0.0440**	**0.0117**	**6.0000e-004**	**0.0123**	**0.1177**	**77.2900**	**77.4078**	**0.0107**	**8.0000e-005**	**77.6991**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.7900e-003	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0201	0.1361	0.2170	6.5000e-004	0.0434	6.4000e-004	0.0440	0.0117	6.0000e-004	0.0123	0.0000	60.2063	60.2063	3.4000e-003	0.0000	60.2913
Waste						0.0000	0.0000		0.0000	0.0000	0.1177	0.0000	0.1177	6.9600e-003	0.0000	0.2917
Water						0.0000	0.0000		0.0000	0.0000	0.0000	17.0836	17.0836	3.7000e-004	8.0000e-005	17.1160
Total	**0.0229**	**0.1361**	**0.2171**	**6.5000e-004**	**0.0434**	**6.4000e-004**	**0.0440**	**0.0117**	**6.0000e-004**	**0.0123**	**0.1177**	**77.2900**	**77.4078**	**0.0107**	**8.0000e-005**	**77.6991**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/14/2021	5	10	
2	Grading	Grading	1/15/2021	2/11/2021	5	20	
3	Paving	Paving	2/12/2021	3/11/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0301	0.0000	0.0301	0.0166	0.0000	0.0166	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1700e-003	0.0643	0.0315	6.0000e-005		3.2200e-003	3.2200e-003		2.9600e-003	2.9600e-003	0.0000	5.1177	5.1177	1.6600e-003	0.0000	5.1591
Total	**6.1700e-003**	**0.0643**	**0.0315**	**6.0000e-005**	**0.0301**	**3.2200e-003**	**0.0333**	**0.0166**	**2.9600e-003**	**0.0195**	**0.0000**	**5.1177**	**5.1177**	**1.6600e-003**	**0.0000**	**5.1591**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.3000e-004	1.1400e-003	0.0000	3.0000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2576	0.2576	1.0000e-005	0.0000	0.2578
Total	**1.5000e-004**	**1.3000e-004**	**1.1400e-003**	**0.0000**	**3.0000e-004**	**0.0000**	**3.1000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2576**	**0.2576**	**1.0000e-005**	**0.0000**	**0.2578**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0301	0.0000	0.0301	0.0166	0.0000	0.0166	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.1700e-003	0.0643	0.0315	6.0000e-005		3.2200e-003	3.2200e-003		2.9600e-003	2.9600e-003	0.0000	5.1177	5.1177	1.6600e-003	0.0000	5.1590
Total	**6.1700e-003**	**0.0643**	**0.0315**	**6.0000e-005**	**0.0301**	**3.2200e-003**	**0.0333**	**0.0166**	**2.9600e-003**	**0.0195**	**0.0000**	**5.1177**	**5.1177**	**1.6600e-003**	**0.0000**	**5.1590**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.3000e-004	1.1400e-003	0.0000	3.0000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2576	0.2576	1.0000e-005	0.0000	0.2578
Total	**1.5000e-004**	**1.3000e-004**	**1.1400e-003**	**0.0000**	**3.0000e-004**	**0.0000**	**3.1000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2576**	**0.2576**	**1.0000e-005**	**0.0000**	**0.2578**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0192	0.2095	0.1134	2.3000e-004		9.3600e-003	9.3600e-003		8.6100e-003	8.6100e-003	0.0000	20.5943	20.5943	6.6600e-003	0.0000	20.7608
Total	**0.0192**	**0.2095**	**0.1134**	**2.3000e-004**	**0.0655**	**9.3600e-003**	**0.0749**	**0.0337**	**8.6100e-003**	**0.0423**	**0.0000**	**20.5943**	**20.5943**	**6.6600e-003**	**0.0000**	**20.7608**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1000e-004	5.4000e-004	4.5600e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0302	1.0302	4.0000e-005	0.0000	1.0311
Total	**6.1000e-004**	**5.4000e-004**	**4.5600e-003**	**1.0000e-005**	**1.2200e-003**	**1.0000e-005**	**1.2200e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0302**	**1.0302**	**4.0000e-005**	**0.0000**	**1.0311**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0192	0.2095	0.1134	2.3000e-004		9.3600e-003	9.3600e-003		8.6100e-003	8.6100e-003	0.0000	20.5942	20.5942	6.6600e-003	0.0000	20.7608
Total	**0.0192**	**0.2095**	**0.1134**	**2.3000e-004**	**0.0655**	**9.3600e-003**	**0.0749**	**0.0337**	**8.6100e-003**	**0.0423**	**0.0000**	**20.5942**	**20.5942**	**6.6600e-003**	**0.0000**	**20.7608**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.1000e-004	5.4000e-004	4.5600e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0302	1.0302	4.0000e-005	0.0000	1.0311
Total	**6.1000e-004**	**5.4000e-004**	**4.5600e-003**	**1.0000e-005**	**1.2200e-003**	**1.0000e-005**	**1.2200e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**1.0302**	**1.0302**	**4.0000e-005**	**0.0000**	**1.0311**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2800e-003	0.0646	0.0733	1.1000e-004		3.3900e-003	3.3900e-003		3.1200e-003	3.1200e-003	0.0000	10.0117	10.0117	3.2400e-003	0.0000	10.0927
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.2800e-003**	**0.0646**	**0.0733**	**1.1000e-004**		**3.3900e-003**	**3.3900e-003**		**3.1200e-003**	**3.1200e-003**	**0.0000**	**10.0117**	**10.0117**	**3.2400e-003**	**0.0000**	**10.0927**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	4.3000e-004	3.6500e-003	1.0000e-005	9.7000e-004	1.0000e-005	9.8000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.8242	0.8242	3.0000e-005	0.0000	0.8249
Total	**4.9000e-004**	**4.3000e-004**	**3.6500e-003**	**1.0000e-005**	**9.7000e-004**	**1.0000e-005**	**9.8000e-004**	**2.6000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.8242**	**0.8242**	**3.0000e-005**	**0.0000**	**0.8249**

3.4 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.2800e-003	0.0646	0.0733	1.1000e-004		3.3900e-003	3.3900e-003		3.1200e-003	3.1200e-003	0.0000	10.0117	10.0117	3.2400e-003	0.0000	10.0927
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.2800e-003**	**0.0646**	**0.0733**	**1.1000e-004**		**3.3900e-003**	**3.3900e-003**		**3.1200e-003**	**3.1200e-003**	**0.0000**	**10.0117**	**10.0117**	**3.2400e-003**	**0.0000**	**10.0927**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	4.3000e-004	3.6500e-003	1.0000e-005	9.7000e-004	1.0000e-005	9.8000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.8242	0.8242	3.0000e-005	0.0000	0.8249
Total	**4.9000e-004**	**4.3000e-004**	**3.6500e-003**	**1.0000e-005**	**9.7000e-004**	**1.0000e-005**	**9.8000e-004**	**2.6000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.8242**	**0.8242**	**3.0000e-005**	**0.0000**	**0.8249**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0201	0.1361	0.2170	6.5000e-004	0.0434	6.4000e-004	0.0440	0.0117	6.0000e-004	0.0123	0.0000	60.2063	60.2063	3.4000e-003	0.0000	60.2913
Unmitigated	0.0201	0.1361	0.2170	6.5000e-004	0.0434	6.4000e-004	0.0440	0.0117	6.0000e-004	0.0123	0.0000	60.2063	60.2063	3.4000e-003	0.0000	60.2913

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	12.85	154.70	113.83	117,248	117,248
Total	12.85	154.70	113.83	117,248	117,248

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.440877	0.040349	0.242673	0.142275	0.034720	0.006163	0.014935	0.067430	0.001823	0.000752	0.005858	0.000581	0.001565

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.7900e-003	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Unmitigated	2.7900e-003	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Total	**2.8000e-003**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0000**	**1.3000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2000e-004	1.2000e-004	0.0000	0.0000	1.3000e-004
Total	**2.8000e-003**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.2000e-004**	**1.2000e-004**	**0.0000**	**0.0000**	**1.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	17.0836	3.7000e-004	8.0000e-005	17.1160
Unmitigated	17.0836	3.7000e-004	8.0000e-005	17.1160

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 8.10207	17.0836	3.7000e-004	8.0000e-005	17.1160
Total		**17.0836**	**3.7000e-004**	**8.0000e-005**	**17.1160**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 8.10207	17.0836	3.7000e-004	8.0000e-005	17.1160
Total		**17.0836**	**3.7000e-004**	**8.0000e-005**	**17.1160**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.1177	6.9600e-003	0.0000	0.2917
Unmitigated	0.1177	6.9600e-003	0.0000	0.2917

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.58	0.1177	6.9600e-003	0.0000	0.2917
Total		**0.1177**	**6.9600e-003**	**0.0000**	**0.2917**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.58	0.1177	6.9600e-003	0.0000	0.2917
Total		**0.1177**	**6.9600e-003**	**0.0000**	**0.2917**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Truckee River Legacy Trail - Phase IV

Nevada County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	6.80	Acre	6.80	296,208.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	80
Climate Zone	14			**Operational Year**	2022
Utility Company	Sierra Pacific Resources				
CO2 Intensity (lb/MWhr)	1328.16	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Truckee Donner Public Utility District unavailable to select for this model. Sierra Pacific Resources selected as a proxy. Project construction start date assumed to be January 1, 2021 (conservatively). Operational Year 2022.

Land Use -

Construction Phase - Assumed schedule (based on a start date of January 1, 2021 and an operational Year of 2022).

Off-road Equipment -

Off-road Equipment - Only 1 tractor/loader/backhoe, and 1 excavator, and 1 grader assumed for grading.

Off-road Equipment - 1 Paver, 1 paving equipment, and 1 roller assumed (given the size and type of the project).

Off-road Equipment - Only need for 1 rubber tired dozer and 1 tractor/loader/backhoe assumed required for site preparation.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.9791	20.9897	11.8240	0.0247	6.6801	0.9372	7.6172	3.4014	0.8622	4.2635	0.0000	2,391.7940	2,391.7940	0.7383	0.0000	2,410.2522
Maximum	**1.9791**	**20.9897**	**11.8240**	**0.0247**	**6.6801**	**0.9372**	**7.6172**	**3.4014**	**0.8622**	**4.2635**	**0.0000**	**2,391.7940**	**2,391.7940**	**0.7383**	**0.0000**	**2,410.2522**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.9791	20.9897	11.8240	0.0247	6.6801	0.9372	7.6172	3.4014	0.8622	4.2635	0.0000	2,391.7940	2,391.7940	0.7383	0.0000	2,410.2522
Maximum	**1.9791**	**20.9897**	**11.8240**	**0.0247**	**6.6801**	**0.9372**	**7.6172**	**3.4014**	**0.8622**	**4.2635**	**0.0000**	**2,391.7940**	**2,391.7940**	**0.7383**	**0.0000**	**2,410.2522**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0153	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.4158	2.3449	3.8085	0.0122	0.8140	0.0114	0.8254	0.2179	0.0107	0.2285		1,243.3042	1,243.3042	0.0655		1,244.9408
Total	**0.4311**	**2.3449**	**3.8092**	**0.0122**	**0.8140**	**0.0114**	**0.8254**	**0.2179**	**0.0107**	**0.2285**		**1,243.3057**	**1,243.3057**	**0.0655**	**0.0000**	**1,244.9424**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0153	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.4158	2.3449	3.8085	0.0122	0.8140	0.0114	0.8254	0.2179	0.0107	0.2285		1,243.3042	1,243.3042	0.0655		1,244.9408
Total	**0.4311**	**2.3449**	**3.8092**	**0.0122**	**0.8140**	**0.0114**	**0.8254**	**0.2179**	**0.0107**	**0.2285**		**1,243.3057**	**1,243.3057**	**0.0655**	**0.0000**	**1,244.9424**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/14/2021	5	10	
2	Grading	Grading	1/15/2021	2/11/2021	5	20	
3	Paving	Paving	2/12/2021	3/11/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.2336	12.8671	6.2980	0.0116		0.6442	0.6442		0.5927	0.5927		1,128.2523	1,128.2523	0.3649		1,137.3748
Total	**1.2336**	**12.8671**	**6.2980**	**0.0116**	**6.0221**	**0.6442**	**6.6663**	**3.3102**	**0.5927**	**3.9029**		**1,128.2523**	**1,128.2523**	**0.3649**		**1,137.3748**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0317	0.0223	0.2435	6.1000e-004	0.0639	4.0000e-004	0.0643	0.0169	3.7000e-004	0.0173		60.8328	60.8328	2.0600e-003		60.8844
Total	**0.0317**	**0.0223**	**0.2435**	**6.1000e-004**	**0.0639**	**4.0000e-004**	**0.0643**	**0.0169**	**3.7000e-004**	**0.0173**		**60.8328**	**60.8328**	**2.0600e-003**		**60.8844**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.2336	12.8671	6.2980	0.0116		0.6442	0.6442		0.5927	0.5927	0.0000	1,128.2523	1,128.2523	0.3649		1,137.3748
Total	**1.2336**	**12.8671**	**6.2980**	**0.0116**	**6.0221**	**0.6442**	**6.6663**	**3.3102**	**0.5927**	**3.9029**	**0.0000**	**1,128.2523**	**1,128.2523**	**0.3649**		**1,137.3748**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0317	0.0223	0.2435	6.1000e-004	0.0639	4.0000e-004	0.0643	0.0169	3.7000e-004	0.0173		60.8328	60.8328	2.0600e-003		60.8844
Total	**0.0317**	**0.0223**	**0.2435**	**6.1000e-004**	**0.0639**	**4.0000e-004**	**0.0643**	**0.0169**	**3.7000e-004**	**0.0173**		**60.8328**	**60.8328**	**2.0600e-003**		**60.8844**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9158	20.9451	11.3370	0.0234		0.9364	0.9364		0.8615	0.8615		2,270.1284	2,270.1284	0.7342		2,288.4835
Total	**1.9158**	**20.9451**	**11.3370**	**0.0234**	**6.5523**	**0.9364**	**7.4887**	**3.3675**	**0.8615**	**4.2289**		**2,270.1284**	**2,270.1284**	**0.7342**		**2,288.4835**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0633	0.0447	0.4870	1.2200e-003	0.1277	8.0000e-004	0.1285	0.0339	7.4000e-004	0.0346		121.6657	121.6657	4.1200e-003		121.7687
Total	**0.0633**	**0.0447**	**0.4870**	**1.2200e-003**	**0.1277**	**8.0000e-004**	**0.1285**	**0.0339**	**7.4000e-004**	**0.0346**		**121.6657**	**121.6657**	**4.1200e-003**		**121.7687**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9158	20.9451	11.3370	0.0234		0.9364	0.9364		0.8615	0.8615	0.0000	2,270.1284	2,270.1284	0.7342		2,288.4835
Total	**1.9158**	**20.9451**	**11.3370**	**0.0234**	**6.5523**	**0.9364**	**7.4887**	**3.3675**	**0.8615**	**4.2289**	**0.0000**	**2,270.1284**	**2,270.1284**	**0.7342**		**2,288.4835**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0633	0.0447	0.4870	1.2200e-003	0.1277	8.0000e-004	0.1285	0.0339	7.4000e-004	0.0346		121.6657	121.6657	4.1200e-003		121.7687
Total	**0.0633**	**0.0447**	**0.4870**	**1.2200e-003**	**0.1277**	**8.0000e-004**	**0.1285**	**0.0339**	**7.4000e-004**	**0.0346**		**121.6657**	**121.6657**	**4.1200e-003**		**121.7687**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6278	6.4596	7.3266	0.0114		0.3389	0.3389		0.3118	0.3118		1,103.6054	1,103.6054	0.3569		1,112.5286
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6278**	**6.4596**	**7.3266**	**0.0114**		**0.3389**	**0.3389**		**0.3118**	**0.3118**		**1,103.6054**	**1,103.6054**	**0.3569**		**1,112.5286**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0507	0.0357	0.3896	9.8000e-004	0.1022	6.4000e-004	0.1028	0.0271	5.9000e-004	0.0277		97.3325	97.3325	3.3000e-003		97.4150
Total	**0.0507**	**0.0357**	**0.3896**	**9.8000e-004**	**0.1022**	**6.4000e-004**	**0.1028**	**0.0271**	**5.9000e-004**	**0.0277**		**97.3325**	**97.3325**	**3.3000e-003**		**97.4150**

3.4 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6278	6.4596	7.3266	0.0114		0.3389	0.3389		0.3118	0.3118	0.0000	1,103.6054	1,103.6054	0.3569		1,112.5286
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6278**	**6.4596**	**7.3266**	**0.0114**		**0.3389**	**0.3389**		**0.3118**	**0.3118**	**0.0000**	**1,103.6054**	**1,103.6054**	**0.3569**		**1,112.5286**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0507	0.0357	0.3896	9.8000e-004	0.1022	6.4000e-004	0.1028	0.0271	5.9000e-004	0.0277		97.3325	97.3325	3.3000e-003		97.4150
Total	**0.0507**	**0.0357**	**0.3896**	**9.8000e-004**	**0.1022**	**6.4000e-004**	**0.1028**	**0.0271**	**5.9000e-004**	**0.0277**		**97.3325**	**97.3325**	**3.3000e-003**		**97.4150**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4158	2.3449	3.8085	0.0122	0.8140	0.0114	0.8254	0.2179	0.0107	0.2285		1,243.3042	1,243.3042	0.0655		1,244.9408
Unmitigated	0.4158	2.3449	3.8085	0.0122	0.8140	0.0114	0.8254	0.2179	0.0107	0.2285		1,243.3042	1,243.3042	0.0655		1,244.9408

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	12.85	154.70	113.83	117,248	117,248
Total	12.85	154.70	113.83	117,248	117,248

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.440877	0.040349	0.242673	0.142275	0.034720	0.006163	0.014935	0.067430	0.001823	0.000752	0.005858	0.000581	0.001565

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0153	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Unmitigated	0.0153	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0153					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Total	**0.0153**	**1.0000e-005**	**7.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4900e-003**	**1.4900e-003**	**0.0000**		**1.5900e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0153					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Total	**0.0153**	**1.0000e-005**	**7.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4900e-003**	**1.4900e-003**	**0.0000**		**1.5900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Truckee River Legacy Trail - Phase IV

Nevada County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	6.80	Acre	6.80	296,208.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	80
Climate Zone	14			**Operational Year**	2022
Utility Company	Sierra Pacific Resources				
CO2 Intensity (lb/MWhr)	1328.16	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Truckee Donner Public Utility District unavailable to select for this model. Sierra Pacific Resources selected as a proxy. Project construction start date assumed to be January 1, 2021 (conservatively). Operational Year 2022.

Land Use -

Construction Phase - Assumed schedule (based on a start date of January 1, 2021 and an operational Year of 2022).

Off-road Equipment -

Off-road Equipment - Only 1 tractor/loader/backhoe, and 1 excavator, and 1 grader assumed for grading.

Off-road Equipment - 1 Paver, 1 paving equipment, and 1 roller assumed (given the size and type of the project).

Off-road Equipment - Only need for 1 rubber tired dozer and 1 tractor/loader/backhoe assumed required for site preparation.

Energy Use -

Table Name	Column Name	Default Value	New Value
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.9839	21.0036	11.7979	0.0246	6.6801	0.9372	7.6172	3.4014	0.8622	4.2635	0.0000	2,381.9032	2,381.9032	0.7380	0.0000	2,400.3540
Maximum	**1.9839**	**21.0036**	**11.7979**	**0.0246**	**6.6801**	**0.9372**	**7.6172**	**3.4014**	**0.8622**	**4.2635**	**0.0000**	**2,381.9032**	**2,381.9032**	**0.7380**	**0.0000**	**2,400.3540**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	1.9839	21.0036	11.7979	0.0246	6.6801	0.9372	7.6172	3.4014	0.8622	4.2635	0.0000	2,381.9032	2,381.9032	0.7380	0.0000	2,400.3540
Maximum	**1.9839**	**21.0036**	**11.7979**	**0.0246**	**6.6801**	**0.9372**	**7.6172**	**3.4014**	**0.8622**	**4.2635**	**0.0000**	**2,381.9032**	**2,381.9032**	**0.7380**	**0.0000**	**2,400.3540**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0153	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.3555	2.4594	4.0713	0.0115	0.8140	0.0116	0.8256	0.2179	0.0109	0.2287		1,164.9742	1,164.9742	0.0700		1,166.7229
Total	**0.3708**	**2.4594**	**4.0720**	**0.0115**	**0.8140**	**0.0116**	**0.8256**	**0.2179**	**0.0109**	**0.2287**		**1,164.9757**	**1,164.9757**	**0.0700**	**0.0000**	**1,166.7244**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0153	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.3555	2.4594	4.0713	0.0115	0.8140	0.0116	0.8256	0.2179	0.0109	0.2287		1,164.9742	1,164.9742	0.0700		1,166.7229
Total	**0.3708**	**2.4594**	**4.0720**	**0.0115**	**0.8140**	**0.0116**	**0.8256**	**0.2179**	**0.0109**	**0.2287**		**1,164.9757**	**1,164.9757**	**0.0700**	**0.0000**	**1,166.7244**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2021	1/14/2021	5	10	
2	Grading	Grading	1/15/2021	2/11/2021	5	20	
3	Paving	Paving	2/12/2021	3/11/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.2336	12.8671	6.2980	0.0116		0.6442	0.6442		0.5927	0.5927		1,128.2523	1,128.2523	0.3649		1,137.3748
Total	**1.2336**	**12.8671**	**6.2980**	**0.0116**	**6.0221**	**0.6442**	**6.6663**	**3.3102**	**0.5927**	**3.9029**		**1,128.2523**	**1,128.2523**	**0.3649**		**1,137.3748**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0341	0.0293	0.2304	5.6000e-004	0.0639	4.0000e-004	0.0643	0.0169	3.7000e-004	0.0173		55.8874	55.8874	1.9100e-003		55.9352
Total	**0.0341**	**0.0293**	**0.2304**	**5.6000e-004**	**0.0639**	**4.0000e-004**	**0.0643**	**0.0169**	**3.7000e-004**	**0.0173**		**55.8874**	**55.8874**	**1.9100e-003**		**55.9352**

3.2 Site Preparation - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.2336	12.8671	6.2980	0.0116		0.6442	0.6442		0.5927	0.5927	0.0000	1,128.2523	1,128.2523	0.3649		1,137.3748
Total	**1.2336**	**12.8671**	**6.2980**	**0.0116**	**6.0221**	**0.6442**	**6.6663**	**3.3102**	**0.5927**	**3.9029**	**0.0000**	**1,128.2523**	**1,128.2523**	**0.3649**		**1,137.3748**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0341	0.0293	0.2304	5.6000e-004	0.0639	4.0000e-004	0.0643	0.0169	3.7000e-004	0.0173		55.8874	55.8874	1.9100e-003		55.9352
Total	**0.0341**	**0.0293**	**0.2304**	**5.6000e-004**	**0.0639**	**4.0000e-004**	**0.0643**	**0.0169**	**3.7000e-004**	**0.0173**		**55.8874**	**55.8874**	**1.9100e-003**		**55.9352**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9158	20.9451	11.3370	0.0234		0.9364	0.9364		0.8615	0.8615		2,270.1284	2,270.1284	0.7342		2,288.4835
Total	**1.9158**	**20.9451**	**11.3370**	**0.0234**	**6.5523**	**0.9364**	**7.4887**	**3.3675**	**0.8615**	**4.2289**		**2,270.1284**	**2,270.1284**	**0.7342**		**2,288.4835**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0682	0.0586	0.4609	1.1200e-003	0.1277	8.0000e-004	0.1285	0.0339	7.4000e-004	0.0346		111.7749	111.7749	3.8200e-003		111.8705
Total	**0.0682**	**0.0586**	**0.4609**	**1.1200e-003**	**0.1277**	**8.0000e-004**	**0.1285**	**0.0339**	**7.4000e-004**	**0.0346**		**111.7749**	**111.7749**	**3.8200e-003**		**111.8705**

3.3 Grading - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.9158	20.9451	11.3370	0.0234		0.9364	0.9364		0.8615	0.8615	0.0000	2,270.1284	2,270.1284	0.7342		2,288.4835
Total	**1.9158**	**20.9451**	**11.3370**	**0.0234**	**6.5523**	**0.9364**	**7.4887**	**3.3675**	**0.8615**	**4.2289**	**0.0000**	**2,270.1284**	**2,270.1284**	**0.7342**		**2,288.4835**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0682	0.0586	0.4609	1.1200e-003	0.1277	8.0000e-004	0.1285	0.0339	7.4000e-004	0.0346		111.7749	111.7749	3.8200e-003		111.8705
Total	**0.0682**	**0.0586**	**0.4609**	**1.1200e-003**	**0.1277**	**8.0000e-004**	**0.1285**	**0.0339**	**7.4000e-004**	**0.0346**		**111.7749**	**111.7749**	**3.8200e-003**		**111.8705**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6278	6.4596	7.3266	0.0114		0.3389	0.3389		0.3118	0.3118		1,103.6054	1,103.6054	0.3569		1,112.5286
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6278**	**6.4596**	**7.3266**	**0.0114**		**0.3389**	**0.3389**		**0.3118**	**0.3118**		**1,103.6054**	**1,103.6054**	**0.3569**		**1,112.5286**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0468	0.3687	9.0000e-004	0.1022	6.4000e-004	0.1028	0.0271	5.9000e-004	0.0277		89.4199	89.4199	3.0600e-003		89.4964
Total	**0.0545**	**0.0468**	**0.3687**	**9.0000e-004**	**0.1022**	**6.4000e-004**	**0.1028**	**0.0271**	**5.9000e-004**	**0.0277**		**89.4199**	**89.4199**	**3.0600e-003**		**89.4964**

3.4 Paving - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6278	6.4596	7.3266	0.0114		0.3389	0.3389		0.3118	0.3118	0.0000	1,103.6054	1,103.6054	0.3569		1,112.5286
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6278**	**6.4596**	**7.3266**	**0.0114**		**0.3389**	**0.3389**		**0.3118**	**0.3118**	**0.0000**	**1,103.6054**	**1,103.6054**	**0.3569**		**1,112.5286**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0545	0.0468	0.3687	9.0000e-004	0.1022	6.4000e-004	0.1028	0.0271	5.9000e-004	0.0277		89.4199	89.4199	3.0600e-003		89.4964
Total	**0.0545**	**0.0468**	**0.3687**	**9.0000e-004**	**0.1022**	**6.4000e-004**	**0.1028**	**0.0271**	**5.9000e-004**	**0.0277**		**89.4199**	**89.4199**	**3.0600e-003**		**89.4964**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3555	2.4594	4.0713	0.0115	0.8140	0.0116	0.8256	0.2179	0.0109	0.2287		1,164.9742	1,164.9742	0.0700		1,166.7229
Unmitigated	0.3555	2.4594	4.0713	0.0115	0.8140	0.0116	0.8256	0.2179	0.0109	0.2287		1,164.9742	1,164.9742	0.0700		1,166.7229

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	12.85	154.70	113.83	117,248	117,248
Total	12.85	154.70	113.83	117,248	117,248

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.440877	0.040349	0.242673	0.142275	0.034720	0.006163	0.014935	0.067430	0.001823	0.000752	0.005858	0.000581	0.001565

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0153	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Unmitigated	0.0153	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0153					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Total	**0.0153**	**1.0000e-005**	**7.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4900e-003**	**1.4900e-003**	**0.0000**		**1.5900e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0153					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	7.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4900e-003	1.4900e-003	0.0000		1.5900e-003
Total	**0.0153**	**1.0000e-005**	**7.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4900e-003**	**1.4900e-003**	**0.0000**		**1.5900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix C: Aquatic Delineation

AQUATIC RESOURCES DELINEATION

TRUCKEE RIVER LEGACY TRAIL – PHASE 4

TRUCKEE, NEVADA AND PLACER COUNTY, CA

MAY 15, 2019

Prepared for:

Town of Truckee
Engineering Division
10183 Truckee Airport Road
Truckee, CA 96161
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De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

AQUATIC RESOURCES DELINEATION

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1. EXECUTIVE SUMMARY

This Aquatic Resources Delineation has been conducted in accordance with the 1987 "Corps of Engineers Wetland Delineation Manual" with the Western Mountains, Valleys, and Coast Region Supplement (Version 2.0) and the 2008 “A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.”

The Biological Study Area, hereinafter, Area of Potential Effects (APE) contains four aquatic resource classifications including: 1) Riverine, Upper Perennial, Rock Bottom – R3RB, 2) Riverine, Intermittent, Streambed - R4SB, 3) Riverine, Ephemeral – R6, and 4) Riparian, lotic, forested - RP1FO.

The Truckee River within the APE averages 80 feet wide, totals 6.98 acres, and is approximately 7,313 linear feet.

A perennial drainage (seep) located along the eastern boundary totals 0.55 acres and 692 linear feet and flows in a south to north direction where it connects to the Truckee River.

There are nine seasonal drainages totaling 0.18 acres and 5,080 linear feet located within the APE. These drainages are generally rocky features that hold intermittent flows during the snow melt. The drainages on the far western end of the site function as a snow melt seasonal drainage and has limited bed characteristics.

There are six seasonal wetlands totaling 2.23 acres located within the APE. These wetlands and are mostly within the 100-year flood plain and/or associated with the winter melt.

The Truckee River, which borders most of the APE on the north side, has riparian area that transitions the mesic environmental along the river into the more xeric environment in the upland sage and bitter brush areas. Within the APE, the riparian area totals 7.05 acres.

The following table presents the delineated features found within the APE.

TABLE EX SUM-1: SUMMARY OF DELINEATED FEATURES

Aquatic Resource Name	Aquatic Resources Classification		Size (Acre)	Size (linear feet)
	Cowardin	Location (lat/long)		
Waters of the U.S.				
Truckee River – 1	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3149, -120.2020	5.34	2,782
Truckee River - 2	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3192, -120.1960	0.32	1,715
Truckee River - 3	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3209, -120.1930	0.07	667
Truckee River – 4	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3217, -120.1920	0.04	234
Truckee River – 5	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3226, -120.1910	0.04	389
Truckee River – 6	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3237, -120.1910	0.09	351
Truckee River – 7	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3252, -120.1880	1.04	1,045
Truckee River – 8	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3257, -120.1860	0.03	130
TOTAL			**6.98**	**7,313**
Perennial Drainage				
Perennial Drainage - 9	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3246, -120.1850	0.55	692
TOTAL			**0.55**	**692**
Seasonal Drainage				
Seasonal Drainage – 10	R4SB – Riverine, Intermittent, Streambed	39.3141, -120.2014	0.02	802
Seasonal Drainage – 11	R4SB – Riverine, Intermittent, Streambed	39.3156, -120.1996	0.03	1,356
Seasonal Drainage – 12	R4SB – Riverine, Intermittent, Streambed	39.3174, -120.1975	0.00	69
Seasonal Drainage – 13	R4SB – Riverine, Intermittent, Streambed	39.3178, -120.1969	0.00	151
Seasonal Drainage – 14	R4SB – Riverine, Intermittent, Streambed	39.3190, -120.1947	0.01	167
Seasonal Drainage – 15	R4SB – Riverine, Intermittent, Streambed	39.3181, -120.1918	0.09	1,851
Seasonal Drainage – 16	R4SB – Riverine, Intermittent, Streambed	39.3198, -120.1933	0.01	281
Seasonal Drainage – 17	R4SB – Riverine, Intermittent, Streambed	39.3200, -120.1929	0.02	336
Seasonal Drainage – 18	R4SB – Riverine, Intermittent, Streambed	39.3215, -120.1909	0.00	66
TOTAL			**0.18**	**5,080**
Seasonal Wetlands				
Seasonal Wetland – A	R6 – Riverine, Ephemeral	39.3158, -120.1990	0.13	--
Seasonal Wetland – B	R6 – Riverine, Ephemeral	39.3196, -120.1930	0.95	--
Seasonal Wetland – C	R6 – Riverine, Ephemeral	39.3243, -120.1910	0.01	--
Seasonal Wetland – D	R6 – Riverine, Ephemeral	39.3249, -120.1890	0.32	--
Seasonal Wetland – E	R6 – Riverine, Ephemeral	39.3245, -120.1870	0.09	--
Seasonal Wetland – F	R6 – Riverine, Ephemeral	39.3247, -120.1860	0.73	--
TOTAL			**2.23**	
Riparian				
Riparian– G	RP1FO – Riparian, lotic, forested	39.3146, -120.2030	1.39	--
Riparian– H	RP1FO – Riparian, lotic, forested	39.3163, -120.2000	2.99	--
Riparian– I	RP1FO – Riparian, lotic, forested	39.3206, -120.1930	1.28	--
Riparian– J	RP1FO – Riparian, lotic, forested	39.3247, -120.1900	1.26	--
Riparian– K	RP1FO – Riparian, lotic, forested	39.3256, -120.1870	0.11	--
Riparian– L	RP1FO – Riparian, lotic, forested	39.3257, -120.1860	0.02	--
TOTAL			**7.05**	

SOURCE: PLACER COUNTY GIS; TOWN OF TRUCKEE; ARCGIS ONLINE AERIAL IMAGERY SERVICE.

2. INTRODUCTION

PROJECT OVERVIEW

The proposed project (Truckee Legacy Trail Phase 4) travels through the Town of Truckee (Town) and unincorporated Placer County; the Town is acting as the Lead Agency. In April 2002, the Town adopted the original *Truckee Trails and Bikeways Master Plan*. The *Truckee Trails and Bikeways Master Plan* was updated most recently in 2015. *The Town of Truckee 2025 General Plan* provides a framework for the *Truckee Trails and Bikeways Master Plan*. Many land use, circulation, and conservation and open space policies contained within the Town of Truckee General Plan encourage the implementation of a non-motorized network that creates recreation and transportation opportunities in Truckee and neighboring jurisdictions. Furthermore, the *Placer County General Plan* identifies several goals and policies that encourage the development of properly-designed parks and recreational facilities and the development of a system of interconnected hiking, riding, and bicycling trails and paths, and the protection of the County's important historical, archaeological, paleontological, and cultural sites.

The *Truckee Trails and Bikeways Master Plan* set out a vision for the Truckee River Legacy Trail project, which upon completion, would link together Donner Lake area in the west of town to the Glenshire neighborhood in the east. Since 2002, phases 1, 2, 3A, and 3B of the Truckee River Legacy Trail have been completed, which connect to the proposed Phase 4 at the eastern end. In addition, a short section of trail along State Route (SR) 89 (the Mousehole Project) is completed. The Mousehole Project provides a tunnel under the Union Pacific Railroad tracks and a 10-foot wide multi-use path along State Route (SR) 89 between Deerfield Drive to West River Street providing a northwest connection to the proposed Phase 4 trail segment. The proposed Legacy Trail Phase 4 provides the missing link between these existing segments of trail. In addition, Phase 4 provides a connection to the future Placer County trail connection to Squaw Valley. For these reasons, the trail is an essential alternative transportation network between Truckee and Tahoe City.

When completed, the proposed project would feature approximately 1.9 miles of Class 1 (paved) bikeway and recreation trail between the Truckee River Regional Park (Brockway Road and Palisades Drive intersection) and West River Street near the intersection of SR 89 South. This section of the Legacy Trail would cross both public and private property and would also include an approximately 400-foot bridge across the Truckee River.

The proposed project would include improved public access to the Truckee River, a paved trailhead parking area adjacent to West River Street with a restroom facility, possibly a small concession stand, and amenities such as benches/trash cans/interpretive signage along the trail alignment. The proposed project may require relocation of power poles that are located on the site. Access roads are provided off of the main trail for utility providers to access their existing infrastructure via the existing dirt roads on site. The parking lot, restrooms, river access area, and paved multi-use trail would be consistent the American Disabilities Act (ADA) Standards for Accessible Design (i.e. it would be ADA accessible).

Soft surface (i.e. unpaved) trails are also planned that would connect to an existing trail network located off of Silver Fir Circle, Thelin Court, and Aspenwood Road adjacent to USFS property and the Sawtooth trail system/06 Road, and to an existing dirt road on the Truckee Springs property. The paved and soft surface trails would be limited to non-motorized use, with an exception for regular maintenance and utility vehicle access.

Phase 4 of the Truckee River Legacy Trail is expected to be the second to last portion of the Truckee River Legacy Trail to be constructed. When complete, the entirety of the Truckee River Legacy Trail system would include an approximate 10-foot wide paved trail from Donner Memorial State Park in the west to the Glenshire neighborhood in the east. Most of the route would parallel the Truckee River.

3. PROJECT LOCATION

The project is located between Truckee Regional Park (at the intersection of Brockway Road and Palisades Drive) and SR 89 South (at the intersection of West River Street), in the Town of Truckee and portions of eastern Placer County.

The western portion of the project is located within the Tahoe National Forest. The project traverses lands owned by the Truckee-Donner Public Utilities District, Town of Truckee, the United States of America (Forest Service), the State of California (Department of Fish and Wildlife, Department of Transportation), Truckee Springs LLC, Redbank Properties LLC, Don & Nancy Davis Trust, Jonathan Shantz Trust, Thomas Young Trust, Gregg Henrikson Trust, Truckee Senior Neighborhood, LLC, Foothill Air-Conditioning and Heating/Davies/Fitch Partners, Jar-Hilltop, Mina Mostoufi, Henry Klehn Jr. and Brenda Willson Klehn Trust, Reynolds Family Partners, and the Truckee Donner Recreation and Park District.

The proposed project (also called the proposed action within this Initial Study) generally follows the path of the Truckee River along its south bank, in an area that is largely flat to rolling, with hilly terrain located within the southern portion of the trail planning area. The trail planning area correlates fully with the Area of Potential Effect (APE). The trail planning area includes all or part of the Town of Truckee Assessor's Parcel Numbers (APNs) 19-450-42, 19-300-75, 19-300-74, 19-300-31, 19-300-23, 19-300-21, 19-300-20, 19-300-18, 19-300-17, 19-300-16, 19-300-12, 19-300-05, 19-152-44, 19-140-17, 19-140-09, 19-140-08, 19-130-30, 19-130-29, 19-130-28, 19-130-27, 19-130-26, 18-660-43, 18-660-42, and all or part of Placer County APNs 080-020-015, 080-010-015, 080-020-008, 080-020-010, 080-020-003, and 080-320-032. The project's regional location is shown in Figure 1 and the project vicinity is shown in Figure 2.

HILLTOP MASTER PLAN

The Hilltop Master Plan Area is a planning sub-area of the Downtown Specific Plan generally located south of Brockway Road and west of Palisades Drive. A portion of the Hilltop Master Plan Area overlaps the northeastern portion of the proposed project. The Hilltop Master Plan and Design Guidelines were adopted in August 2008 and provide policies and implementation measures to guide future development of the area. The Hilltop Master Plan and Design Guidelines includes multiple guidelines for bicyclists and pedestrians, including for the portion of the proposed project

within the boundaries of the Hilltop Master Plan, located to the south and west of Brockway Road.

TRUCKEE SPRINGS MASTER PLAN

The Truckee Springs property consists of approximately 25.5 acres of undeveloped land at the western end of South River Street, adjacent to the Truckee River. A portion of the proposed project trail would traverse a portion of this area, towards the eastern end of the trail. The Truckee Springs project may develop this property for residential and/or hotel/lodging units.

EXISTING SITE USES

The proposed project trail planning area is currently on mostly vacant/undeveloped land, abutting the Truckee River. Depending on the proposed project's final alignment, portions of the trail planning area may run through or adjacent to residential land uses. There are existing soft surface trails that currently run through much of the proposed trail planning area. There are also existing access roads located sporadically throughout the trail planning area.

SURROUNDING LAND USES

The surrounding land uses consist primarily of vacant and/or undeveloped land. Additionally, the Truckee River runs along the north of the trail planning area, except where the trail would cross the Truckee River (via a bridge) at the western portion of the trail. Commercial developments and residential developments are currently located near the eastern edge of the trail planning area, and commercial developments exist, near the central and western portions of the trail planning area on the north side of the Truckee River. A small residential community also exists just north of the western edge of the trail planning area, east of SR 89 and north of West River Street. The eastern end of the trail would intersect with Truckee River Regional Park.

Furthermore, as described above, the trail planning area crosses the Hilltop Master Plan area. The Hilltop Master Plan area contains the following proposed uses: Downtown Commercial, Downtown Mixed Use, Downtown High Density Residential, Downtown Medium Density Residential, and Downtown Mixed Use. As described previously, the trail planning area crosses some of these land uses in the northeastern part of the trail planning area (near Brockway Road).

GENERAL PLAN AND ZONING DESIGNATIONS

The trail planning area includes the following Town of Truckee General Plan land uses: Residential Cluster Average Density 1 du/5 acres (RC-5) (in the south-central portion of the trail planning area) and a small amount of Commercial (in the far eastern portion of the trail planning area). The trail planning area also includes the following Plan Area: Downtown Specific Plan Area (along the alignment of the Truckee River). Additionally, the southwestern portion of the trail planning area is in unincorporated Placer County, and is currently primarily designated Agriculture/Timberland (AG/T) by the Placer County General Plan Land Use Map, with a small portion of this area designated Low Density Residential 1 – 5 du/acre (LDR). See Figure 3 for the respective General Plan land uses for the trail planning area.

The trail planning area traverses the following Town of Truckee zoning districts: Downtown Master Plan (DMP), Downtown Mixed Use (DMU), Public Facilities (PF), Downtown Single Family Residential

(DRS), Rural Residential (RR), and General Commercial (CG). The trail planning area also traverses the following Placer County zoning districts (in the portion of the trail planning area located outside of the Town of Truckee): Forestry (FOR), Water Influence (W), and Residential Single Family (RS). See Figure 4 for the respective zoning for the trail planning area.

4. PROJECT DESCRIPTION

The Town of Truckee is continuing with its implementation of the Truckee *Trails and Bikeways Master Plan*, originally adopted by the Town Council in April 2002. The *Truckee Trails and Bikeways Master Plan* was updated in 2007, 2012, and most recently in 2015. Within the most recent version of the Plan, the Truckee River Legacy Trail, which includes the proposed action, was given the highest priority rating, based on community benefit scores and the level of public support received through public workshops and online surveys.

The Truckee River Legacy Trail is the culmination of nearly 20 years of planning and collaboration between the Town and the community. The Truckee River Legacy Trail has been a public/private partnership between federal, state, and local agencies, non-profits organizations, and volunteers. The focal point of the trail is the Truckee River. The trail is designed to provide cyclists and pedestrians an essential alternative transportation facility with views of the river without encroaching on the fragile riparian areas along its banks.

The proposed action would develop Phase 4 of the Truckee River Legacy Trail from Palisades Drive/Brockway Road to the SR89/West River Street intersection. When completed, the proposed action would feature approximately 1.9 miles of Class 1 (paved) bikeway and multi-use trail between the Truckee River Regional Park (Brockway Road and Palisades Drive intersection) and SR 89 South (by West River Street). This section of the Truckee River Legacy Trail would cross both public and private property and would include an approximately 400-foot bridge across the Truckee River. Drainage crossings would have open bottom culverts or similar structures to avoid impacts to the seasonal drainage channels. The preferred trail alignment (West Bridge) is shown in Figure 5a (Proposed Trail Alignment).[1] The preferred alignment of the bridge is the western alignment located on the USFS parcel. Separately, Figure 5b provides a conceptual map of the entire APE, inclusive of the temporary impact areas that are associated with both the proposed alignment and the alternative alignments (including a truck turn-around area and a potential construction vehicle/equipment staging area), as well as the location of a (non-project) future soft surface trail connection.

The proposed action would connect to Truckee River Legacy Trail Phases 1-3B in the east, the Mousehole Project to the northwest (providing a connection to planned Phase 5 of the Truckee River Legacy Trail in the west), and nearby soft surface trails. Placer County is also planning a trail connection from the proposed bridge to Squaw Valley.

The proposed project would provide a trailhead parking area adjacent to West River Street (with a

[1] The preferred alignment is also called the "Proposed Project - West Bridge" within this Initial Study.

restroom) and the option for a small kiosk or concession structure, and amenities such as benches/trash cans/interpretive signage along the trail alignment. The signage will include wayfinding/signage that informs trail users, and encourages them to stay on the designated trail (i.e. minimize dispersed recreation). Soft surface trails are also planned that will connect to an existing trail network located off of Silver Fir Drive and Aspenwood Drive and to an existing dirt road in Truckee Springs. The paved and soft surface trails will be limited to non-motorized use, with an exception for regular maintenance, utility, and emergency vehicle access. The project will also include a boardwalk across the spring above ice pond. The proposed action may require relocation of power poles that are located on the site.

The enhanced pedestrian access to the Truckee River on the Town of Truckee property will include paved parking spaces, improved walking surfaces, erosion prevention, trail amenities, and/or similar improvements. It is also anticipated that there will be a launch/take out established along the river in an area that has a short existing trail to the river. The existing vehicle access to the river will be decommissioned and sensitive disturbed areas will be restored.

The proposed bridge crossing(s) will include aesthetic features such as decorative railings or pilasters on the approaches. The addition of a "bulb-out" on the bridge to provide for an overlook of the Truckee River will also be considered. The trail alignment also accommodates a future roundabout at the entrance to the Hilltop Development at Brockway Road for future development in that area. The trail will then be re-aligned through the roundabout once it is constructed. Impacts for both of these scenarios have been included within this document.

ALTERNATIVES

The preferred trail alignment (West Bridge) is shown in Figure 5a (Proposed Trail Alignment). The two primary alternatives to the preferred trail alignment are the Middle Bridge Alternative and Donner Creek Bridge Alternative. The proposed project would construct only one of the bridge crossings over the Truckee River (e.g. the West Bridge under the proposed project, or either the Middle Bridge under the Middle Bridge Alternative or the Donner Bridge under the Donner Creek Bridge Alternative)[2], and one continuous trail alignment. It is noted that if the Donner Creek Bridge alternative was selected, there would be a need for a second bridge crossing across Donner Creek. This second bridge across Donner Creek would not be needed under the proposed project, or Middle Bridge alternative. Separately, there is an additional alignment alternative near the eastern edge of the proposed project (shown as "K3" in Figure 5a).

Project sponsors reviewed an alternative alignment (shown in Figure 5a) between the Middle Bridge and Donner Creek Bridge alignments, taking advantage of existing disturbance on the island within the floodplain that would result in the shortest bridge (bridge span B1) over the Truckee River. This alignment is less impactful as compared to the proposed alignment, as some of this alignment would follow an existing dirt road; it is relatively level; it does not cross eligible cultural resources, or wetlands; and it results in the shortest bridge over the Truckee River. This alternative alignment is contingent on a private property owner granting an easement that would bifurcate the parcel,

[2] See "Figure 5a: Proposed Trail Alignment" for further detail.

resulting in the loss of buildable area. For purposes of the environmental analysis, the least intrusive crossing of this private parcel was evaluated. This alternative alignment is incorporated into the project environmental analysis as an option that is considered to have the same or less environmental impact.

AREA OF DISTURBANCE

Construction of the project would impact between 11.4 and 12.6 acres, depending on the exact alignment and bridge that is constructed. This would include between approximately 5.0 and 5.9 acres of permanent impact and between 6.6 and 6.7 acres of temporary disturbance.

The following tables (Tables 1 through 3) provide a breakdown of the estimated area of disturbance associated with the proposed project (i.e. "Proposed Project – West Bridge) and the two alternatives (i.e. the Middle Bridge Alternative and the Donner Creek Bridge Alternative), respectively. The proposed project would construct only one of the bridge crossings over the Truckee River (e.g. the West Bridge under the proposed project, or either the Middle Bridge under the Middle Bridge Alternative or the Donner Bridge under the Donner Creek Bridge Alternative)[3], and one continuous trail alignment. It is noted that if the Donner Creek Bridge alternative was selected, there would be a need for a second bridge crossing across Donner Creek. This second bridge across Donner Creek would not be needed under the proposed project, or Middle Bridge alternative. Separately, there is an additional alignment alternative near the eastern edge of the proposed project (shown as "K3" in Figure 5a).

TABLE 1: PROPOSED PROJECT - WEST BRIDGE - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
Bridge Facilities			
Bridge Span (A1)	0.12	0.00	0.12
Subtotal	***0.12***	***0.00***	***0.12***
At-grade Facilities			
At-Grade Segments	1.92	4.74	6.66
Parking Area	1.68	0.19	1.87
Soft Surface Trail	0.98	0.00	0.98
Boardwalk (K2)	0.03	0.00	0.03
Trail Modification (near Brockway) (i.e. Future Roundabout)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97
Subtotal	***4.87***	***6.43***	***11.30***
Total	***4.99***	***6.55***	***11.42***

Notes: 1) The area of disturbance calculations for bridges include the bridge area, however, it is noted that the bridge does not have an on-ground physical impact (permanent or temporary) given that they are spans with limited piles. Abutment areas are included in the at-grade area calculations.

2) Segments D1, D2, and D3 are shown within the Parking Area.

3) Numbers may not add up due to rounding.

Source: Mark Thomas, 2019.

[3] See "Figure 5a: Proposed Trail Alignment" for further detail.

TABLE 2: MIDDLE BRIDGE ALTERNATIVE - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
Bridge Facilities			
Bridge Span (B1)	0.07	0.00	0.07
Bridge Span (C1)	0.66	0.00	0.66
Subtotal	*0.73*	*0.00*	*0.73*
At-grade Facilities			
At-Grade Segments	1.93	4.47	6.40
Parking Area	1.68	0.19	1.87
Soft Surface Trail	0.98	0.00	0.98
Boardwalk (K2)	0.03	0.00	0.03
New TTSA access	0.05	0.10	0.16
Trail Modification (near Brockway) (i.e. Future Roundabout Connection)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97
Bridge access road	0.06	0.02	0.07
Subtotal	*4.99*	*6.28*	*11.27*
Subtotal (Bridge and at-grade Facilities)	***5.72***	***6.28***	***12.00***
At-grade Options			
At-grade Segment (A3)	0.19	0.37	0.56
At-grade Segment (E1)	0.18	0.42	0.60
Total w/ A3	***5.91***	***6.65***	***12.56***
Total w/ E1	***5.90***	***6.70***	***12.60***

Notes: 1) The area of disturbance calculations for bridges include the bridge area, however, it is noted that the bridge does not have an on-ground physical impact (permanent or temporary) given that they are spans with limited piles. Abutment areas are included in the at-grade area calculations.

2) Segments D1, D2, and D3 are shown within the Parking Area.

3) Numbers may not add up due to rounding.

Source: Mark Thomas, 2019.

TABLE 3: DONNER CREEK BRIDGE ALTERNATIVE - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
Bridge Facilities			
Bridge Spans (F1) – Donner Creek and Truckee River	0.15	0.00	0.15
Bridge Span (G1)	0.05	0.00	0.05
Subtotal	*0.20*	*0.00*	*1.20*
At-grade Facilities			
At-Grade Segments	1.93	4.45	6.38
Parking Area	1.68	0.19	1.87
Soft Surface Trail	0.98	0.00	0.98
Boardwalk (K2)	0.03	0.00	0.03
New TTSA access	0.05	0.10	0.16
Trail Modification (near Brockway) (i.e. Future Roundabout Connection)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97
Bridge access road	0.07	0.01	0.08
Subtotal	*5.00*	*6.25*	*11.26*
Subtotal (Bridge and at-grade Facilities)	***5.20***	***6.25***	***11.46***
At-grade Options			
At-grade Segment (A3)	0.19	0.37	0.56
At-grade Segment (E1)	0.18	0.42	0.60
Total w/ A3	***5.39***	***6.62***	***12.02***
Total w/ E1	***5.38***	***6.67***	***12.06***

Notes: 1) The area of disturbance calculations for bridges include the bridge area, however, it is noted that the bridge does not have an on-ground physical impact (permanent or temporary) given that they are spans with limited piles. Abutment areas are included in the at-grade area calculations.

2) Segments D1, D2, and D3 are shown within the Parking Area.

3) Numbers may not add up due to rounding.

Source: Mark Thomas, 2019.

The area disturbed includes the footprint of the trail facility and an approximately 10-foot buffer on each side of the full length of the segment to account for construction equipment disturbance. In some more sensitive areas (i.e. near wetlands), the buffer is reduced to avoid and minimize impacts to the wetlands. Table 4 provides a breakdown of the estimated area of disturbance for the facilities that would be on-ground.

TABLE 4: ON-GROUND FACILITIES - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
At-Grade Segments			
A1	0.02	0.33	0.35
A2	0.03	0.06	0.08
A3	0.19	0.37	0.56
A4	0.01	0.01	0.02
A5	0.35	0.74	1.10
C1 (only for Middle Bridge Alternative)	0.03	0.06	0.09
E1 (option)	0.18	0.42	0.60
F1 (for Donner Creek or Middle Bridge Alternatives)	0.02	0.03	0.05
G1 (only for Donner Creek Bridge)	0.01	0.01	0.02
H1	0.18	0.36	0.55
K1	0.38	0.99	1.37
I1	0.23	0.47	0.70
K2 (includes sidewalks)	0.36	0.98	1.34
K3 (option)	0.09	0.16	0.25
K4	0.18	0.43	0.61
L1 (only for Middle Bridge/Donner Creek Bridge Alternative)	0.08	0.15	0.23
Bridge			
A1 (Proposed Project – West Bridge)	0.12	0.00	0.59
B1 (Middle Bridge Alternative)	0.07	0. 00	0.35
C1 (Middle Bridge Alternative)	0.66	00	3.30
F1 (Donner Creek Bridge Alternative – Donner Creek Bridge)	0.03	00	0.14
F1 (Donner Creek Bridge Alternative – Truckee River Bridge)	0.12	00	0.62
G1 (Donner Creek Bridge Alternative)	0.05	00	0.26
Boardwalks			
K2	0.03	0.00	0.03
Parking Area			
Trailhead Parking Lot	1.66	0.00	1.66
D1 (w/in parking lot)	0.00	0.03	0.03
D2 (w/in parking lot)	0.00	0.08	0.08
D3 (w/in parking lot)	0.02	0.09	0.11
Subtotal	***1.68***	***0.19***	***1.87***
Other Segments			
Soft Surface Trails (all)	0.98	0.00	0.98
West Bridge access road (under proposed project)	0.03	0.00	0.03
Middle Bridge access road (under Middle Bridge Alt.)	0.06	0.02	0.07
Donner Creek Bridge access road (Under Donner Creek Bridge Alt.)	0.07	0.01	0.08
New TTSA access road (only under Alternatives)	0.05	0.10	0.16
Trail Modification (near Brockway Rd.) (i.e. Future Roundabout Connection)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97

Notes: 1) Segments D1, D2, and D3 are shown within the Parking Area.

2) Numbers may not add up due to rounding. Source: Mark Thomas, 2019.

The trail segments were designed to minimize impacts to riparian and wetlands to the extent feasible by either avoiding through design or constructing a boardwalk or bridge that spans these areas. The boardwalk/bridge would still result in some loss of natural light on the underside of the boardwalk and vegetated areas would become largely barren. Also, the bridge would include piles to support the bridge, which will have very little impact to the wetland. As such, portions of the boardwalk/bridge areas are classified as permanent impact within this study. However, in general, although the boardwalk is expected to generate a permanent impact (due to shading and being close to grade), the bridge span would not have a permanent impact to riparian and wetlands.

The trail segments portion of the project, which excludes the bridge and boardwalk portions of the project, would include approximately 0.0073 acres of impacts to wetlands (0.0035 permanent impact and 0.0038 temporary impact). These impacts are irrespective of the bridge that is selected. The bridge and boardwalk portion of the project would include impacts that range from approximately 0.0425 to 0.0680 acres of impacts to wetlands, depending on the bridge that is selected. Therefore, the total wetland impact (inclusive of the impact to the trail segments, bridges, and boardwalk) is anticipated to range between approximately 0.0498 to 0.0753 acres. Table 5, below, provides a summary of area of impact to wetlands (by wetland type) from the trail segments (excluding bridges and boardwalk segments). Table 6 provides a summary of the area of impact to wetlands (by wetland type) from the bridge and boardwalk segments.

TABLE 5: SUMMARY OF TRAIL SEGMENT WETLAND IMPACTS (PERMANENT AND TEMPORARY) (ACRES)

Facility	*Wetland Type*			*Grand Total*
	Riparian	*Waters of the U.S.*	*Seasonal Drainage*	
Trail Segments(A5/H1)				
A5				
Paved Trail Permanent	0	0	0.0020	0.0020
Paved Trail Temporary	0	0	0.0009	0.0009
H1				
Paved Trail Permanent	0	0	0.0015	0.0015
Paved Trail Temporary	0	0	0.0029	0.0029
Permanent Subtotal	***0***	***0.0000***	***0.0035***	***0.0035***
Temporary Subtotal	***0***	***0.0000***	***0.0038***	***0.0038***
Grand Total	**0**	**0.0000**	**0.0073**	**0.0073**

Source: Mark Thomas GIS, 2019.

TABLE 6: SUMMARY OF BRIDGE & BOARDWALK WETLAND IMPACTS (PERMANENT AND TEMPORARY) (ACRES)

Facility	*Wetland Type*			*Grand Total*
	Riparian	*Waters of the U.S.*	*Seasonal Drainage*	
Proposed Project – West Bridge Alternative				
West Bridge (A1)				
A1 Bridge Permanent	0.0139	0.0181	0	0.0320
Paved Trail Permanent	0	0	0.0002	0.0002
Paved Trail Temporary	0	0	0.0005	0.0005
Access Road - A1	0	0	0.0002	0.0002
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0139***	***0.0276***	***0.0005***	***0.0420***
Temporary Subtotal	***0.0000***	***0.0000***	***0.0005***	***0.0005***
Grand Total	**0.0139**	**0.0276**	**0.001**	**0.0425**
Middle Bridge Alternative				
Middle Bridge (B1/C1)				
B1 Bridge Permanent	0.0221	0.0238	0	0.0459
C1 Bridge Permanent	0	0	0.0006	0.0006
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0221***	***0.0333***	***0.0006***	***0.0560***
Grand Total	**0.0221**	**0.0333**	**0.0006**	**0.0560**
Donner Bridge Alternative				
Donner Bridge (F1/G1)				
F1 Bridge (Donner Creek) Permanent	0.0028	0.0099	0	0.0127
F1 Bridge (Truckee River) Permanent	0.0086	0.0369	0	0.0455
G1 Bridge Permanent	0	0	0.0003	0.0003
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0114***	***0.0563***	***0.0003***	***0.0680***
Grand Total	**0.0114**	**0.0563**	**0.0003**	**0.0680**

Source: Mark Thomas GIS, 2019.

TRUCKEE RIVER LEGACY TRAIL SEGMENTS

Trail Head Parking Area: The proposed action (i.e. the proposed project, also called the "Proposed Project – West Bridge" within this Initial Study) includes a trailhead parking area, a portion of which is located on USFS land (with the remaining portion owned by Placer County). The parking area is bounded by SR 89, West River Street, Donner Creek and the upper bank of the Truckee River. The final parking area design is estimated to range between 90-100 parking spaces. A permanent rest room facility is also planned for this area. There is also the option for a small kiosk for a vendor or trail information, along with a signage and wayfinding plan to ensure users stay on the trail system and out of sensitive environmental areas. Portions of the parking area may be used for snow storage in the winter and will require adequate stormwater conveyance and treatment infrastructure.

The parking area will have a trail segment D (shown as D1-D3 in Figure 5a) located along the southern perimeter of the parking area which would function to move trail users from the parking area to the main trail. This trail segment located in the parking area would be 10-foot wide, paved with asphalt concrete, with 2-foot graded shoulders on each side. The parking lot will affect approximately 1.68 acres. The effects of constructing segments D1-D3 along the southern boundary of the parking lot

will have additional temporary impacts of approximately 0.19 acres. The USFS land affected for the parking lot is estimated to be approximately 0.59 acres (out of a total of approximately 1.87 acres).

Main Trail Segments: The proposed action includes the construction of a trail system that is approximately 1.9 miles long and generally traverses from east to west. The trails within the main trail system would be 10-foot wide, paved with either asphalt or concrete, with 2-foot graded shoulders on each side. The main trail begins near the intersection of Palisades Drive and Brockway Road where it provides connectivity to an existing trail system (i.e. Phases 1-3B of the Truckee River Legacy Trail System). Only a portion of the trail system is located on USFS land.

- **K4:** The first segment of the main trail (shown as K4 in Figure 5a) travels approximately 1200 feet to intersect with segment K2 on top of the bluff, west along Brockway Road where it connects with trail segment K2.
- **K3 (Alternative Scenario):** Segment K3 makes use of the existing Old Brockway Road and travels to the south for approximately 200 feet where it connects to segment K2. This is not considered the permanent trail location, but provides an alternative to the private property owner.
- **K2:** Segment K2 would be a new trail that extends approximately 1500 feet to the west where it connects to segment K1 just south of the existing residential homes on South River Street. Segment K2 crosses a perennial stream/seep (spring) just east of the intersection with segments K1. The crossing will be a boardwalk and will be engineered such that the water flow is maintained.
- **Soft surface Trail:** There is a soft-surface spur trail that will drop in elevation at a maximum of approximately 10% grades with switch-backs to ultimately provide connectivity to the existing dirt road/trail located in the Truckee Springs property that connects to South River Road.
- **K1:** Segment K1 traverses approximately 1700 feet to the west along the grade of an abandoned railroad grade where it gradually loses elevation before it reaches a sage flat near an existing dirt road. This segment crosses a mapped avalanche zone to avoid a steep switchback alignment.
- **I1:** Segment I1 traverses approximately 975 feet to the west along the sage flat generally following an existing dirt road. The beginning of this segment crosses a mapped avalanche zone.
- **H1:** This segment traverses approximately 800 feet to the west along the sage flat near an existing dirt road. This segment will require a crossing at three seasonal drainages. The crossings will be engineered such that the seasonal water flow is maintained. A soft surface trail connection occurs within this segment.
- **Soft Surface Trail**: This soft surface graded trail would connect the Truckee River Legacy Trail Phase 4 to Silver Fir Circle and/or Thelin Court and existing trail networks (shown as the Proposed Soft Trail in Figure 5a). Beginning at the main trail, it would follow alongside the west side of an unnamed swale, using switchbacks to gain over 250 feet in elevation to Silver Fir Drive.

- **A5:** Segment A5 generally follows existing dirt roads to the west for approximately 1550 feet along the base of the talus slope where it intersects with two trail segment variations (segments A3 and E1), as well as the first river crossing segment (Donner Creek Bridge crossing alternative).
- **L1 (Alternative Scenario):** Segment L1 would be built to access the Donner Creek Bridge or the Middle Bridge crossing alternative. This may also be an option to crossing the floodplain bypass area. This option is less environmentally impactful than the preferred alternative due to using portions of an existing dirt road located above the floodplain. However, in this scenario the trail traverses the only buildable area on the underlying private property and bifurcates the property. This segment would cutoff of the A5 segment and traverse to the west along the top of the 'island' in the floodplain.
- **A4**: Segment A4 is a short segment that connects Segment A5 to A3. Under the Donner Creek Bridge Alternative, this segment would also act as the terminus for optional segment G1.
- **G1 (Alternative Scenario)**: Segment G1 is an optional bridge connector segment that would only be developed under the Donner Creek Bridge Alternative. Segment G1 is one option that would connect Segment F1 (a section containing bridges over the Truckee River and Donner Creek) to the main trail.
- **F1 (Alternative Scenario)**: Segment F1 is a bridge segment that would only be developed under the Donner Creek Bridge Alternative. It would contain two bridges – one over the Truckee River and a prefabricated bridge over Donner Creek. It would connect either to segment G1 or segment L1 on its eastern end, and the parking area (at segment D3) on its western end.
- **A3:** Segment A3 traverses approximately 800 feet to the west on the base of the talus slope on a more northern route.
- **E1 (Alternative Scenario):** Segment E1 traverses approximately 850 feet to the west on the base of the talus slope on a more southern route. This would replace Segment A3
- **A2:** At the western end of segment variations A3 and E1 is a connection with segment A2. Segment A2 traverses to the west for approximately 250 feet along the base of the talus slope where it intersects with segment A1, as well as the second river crossing segment (the Middle Bridge crossing alternative).
- **C1 (Alternative Scenario):** Segment C1 would develop a bridge crossing connecting segment that would only be developed under the Middle Bridge Alternative. It would connect to Segment B1 (Optional), which would cross the Truckee River before crossing into the trailhead parking area.
- **B1 (Alternative Scenario):** Segment B1 would only be developed under the Middle Bridge Alternative. It would develop a bridge crossing over the Truckee River that would connect to the trailhead parking area.
- **A1:** Segment A1 traverses approximately 700 feet to the west where it intersects with the third river crossing segment (West Bridge). Each of the river crossing segments connect to segment D, which provides direct access to the trailhead parking lot.

- **D1, D2, D3:** Segment D connects to the existing Mousehole Project 10-foot wide multi-use path, which would ultimately provide direct bicycle and pedestrian access to planned Phase 5 of the Truckee River Legacy Trail System. Segment D1 would connect to the West Bridge crossing alternative; segments D1 and D2 would connect to the Middle Bridge crossing alternative; and segments D1, D2, and D3 would connect to the Donner Creek Bridge crossing alternative. Additionally, in the case that the Donner Creek bridge crossing alternative is selected as the bridge alternative, a pre-manufactured bridge over Donner Creek would be constructed to connect segment D1 to the proposed Donner Creek bridge crossing.

The trail system will include wayfinding and educational signage to ensure users stay on the trail system and out of sensitive environmental areas. This new trail would be constructed using sustainable construction techniques and would utilize grade reversals and rolling dips to minimize erosion and long-term trail degradation. Full bench construction will be minimized. The trail segments would be placed out of the drainage and wetland areas that have been mapped within the APE. Trail construction would follow guidelines and protocols described in detail in the complete set of National Quality Standards for Trails (Forest Service Handbook 2353.15).

River Crossing Segment Alternatives: The proposed action includes the construction of a river crossing. Three bridge locations (the West, Middle, and Donner Creek bridge crossings) (see Appendix A for each bridge crossing alternative's Plan/Profile) were evaluated and the West Bridge location is the preferred alternative. It is noted that all three bridge crossing alternatives span the Truckee River with very limited piles to support the structure. The actual area physically disturbed is much less than the bridge area calculation. In addition to the preferred alternative (West Bridge), there is a Middle Bridge crossing alternative, a portion of which is located on USFS land, and third alternative (Donner Creek Bridge) crossing, which is not on USFS land.

The West Bridge crossing alternative has abutments on the north side of the river and on the south side of the river outside of the floodplain. The Middle bridge crossing alternative has abutments on a high spot (island) above the Truckee River floodplain on the south side of the river and has abutments on the north side of the river (outside of the floodplain). This design was specifically tailored to avoid and minimize adverse effects to biological resources and water quality.

The bridge crossing for each of the alternatives would be 12-foot wide between railings. Trail segments along the river crossings would have grades of 5% or less. The bridge crossing alignments may have pop-outs that jut over the river to allow fishing and standing outside of the travel corridor. The aesthetics of the bridge crossings would be developing during final design and would be appropriate for the visual context of the corridor and in accordance with the guidelines in the U.S. Department of Agriculture (USDA) Built Environment Image Guide. The potential aesthetic considerations would include railings, truss configuration/type, railing finishes, and considerations of railing height. Finishes would be earth tones, non-shiny, and durable, which would blend with the surrounding environment.

The river crossing segments connect to the main trail segment to the south along the base of the talus hillside. The main trail segment generally traverses east to west along the base of the talus

hillside and in the sage and eastside pine flats. Graded access roads for utility access to the existing dirt road will be required across the trail alignment.

The Middle bridge crossing alternative has abutments on a high spot (island) above the Truckee River floodplain on the south side of the river and has abutments on the north side of the river (outside of the floodplain). The Middle bridge crossing alternative has a second bridge to cross the floodplain/riparian area that is separated by an island from the main channel of the Truckee River. The West Bridge crossing alternative has abutments on the north side of the river and on the south side of the river outside of the floodplain.

The bridges would be constructed on concrete footings excavated into native soil and depth would be determined based on scour equations and/or bedrock depth. The proposed locations were determined using the narrowest channel locations found onsite where the bridge will span the Truckee River and floodplain area with limited piles to support the structure. The West Bridge and Middle Bridge alternatives provide the best trail alignments, requiring the least of out-of-way travel for Placer County trail users that need to cross the bridge.

Construction Equipment Access Route. Equipment used to construct the bridge, trail segments, and parking area, as well as to implement the restorative actions would use the equipment access routes. Most equipment access routes are confined to a 30-foot swath of land that will contain the 10-foot paved trail with 2-foot wide shoulders (14 feet wide total) and 10 feet buffered on both sides of the paved trail as a temporary impact area. In addition, there are existing dirt roads through the area that will be used for equipment access. The 10 feet on both sides of the equipment access routes act as a temporary impact area (20 feet of temporary impact area) that would be rehabilitated to their desired condition after construction is completed following the requirements of the resource protection measures, and per the complete set of National Quality Standards for Trails (Forest Service Handbook 2353.15).

In addition, construction access or staging areas outside of the trail footprint may also be required. This would take the form of expanded disturbance areas near bridges and bridge piers, and room for large construction equipment such as cranes. As shown in Figure 5b, a truck turn-around area of approximately 0.02 acres is assumed to be located along A1, outside of any riparian or wetland areas. In addition, as also shown in Figure 5b, a potential staging area for construction vehicles/equipment was assumed to be located adjacent to trail segment K4 (approximately 0.97 acres in size). The impact analysis throughout this Initial Study/Mitigated Negative Declaration takes into account the truck turn-around area and the potential staging area, as well as all other temporary impact areas.

The temporary impact area would be rehabilitated by sub-soiling, removing temporary berms and re-contouring where overland flows can be reestablished. Other drainage would be provided as needed, and disturbed areas would be mulched. Native seed would be used as needed to aid in quick re-vegetation of the disturbed areas and to control erosion. Certain areas could be covered with weed-free certified natural material as needed such as pine needles, mulch, slash and debris to prevent erosion and to cover the former area no deeper than 4-inches of depth. The area two feet off of the pavement on either side of the trail will be decomposed granite. Where construction

equipment crosses the sewer line, metal plates or temporary bridges will be used. Construction staging and storage will be limited to previously disturbed areas and will be restored at the completion of the project.

User Management/Education/Wayfinding: The trail will have indirect permanent impacts on aquatic resources, riparian habitat, water quality, etc. because the trail (and more particularly the parking lot) will draw more users to the site for boat launch, swimming, and picnicking activities. It is expected that there will be high use of the trail (similar to the use at the East River Street bridge, which increased when the parking lot was improved). To minimize use and disturbance to sensitive areas in proximity to the parking lot and trail system, the Town would install railings and signs along the parking lot edge closest to the river to keep people out of the riparian areas, and provide wayfinding signage that directs users to the river access area on Town of Truckee property to the east of Donner Creek. The parking lot railings will connect to the bridge railings. This is intended to prevent people from accessing the river area near the parking lot. The parking lot will also include trash containers, pet waste stations, and a restroom facility.

The Town will provide a river access point on the Town property located just east of Donner Creek and the trailhead parking lot. The Town would install a 10-foot wide paved road shoulder on the east side of the West River Street Bridge to accommodate parallel parking spaces at the river access point. This would accommodate 4 to 5 parallel spaces directly adjacent to the river access area located on Town land. Amenities at the river access may include picnic tables, benches, trash cans, pet waste stations, and signage.

Small informational signs will be erected at strategic locations along the trail, parking lot, and river access to facilitate use of the trail and discourage use in sensitive environmental areas.

SOFT SURFACE GRADED TRAILS

The proposed project includes a soft-surface spur trail, located north of (and connecting to) segment K1 that will drop in elevation at a maximum of approximately 10% grade with switch-backs to ultimately provide connectivity to the existing dirt road/trail located in the Truckee Springs property that connects to South River Road. In addition, a separate soft surface graded trail would connect the Truckee River Legacy Trail Phase 4 to Silver Fir Circle and/or Thelin Court and existing trail networks, including the Sawtooth trail system. This graded trail would be a minimum of 4-feet wide and slopes would have a maximum grade of 10%. The soft surface graded trail locations shown are approximate and will be field fit and approved by the underlying property owner prior to construction. The permanent impact width of this trail would be approximately 10-feet, to accommodate grading. Beginning at the main trail, it would follow alongside the west side of an unnamed swale, using switchbacks to gain over 250 feet in elevation to Silver Fir Drive. One option is to remain on the west side of the swale and connect to Silver Fir Circle. A second option is to cross this swale, either at grade or on a drainage structure approximately 400 feet south of Silver Fir Circle, and connect to Thelin Court. A separate segment of the existing soft surface trail may be re-routed to provide more privacy to nearby property owners. This connects to an existing dirt trail system and the proposed Hilltop Master Plan Area.

NEARBY MASTER PLAN AREAS

Portions of the northeastern section of the trail planning area would overlap with the Hilltop Master Plan area and the Truckee Springs Master Plan area. The Hilltop Master Plan area extends to the south of the northeastern portion of the trail planning area. The Hilltop Master Plan directly accommodates the proposed project along the frontage of the Hilltop Master Plan area. The proposed Truckee Springs Master Plan area is located to the northwest of the Hilltop Master Plan area, also in the eastern portion of the trail planning area. The proposed Truckee Springs Master Plan is not adopted yet and is therefore subject to change. The trail has been designed to avoid potential buildable areas in the Truckee Springs and Hilltop Master Plan area. A future modification to the trail alignment in the northeast corner of the trail planning area, near segment K4 and (optional) segment K3, would accommodate a roundabout planned for Brockway Road, as provided by the Hilltop Master Plan (shown as Roundabout in Figure 5a).

FUTURE TRAILS

The Truckee River Legacy Trail Phase 4 could serve as a hub or intersection, given that it will include parking. Placer County proposes a trail connection between Squaw Valley and the Legacy Trail Phase 4 bridge. However, the Truckee River Legacy Trail Phase 4 has independent utility, and is not dependent on any future potential trail connections. In addition, past proposals made by the Truckee Springs development have included additional on-site trails. These are not included within the current project but have been considered within the alignments to ensure connectivity.

MAINTENANCE ACTIVITIES

As described by the 2015 update to the *Truckee Trails and Bikeways Master Plan*, the proposed project would require maintenance strategies (and the Truckee River Legacy Trail system as a whole). In June 2014, Truckee residents voted in favor of Measure R, a sales tax increase dedicated specifically to dirt and paved trails construction and maintenance. On October 14, 2014, the Town Council adopted a proposal to use a portion of Measure R funds for winter maintenance of paved trails. The portions of the proposed project located within Truckee would be eligible for these funds. Areas of the trail in Placer County will be maintained by Placer County or established through an agreement between Placer County, the Town of Truckee and the USFS for maintenance responsibilities.

AGENCIES WHOSE APPROVAL MAY BE REQUIRED

- Placer County will be a Responsible Agency for the portion of the trail within their jurisdiction. The County Board of Supervisors will utilize this CEQA document for their discretionary approvals including adoption of the MMRP and subsequent Operations and Maintenance agreements.
- California Department of Fish and Game
- California Department of Transportation (Caltrans)
- Northern Sierra Air Quality Management District (NSAQMD)
- Regional Water Quality Control Board, Lahontan Region

- Tahoe-Truckee Sanitation Agency
- Truckee-Donner Public Utilities District
- U.S. Department of Interior, Fish & Wildlife Service
- U.S. Army Corps of Engineers
- U.S. Forest Service

5. METHODS

The Delineation of Jurisdictional Waters and Wetlands that is reported in this document was conducted in accordance with regulations set forth in 33 Code of Federal Regulations (CFR) Part 328 and the USACE guidance documents referenced below:

- USACE Wetlands Research Program Technical Report Y-87-1, Wetlands Delineation Manual, Environmental Laboratory, 1987 (Wetland Manual).
- USFWS Classification of Wetlands and Deepwater Habitats of the United States, Lexis M. Cowardin, U.S. Department of Interior, Fish and Wildlife Service, FWS/OBS-79/31, December 1979, updated 1992 (Cowardin).
- USACE Jurisdictional Determination Form Instruction Guidebook, 2007.
- USACE Minimum Standards for Acceptance of Preliminary Wetlands Delineations, November 30, 2001 (Minimum Standards).
- USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)
- USACE Wetland Determination Data Form – Western Mountains, Valleys, and Coast Region

PRE-FIELD INVESTIGATION

Prior to the field investigation several maps were reviewed to identify drainage features within the project site, as indicated from topographic changes or visible drainage patterns. The maps include the Truckee, California, U.S. Geological Survey (USGS) 7.5-minute Quadrangle, USGS National Hydrography Data Set, Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, National Resource Conservation Service (NRCS) Soil Survey, and aerial photos. Additionally, the NRCS Soil Survey was reviewed to identify all soil series that occur within the project site.

FIELD INVESTIGATION

Additional field investigations were performed in the APE by Steve McMurtry on July 27 and 28, 2016, September 23, 2016, and June 16, 2017. Tools used included a Trimble GeoExplorer XH Handheld (sub-foot unit), 30-meter tape measure, diameter tape, spade, Dutch auger, Munsell color chart, alph-alpha dipridil solution, muriatic acid, wetland flagging, and digital camera. All features were mapped using the sub-foot Trimble GPS unit plotted onto an orthographically corrected aerial photograph using ArcGIS. Additionally, an ACAD file with a recent topo survey was plotted on the aerial photos.

All surveys were conducted on foot. Potential jurisdictional features were systematically inspected over two seasons to record existing conditions and to determine the jurisdictional limits. The project

site was assessed carefully for surface flow indicators (presence of hydrophytic vegetation, staining, cracked soil, ponding, etc.). The apparent flow regimes and corresponding hydrogeomorphic features were subsequently identified. The 2017 field survey represented a non-drought year and revealed larger seasonal wetlands then were observable in the 2016 drought year. In non-wetland jurisdictional areas, the lateral extent of USACE jurisdiction was measured at the OHWM. Where appropriate, multiple measurements were recorded at various representative locations along the length of the feature.

Potential wetland areas were assessed to the outer reach of the applicable (hydrophytic) vegetative community or (where vegetation was absent/disturbed) to the natural topographical rim of the depressional feature (whichever was greater). Features previously indicated on aerial photographs (dark/saturated areas, associated riparian vegetation, etc.) were field verified during the site visit. Plant species for each vegetative community were identified and given an indicator status as prescribed in the "National List of Plant Species That Occur in Wetlands: 1988 National Summary" (Reed 1988). All data collected were recorded on wetland data forms and evaluated using the USACE wetland data forms.

Width and length measurements were recorded using a subfoot Trimble GPS unit. The GPS data was downloaded into ArcGIS software to precisely identify the location and dimensions of jurisdictional areas. The ArcGIS application was then used to compute federal and state jurisdiction in acres. The acreage computations were plotted against the ortho photo.

6. EXISTING CONDITIONS

LANDSCAPE SETTING

REGIONAL SETTING

The APE is located within the Sierra Bioregion and is surrounded by six different bioregions: Sacramento Valley, San Joaquin Valley, and Bay/Delta to the west, Modoc to the north, Mojave to the south, and the Central Basin and Range in Nevada to the east.

The Sierra Bioregion is a vast and rugged mountainous area extending approximately 380 miles along California's eastern side and largely contiguous with Nevada. Its east face is a high, rugged multiple scarp, contrasting with the gentle western slope (about 2°) that disappears under sediments of the Great Valley. Deep river canyons are cut into the western slope. Their upper courses, especially in massive granites of the higher Sierra, are modified by glacial sculpturing, forming such scenic features as Yosemite Valley. The high crest culminates in Mt. Whitney with an elevation of 14,495 feet above sea level near the eastern scarp. The metamorphic bedrock contains gold bearing veins in the northwest trending Mother Lode. The northern Sierra boundary is marked where bedrock disappears under the Cenozoic volcanic cover of the Cascade Range.

Named for the Sierra Nevada mountain range it encompasses, the Sierra Bioregion includes forests, lakes, and rivers that generate much of the state's water supply. It shares Lake Tahoe with Nevada and features eight national forests, three national parks -- Yosemite, Kings Canyon and Sequoia --

numerous state parks, historical sites, wilderness, special recreation and national scenic areas, and mountain peaks.

Due to the relatively high elevations and its orientation in the Sierra Nevada mountain range, temperatures range from cool and moderate in the summer to repetitively below freezing in the winter. Precipitation in Truckee occurs as rainfall in the summer months and as a combination of rainfall and snowfall in the winter months. The majority of precipitation comes in the form of snowfall, which occurs in the winter months, with some rainfall in the spring. Average minimum temperature is 14.5 °F (January), while the average maximum temperature is 81.6 °F (July). Average annual precipitation is approximately 37 inches.

LOCAL SETTING

Most of the project area is composed of Great Basin sagebrush scrub, with some forested, riparian, and wetland areas. Jeffery pine *(Pinus jefferyi)* is the dominant tree in forested habitats, while brushy areas support mountain big sagebrush *(Artemisia tridentata vaseyana),* antelope bitterbrush *(Purshia tridentata), and* yellow rabbitbrush (*Crysothamnus viscidiflorus*). Within the APE, black cottonwood *(Populus angustifolia)* trees border portions of the Truckee River. Aspens *(Populus tremuloides)* occur along the base of steep rocky slopes that form the southern border of the APE. The APE includes channels that may convey snowmelt during the spring melt. A large meadow area supporting willows *(Salix* sp.) and Nebraska sedge *(Carex nebrascensis)* was found in the central portion of the APE. Low areas that appeared to have been wetted earlier in the season were found south of a dirt road that traverses the western part of the APE. Flow on a slope in the eastern end of the APE supplied a large stand of willow, twinberry *(Lonicera involucrata)* and red-osier dogwood *(Cornus stolonifera).*

CALIFORNIA WILDLIFE HABITAT RELATIONSHIP SYSTEM

The California Wildlife Habitat Relationships (CWHR) is an information system for California's wildlife. CWHR contains life history, geographic range, habitat relationships, and management information on 694 species of amphibians, reptiles, birds, and mammals known to occur in the state. CWHR products are available to anyone interested in understanding, conserving, and managing California's wildlife. The CWHR habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly-occurring birds, mammals, reptiles and amphibians. There are 59 wildlife habitats in the CWHR System: 27 tree, 12 shrub, 6 herbaceous, 4 aquatic, 8 agricultural, 1 developed, and 1 non-vegetated. There are six wildlife habitat classifications within the APE out of 59 found in the state. The habitat classifications include: Barren, Eastside Pine, Sagebrush, Riverine, Montane Riparian, and Urban.

Habitat Descriptions

Barren habitat is defined by the absence of vegetation. It can be found with many different habitats, depending on the region of the state.

Eastside pine habitat occurs from about 4,000 to 6,500 feet elevation from Lake Tahoe north to Oregon, with small scattered stands that occur south to Inyo County. It is found on coarse, well-

drained basaltic soils, in a drier, and colder setting, with all exposures represented. Stands are short to moderate height, 65 to 115 feet tall, with ponderosa pine being the dominant tree and some representation by Jeffrey pine, lodgepole pine, white fir, incense-cedar, Douglas-fir, California black oak and western juniper. Undergrowth typically includes one or more of the following shrubs: big sagebrush, antelope bitterbrush, manzanita, ceanothus, rubber rabbitbrush, mountain mahogany, creambush oceanspray and mountain snowberry. Prominent herbaceous plants include mule ears, arrowleaf balsamroot, Idaho fescue, pinegrass, bluebunch wheatgrass and bottlebrush squirreltail.

Sagebrush occurs at a wide range of middle and high elevations (1600 to 10,500 feet) along the east and northeast borders of California on dry slopes and flats. At lower elevations and on drier sites, species such as saltbrush, greasewood, creosotebush, and winterfat are found. At mid-elevations and on more mesic (wet) sites, species such as bitterbrush, curlleaf mountain mahogany, and western serviceberry are found. At high elevations this habitat intergrades with Ponderosa Pine and Aspen habitat types. Sagebrush stands are typically large, open, discontinuous stands of fairly uniform height (1.6 to 9.8 feet). Plant density ranges from very open, widely spaced, small plants to large, closely spaced plants with canopies touching.

Montane riparian habitats are found in the Klamath, Coast and Cascade ranges and in the Sierra Nevada south to about Kern and northern Santa Barbara Counties, usually below 8000 feet elevation. Riparian areas are found associated with montane lakes, ponds, seeps, bogs and meadows as well as rivers, streams and springs. Water may be permanent or ephemeral. The growing season extends from spring until late fall, becoming shorter at higher elevations. Most tree species flower in early spring before leafing out.

Riverine habitats can occur in association with many terrestrial habitats. Riparian habitats are found adjacent to many rivers and streams. Riverine habitats are also found contiguous to lacustrine and fresh emergent wetland habitats. Streams begin as outlets of ponds or lakes (lacustrine) or rise from spring or seepage areas. All streams at some time experience very low flow and nearly dry up. Some streams, except for occasional pools, dry up seasonally every year. The temperature of the riverine habitat is not constant. In general, small, shallow streams tend to follow, but lag behind air temperatures, warming and cooling with the seasons. Rivers and streams with large areas exposed to direct sunlight are warmer than those shaded by trees, shrubs and high, steep banks. The constant swirling and churning of high-velocity water over riffles and falls result in greater contact with the atmosphere-and thus have a high oxygen content. In polluted waters, deep holes or low velocity flows, dissolved oxygen is lower (Smith 1974). Rivers and streams occur statewide, mostly between sea level and 8000 feet elevation.

Urban habitats are not limited to any particular physical setting. Three urban categories relevant to wildlife are distinguished: downtown, urban residential, and suburbia. The heavily-developed downtown is usually at the center, followed by concentric zones of urban residential and suburbs. There is a progression outward of decreasing development and increasing vegetative cover. Species richness and diversity is extremely low in the inner cover. The structure of urban vegetation varies, with five types of vegetative structure defined: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. A distinguishing feature of the urban wildlife habitat is the mixture of native and exotic species.

AQUATIC RESOURCES

Overview

The APE has three types of jurisdictional areas that were delineated: Navigable waters, riparian, and wetland. The appendix includes an index figure of the jurisdictional features within the APE, as well as individual figures at a smaller scale view of the APE with the jurisdictional features.

RIVERINE

Riverine, Upper Perennial, Rock Bottom – R3RB: The Truckee River borders most the APE on the north side. In some places, the entirety of the Truckee River is within the APE boundary, and in other areas it is all, or mostly, outside the APE boundary. The Truckee River is an interstate water and both the river and its tributaries, as well as adjacent wetlands in the APE, would be considered jurisdictional waters by the USACE. Within the APE, the Truckee River averages 80 feet wide and can be broken up into eight areas (Water IDs) totaling 6.98 acres and approximately 7,313 linear feet. Near the west end of the APE is the confluence of Donner Creek and Truckee River. The Donner Creek channel in this area average 36 feet wide. The water from the Truckee River is derived primarily from snow during the winter season, which is generally October through April. The Truckee River originates at the outlet of Lake Tahoe and flows approximately 110 miles to Pyramid Lake. The Truckee River is a designated "Traditional Navigable Water" (TNW).

There is also one perennial drainage totaling 0.55 acres and 692 linear feet located within the APE. This drainage originates as a seep and flows along the eastern boundary in a south to north direction where it connects to the Truckee River.

Riverine, Intermittent, Streambed - R4SB: There are nine seasonal drainages totaling 0.18 acres and 5,080 linear feet located within the APE. These drainages are generally rocky features that hold intermittent flows during the snow melt. The drainages on the far western end of the site function as a snow melt seasonal drainage and has limited bed characteristics.

Riverine, Ephemeral – R6: There are six seasonal wetlands totaling 2.23 acres located within the APE. Most these wetlands are dominated by Nebraska sedge (*Carex nebrascensis*) and are mostly within the 100-year flood plain or associated with the winter melt.

RIPARIAN

Riparian, lotic, forested - RP1FO: The Truckee River, which borders most the APE on the north side, has riparian area that transitions the mesic environmental along the river into the more xeric environment in the upland sage and bitter brush areas. The riparian areas have a variety of obligate and facultative plants including: mountain alder (Alnus incana ssp, tenuifolia), black cottonwood (*Populus balsamifera ssp. trichocalpa*), willows (*Salix* sp.), Nebraska sedge (*Carex nebrascensis*), and wooly sedge (*Carex lanuginose*). Within the APE, the delineation broke the riparian areas into six areas (Water IDs) totaling 7.05 acres.

Summary

Table 7 provides a summary of delineated features present within the APE. A jurisdictional map is provided in the Appendix.

TABLE 7: SUMMARY OF DELINEATED FEATURES

Aquatic Resource Name	Aquatic Resources Classification		Size (Acre)	Size (linear feet)
	Cowardin	Location (lat/long)		
Waters of the U.S.				
Truckee River – 1	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3149, -120.2020	5.34	2,782
Truckee River - 2	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3192, -120.1960	0.32	1,715
Truckee River - 3	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3209, -120.1930	0.07	667
Truckee River – 4	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3217, -120.1920	0.04	234
Truckee River – 5	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3226, -120.1910	0.04	389
Truckee River – 6	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3237, -120.1910	0.09	351
Truckee River – 7	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3252, -120.1880	1.04	1,045
Truckee River – 8	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3257, -120.1860	0.03	130
TOTAL			**6.98**	**7,313**
Perennial Drainage				
Perennial Drainage - 9	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3246, -120.1850	0.55	692
TOTAL			**0.55**	**692**
Seasonal Drainage				
Seasonal Drainage – 10	R4SB – Riverine, Intermittent, Streambed	39.3141, -120.2014	0.02	802
Seasonal Drainage – 11	R4SB – Riverine, Intermittent, Streambed	39.3156, -120.1996	0.03	1,356
Seasonal Drainage – 12	R4SB – Riverine, Intermittent, Streambed	39.3174, -120.1975	0.00	69
Seasonal Drainage – 13	R4SB – Riverine, Intermittent, Streambed	39.3178, -120.1969	0.00	151
Seasonal Drainage – 14	R4SB – Riverine, Intermittent, Streambed	39.3190, -120.1947	0.01	167
Seasonal Drainage – 15	R4SB – Riverine, Intermittent, Streambed	39.3181, -120.1918	0.09	1,851
Seasonal Drainage – 16	R4SB – Riverine, Intermittent, Streambed	39.3198, -120.1933	0.01	281
Seasonal Drainage – 17	R4SB – Riverine, Intermittent, Streambed	39.3200, -120.1929	0.02	336
Seasonal Drainage – 18	R4SB – Riverine, Intermittent, Streambed	39.3215, -120.1909	0.00	66
TOTAL			**0.18**	**5,080**
Seasonal Wetlands				
Seasonal Wetland – A	R6 – Riverine, Ephemeral	39.3158, -120.1990	0.13	--
Seasonal Wetland – B	R6 – Riverine, Ephemeral	39.3196, -120.1930	0.95	--
Seasonal Wetland – C	R6 – Riverine, Ephemeral	39.3243, -120.1910	0.01	--
Seasonal Wetland – D	R6 – Riverine, Ephemeral	39.3249, -120.1890	0.32	--
Seasonal Wetland – E	R6 – Riverine, Ephemeral	39.3245, -120.1870	0.09	--
Seasonal Wetland – F	R6 – Riverine, Ephemeral	39.3247, -120.1860	0.73	--
TOTAL			**2.23**	
Riparian				
Riparian– G	RP1FO – Riparian, lotic, forested	39.3146, -120.2030	1.39	--
Riparian– H	RP1FO – Riparian, lotic, forested	39.3163, -120.2000	2.99	--
Riparian– I	RP1FO – Riparian, lotic, forested	39.3206, -120.1930	1.28	--

Riparian– J	RP1FO – Riparian, lotic, forested	39.3247, -120.1900	1.26	--
Riparian– K	RP1FO – Riparian, lotic, forested	39.3256, -120.1870	0.11	--
Riparian– L	RP1FO – Riparian, lotic, forested	39.3257, -120.1860	0.02	--
TOTAL			**7.05**	

SOURCE: PLACER COUNTY GIS; TOWN OF TRUCKEE; ARCGIS ONLINE AERIAL IMAGERY SERVICE.

Soils

The USDA/NRCS Web Soil Survey indicates the presence of four soil series occurring within the project site presented below. Soil resources identified in the APE include the following soil types, as shown in Figure 6:

- EWB- Inville-Riverwash-Aquolls complex (2-5% slopes)
- Aquolls and Borolls (0-5% slopes)
- FUE - Kyburz-Trojan complex (9-30% slopes)
- SUG - Rubble land-Rock outcrop complex
- MEB - Martis-Euer variant complex (2-30% slopes)
- SIE - Sierraville-Trojan-Kyburz complex (2-30% slopes)

Of the soils listed above, the soil pits were dug within the EWB soils, which is defined below in more detail.

EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes. The Inville-Riverwash-Aquolls complex is found between 5,500 and 6,300 feet msl. Typical vegetation on this complex includes sagebrush, bitterbrush and meadow-willow communities. Inville soils make up about 55 percent of the unit and Riverwash materials (stony, cobbly, gravelly fluvial material) make up 20 percent of the unit, located along streams and waterways. Aquolls make up about 15 percent of the unit. Inville soils are well drained and have a moderate erosion hazard. Aquolls soils are very poorly drained and have a severe erosion hazard. The EWB complex is the principal soil unit within the survey area.

Hydrology

The APE is located within the southern portion of the Town of Truckee, located within the Sierra Nevada Mountains of California. The APE is found within the watershed of the Truckee River. A nearby segment of the Truckee River flows east along an alignment that is approximately adjacent to the north of the APE. The Truckee River is the sole outlet of Lake Tahoe and flows generally northeast to Truckee, then turns sharply to the east and flows down the mountain slope into Nevada, through Reno and Sparks, and along the northern end of the Virginia Range. At Fernley it turns north, flowing along the east side of the Pah Rah Range and ultimately emptying into the southern end of Pyramid Lake. The Truckee River is approximately 105 miles in length as it extends downstream between its origin (outlet) at Lake Tahoe and its terminal discharge into Pyramid Lake. The Truckee River Watershed is a closed system, having Pyramid Lake as its point of terminal discharge, and it does not have a natural outlet.

The overall watershed area for the Truckee River at its outfall at Pyramid Lake is about 3,115 square miles. Roughly 25% of the overall watershed is found in California and includes the higher elevations

within the watershed. The middle and lower elevations of the watershed reside in Nevada and represent about 75% of the overall watershed area. The U.S. Geological Survey has subdivided the Truckee River Watershed into three (3) primary sub-basins (or regions with separate Hydrologic Unit Codes). These primary sub-basins are referred to as the Lake Tahoe sub-basin, the Middle Truckee River sub-basin, and the Pyramid-Winnemucca Lake sub-basin. The APE lies within the Middle Truckee River sub-basin, within the Trout Creek-Truckee River and Squaw Creek-Truckee River sub-watersheds (Figure 7).

Major tributaries to the Truckee River include the Little Truckee River, Martis Creek, Donner Creek and Prosser Creek in California and Hunter Creek, Steamboat Creek and the North Truckee Drain in Nevada. Watershed elevations range from about 9,000 feet at mountain peaks, to about 5,700 feet in the Truckee River valley north of the APE, to about 4,500 feet at Reno and about 3,800 feet at Pyramid Lake. Additionally, rainfall within the APE generally drains into the Truckee River.

This perennial drainage on the eastern end of the APE originates as a seep and flows in a south to north direction where it connects to the Truckee River. This perennial drainage supports an artificially created ponded area (historical ice pond) from water flowing through a pipe. In September of 2016 the pond area was dry, while the perennial drainage was still flowing, therefore, the pond area is considered a seasonal wetland.

The seasonal drainages were dry during the June, July, and September 2016 field surveys. These rocky features show evidence of intermittent flows, which is anticipated to be strictly during the spring snow melt and/or periods of heavy precipitation. The site was revisited in June 2017. Seasonal drainages that were not apparent during the 2016 surveys, were noted in 2017 after a historically wet winter season.

The seasonal wetlands are associated with the seasonal drainages. These areas receive water from snowmelt during the spring, and are dry throughout the remainder of the year.

Vegetation

Most of the APE is composed of Great Basin sagebrush scrub, with some forested, riparian, and wetland areas. Jeffery pine *(Pinus jefferyi)* is the dominant tree in forested habitats, while brushy areas support mountain big sagebrush *(Artemisia tridentata vaseyana),* antelope bitterbrush *(Purshia tridentata), and* yellow rabbitbrush (*Crysothamnus viscidiflorus*). Within the APE, black cottonwood *(Populus angustifolia)* trees border portions of the Truckee River. Aspens *(Populus tremuloides)* occur along the base of steep rocky slopes that form the southern border of the APE. The APE includes channels that may convey snowmelt during the spring melt. A large meadow area supporting willows *(Salix* sp.) and Nebraska sedge *(Carex nebrascensis)* was found in the central portion of the APE. Low areas that appeared to have been wetted earlier in the season were found south of a dirt road that traverses the western part of the APE. Flow on a slope in the eastern end of the APE supplied a large stand of willow, twinberry *(Lonicera involucrata)* and red-osier dogwood *(Cornus stolonifera).*

Interstate Commerce

The Truckee River is used primarily for recreational uses (fishing and kayaking), as well as water supply. There is no use by interstate or foreign travelers, sale of fish or shellfish in interstate or foreign commerce, or use by industries operating in interstate or foreign commerce.

7. IMPACT ANALYSIS

AREA OF DISTURBANCE

Construction of the proposed project would impact between approximately 11.4 and 12.6 acres, depending on the exact alignment and bridge that is constructed. This would include between approximately 5.0 and 5.9 acres of permanent impact and between 6.6 and 6.7 acres of temporary disturbance, as provided in Tables 8 through 10 (note: depending on the alternative selected). These areas of disturbance were estimated based on the alignments developed by the proposed project engineer (Mark Thomas, 2019). The following tables (Tables 8 through 10) provide a breakdown of the estimated area of disturbance associated with the proposed project (i.e. "Proposed Project – West Bridge) and the two alternatives (i.e. the Middle Bridge Alternative and the Donner Creek Bridge Alternative), respectively.

TABLE 8: PROPOSED PROJECT - WEST BRIDGE - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
Bridge Facilities			
Bridge Span (A1)	0.12	0.00	0.12
Subtotal	***0.12***	***0.00***	***0.12***
At-grade Facilities			
At-Grade Segments	1.92	4.74	6.66
Parking Area	1.68	0.19	1.87
Soft Surface Trail	0.98	0.00	0.98
Boardwalk (K2)	0.03	0.00	0.03
Trail Modification (near Brockway) (i.e. Future Roundabout)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97
Subtotal	***4.87***	***6.43***	***11.30***
Total	***4.99***	***6.55***	***11.42***

Notes: 1) The area of disturbance calculations for bridges include the bridge area, however, it is noted that the bridge does not have an on-ground physical impact (permanent or temporary) given that they are spans with limited piles. Abutment areas are included in the at-grade area calculations.

2) Segments D1, D2, and D3 are shown within the Parking Area.

3) Numbers may not add up due to rounding.

Source: Mark Thomas, 2019.

TABLE 9: MIDDLE BRIDGE ALTERNATIVE - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
Bridge Facilities			
Bridge Span (B1)	0.07	0.00	0.07
Bridge Span (C1)	0.66	0.00	0.66
Subtotal	*0.73*	*0.00*	*0.73*
At-grade Facilities			
At-Grade Segments	1.93	4.47	6.40
Parking Area	1.68	0.19	1.87
Soft Surface Trail	0.98	0.00	0.98
Boardwalk (K2)	0.03	0.00	0.03
New TTSA access	0.05	0.10	0.16
Trail Modification (near Brockway) (i.e. Future Roundabout Connection)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97
Bridge access road	0.06	0.02	0.07
Subtotal	*4.99*	*6.28*	*11.27*
Subtotal (Bridge and at-grade Facilities)	***5.72***	***6.28***	***12.00***
At-grade Options			
At-grade Segment (A3)	0.19	0.37	0.56
At-grade Segment (E1)	0.18	0.42	0.60
Total w/ A3	***5.91***	***6.65***	***12.56***
Total w/ E1	***5.90***	***6.70***	***12.60***

Notes: 1) The area of disturbance calculations for bridges include the bridge area, however, it is noted that the bridge does not have an on-ground physical impact (permanent or temporary) given that they are spans with limited piles. Abutment areas are included in the at-grade area calculations.

2) Segments D1, D2, and D3 are shown within the Parking Area.

3) Numbers may not add up due to rounding.

Source: Mark Thomas, 2019.

TABLE 10: DONNER CREEK BRIDGE ALTERNATIVE - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
Bridge Facilities			
Bridge Spans (F1) – Donner Creek and Truckee River	0.15	0.00	0.15
Bridge Span (G1)	0.05	0.00	0.05
Subtotal	*0.20*	*0.00*	*1.20*
At-grade Facilities			
At-Grade Segments	1.93	4.45	6.38
Parking Area	1.68	0.19	1.87
Soft Surface Trail	0.98	0.00	0.98
Boardwalk (K2)	0.03	0.00	0.03
New TTSA access	0.05	0.10	0.16
Trail Modification (near Brockway) (i.e. Future Roundabout Connection)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97
Bridge access road	0.07	0.01	0.08
Subtotal	*5.00*	*6.25*	*11.26*
Subtotal (Bridge and at-grade Facilities)	***5.20***	***6.25***	***11.46***
At-grade Options			
At-grade Segment (A3)	0.19	0.37	0.56
At-grade Segment (E1)	0.18	0.42	0.60
Total w/ A3	***5.39***	***6.62***	***12.02***
Total w/ E1	***5.38***	***6.67***	***12.06***

Notes: 1) The area of disturbance calculations for bridges include the bridge area, however, it is noted that the bridge does not have an on-ground physical impact (permanent or temporary) given that they are spans with limited piles. Abutment areas are included in the at-grade area calculations.

2) Segments D1, D2, and D3 are shown within the Parking Area.

3) Numbers may not add up due to rounding.

Source: Mark Thomas, 2019.

The plan and profiles for the trail segments, which includes the cut and fill, are included in Appendix A. The area disturbed includes the footprint of the trail facility and an approximately 10-foot buffer on each side of the full length of the segment to account for construction equipment disturbance. In some more sensitive areas (i.e. near wetlands), the buffer is reduced to avoid and minimize impacts to the wetlands. Table 11 provides a breakdown of the estimated area of disturbance for the facilities that would be on-ground.

TABLE 11: ON-GROUND FACILITIES - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
At-Grade Segments			
A1	0.02	0.33	0.35
A2	0.03	0.06	0.08
A3	0.19	0.37	0.56
A4	0.01	0.01	0.02
A5	0.35	0.74	1.10
C1 (only for Middle Bridge Alternative)	0.03	0.06	0.09
E1 (option)	0.18	0.42	0.60
F1 (for Donner Creek or Middle Bridge Alternatives)	0.02	0.03	0.05
G1 (only for Donner Creek Bridge)	0.01	0.01	0.02
H1	0.18	0.36	0.55
K1	0.38	0.99	1.37
I1	0.23	0.47	0.70
K2 (includes sidewalks)	0.36	0.98	1.34
K3 (option)	0.09	0.16	0.25
K4	0.18	0.43	0.61
L1 (only for Middle Bridge/Donner Creek Bridge Alternative)	0.08	0.15	0.23
Bridge			
A1 (Proposed Project – West Bridge)	0.12	0.00	0.59
B1 (Middle Bridge Alternative)	0.07	0. 00	0.35
C1 (Middle Bridge Alternative)	0.66	00	3.30
F1 (Donner Creek Bridge Alternative – Donner Creek Bridge)	0.03	00	0.14
F1 (Donner Creek Bridge Alternative – Truckee River Bridge)	0.12	00	0.62
G1 (Donner Creek Bridge Alternative)	0.05	00	0.26
Boardwalks			
K2	0.03	0.00	0.03
Parking Area			
Trailhead Parking Lot	1.66	0.00	1.66
D1 (w/in parking lot)	0.00	0.03	0.03
D2 (w/in parking lot)	0.00	0.08	0.08
D3 (w/in parking lot)	0.02	0.09	0.11
Subtotal	***1.68***	***0.19***	***1.87***
Other Segments			
Soft Surface Trails (all)	0.98	0.00	0.98
West Bridge access road (under proposed project)	0.03	0.00	0.03
Middle Bridge access road (under Middle Bridge Alt.)	0.06	0.02	0.07
Donner Creek Bridge access road (Under Donner Creek Bridge Alt.)	0.07	0.01	0.08
New TTSA access road (only under Alternatives)	0.05	0.10	0.16
Trail Modification (near Brockway Rd.) (i.e. Future Roundabout Connection)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97

Notes: 1) Segments D1, D2, and D3 are shown within the Parking Area.

2) Numbers may not add up due to rounding. Source: Mark Thomas, 2019.

The trail segments were designed to minimize impacts to riparian and wetlands to the extent feasible by either avoiding through design or constructing a boardwalk or bridge that spans these areas. The boardwalk/bridge would still result in some loss of natural light on the underside of the boardwalk and vegetated areas would become largely barren. Also, the bridge would include piles to support the bridge, which will have very little impact to the wetland. As such, portions of the boardwalk/bridge areas are classified as permanent impact within this study. However, in general, although the boardwalk is expected to generate a permanent impact (due to shading and being close to grade), the bridge span would not have a permanent impact to riparian and wetlands.

The trail segments portion of the project, which excludes the bridge and boardwalk portions of the project, would include approximately 0.0073 acres of impacts to wetlands (0.0035 permanent impact and 0.0038 temporary impact). These impacts are irrespective of the bridge that is selected. The bridge and boardwalk portion of the project would include impacts that range from approximately 0.0425 to 0.0680 acres of impacts to wetlands, depending on the bridge that is selected. Therefore, the total wetland impact (inclusive of the impact to the trail segments, bridges, and boardwalk) is anticipated to range between approximately 0.0498 to 0.0753 acres. Table 12, below, provides a summary of area of impact to wetlands (by wetland type) from the trail segments (excluding bridges and boardwalk segments). Table 13 provides a summary of the area of impact to wetlands (by wetland type) from the bridge and boardwalk segments.

TABLE 12: SUMMARY OF TRAIL SEGMENT WETLAND IMPACTS (PERMANENT AND TEMPORARY) (ACRES)

Facility	*Wetland Type*			*Grand Total*
	Riparian	*Waters of the U.S.*	*Seasonal Drainage*	
Trail Segments(A5/H1)				
A5				
Paved Trail Permanent	0	0	0.0020	0.0020
Paved Trail Temporary	0	0	0.0009	0.0009
H1				
Paved Trail Permanent	0	0	0.0015	0.0015
Paved Trail Temporary	0	0	0.0029	0.0029
Permanent Subtotal	***0***	***0.0000***	***0.0035***	***0.0035***
Temporary Subtotal	***0***	***0.0000***	***0.0038***	***0.0038***
Grand Total	**0**	**0.0000**	**0.0073**	**0.0073**

Source: Mark Thomas GIS, 2019.

TABLE 13: SUMMARY OF BRIDGE & BOARDWALK WETLAND IMPACTS (PERMANENT AND TEMPORARY) (ACRES)

Facility	*Wetland Type*			*Grand Total*
	Riparian	*Waters of the U.S.*	*Seasonal Drainage*	
Proposed Project – West Bridge Alternative				
West Bridge (A1)				
A1 Bridge Permanent	0.0139	0.0181	0	0.0320
Paved Trail Permanent	0	0	0.0002	0.0002
Paved Trail Temporary	0	0	0.0005	0.0005
Access Road - A1	0	0	0.0002	0.0002
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0139***	***0.0276***	***0.0005***	***0.0420***
Temporary Subtotal	***0.0000***	***0.0000***	***0.0005***	***0.0005***
Grand Total	**0.0139**	**0.0276**	**0.001**	**0.0425**
Middle Bridge Alternative				
Middle Bridge (B1/C1)				
B1 Bridge Permanent	0.0221	0.0238	0	0.0459
C1 Bridge Permanent	0	0	0.0006	0.0006
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0221***	***0.0333***	***0.0006***	***0.0560***
Grand Total	**0.0221**	**0.0333**	**0.0006**	**0.0560**
Donner Bridge Alternative				
Donner Bridge (F1/G1)				
F1 Bridge (Donner Creek) Permanent	0.0028	0.0099	0	0.0127
F1 Bridge (Truckee River) Permanent	0.0086	0.0369	0	0.0455
G1 Bridge Permanent	0	0	0.0003	0.0003
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0114***	***0.0563***	***0.0003***	***0.0680***
Grand Total	**0.0114**	**0.0563**	**0.0003**	**0.0680**

Source: Mark Thomas GIS, 2019.

The APE has five types of wetland features: Waters of the U.S. – 6.98 acres; Perennial Drainage – 0.55 acres; Seasonal Drainage - 0.18 acres; Seasonal Wetland – 2.23 acres; and Riparian - 7.05 acres. The aquatic resources delineation would need to be verified and a final determination made by the USACE prior to any activities that would involve construction in the jurisdictional areas. Any encroachment and fill activities in the Truckee River or the wetland features would be an impact and would require authorization through a Section 404 permit. In addition, these features are subject to the Porter-Cologne Water Quality Act and the California Fish and Game Code Section 1601. As such, any encroachment and fill activities in these features would require authorization through a Section 401 permit from the RWQCB and a 1600 permit through the CDFW.

AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

Measure: *Prior to any activities that would result in removal, fill, or hydrologic interruption of the jurisdictional areas, the project proponent shall consult with the regulatory agencies (USACE, RWQCB, and CDFW) to secure an authorization for any fill activities associated with the alternative selected. This shall include obtaining a 404 permit, 401 certification, and 1600 Streambed Alteration Agreement, unless alternative permits are deemed necessary by the*

permitting agencies. The permits may require compensation for the fill, and implementation of all minimization and conservation measures recommended by the regulatory agencies.

Measure. *Prior to construction, the project proponent shall install orange construction barrier fencing to identify environmentally sensitive areas around all delineated and verified wetland(s). This requirement shall only apply to delineated areas that are within 100 feet of the construction zone.*

Measure. *Based on the potential for impacts to riparian and wetland habitat, the Town shall prepare and implement an onsite revegetation and restoration plan for the riparian and wetland habitat temporarily impacted by construction activities. Restoration and revegetation shall take place onsite if possible and will directly restore those areas temporarily impacted. The plan shall be prepared in consultation with a qualified restoration ecologist. Restoration activities shall be monitored in accordance with the restoration plan or permit requirements. The revegetation/restoration of the temporarily impacted areas shall also include an additional acreage for onsite created/restored habitat to account for the permanent loss of riparian and wetland habitat based on the trail placement (anticipated at a rate of 1.5 to 1), in compliance with Town of Truckee Development Code Section 8.46.040 (C.2.), or in lieu fees for the loss of wetland in accordance with the permitting agency. The additional acreage will be located in the vicinity of the project and adjacent to existing or restored riparian and wetland habitat.*

8. REFERENCES

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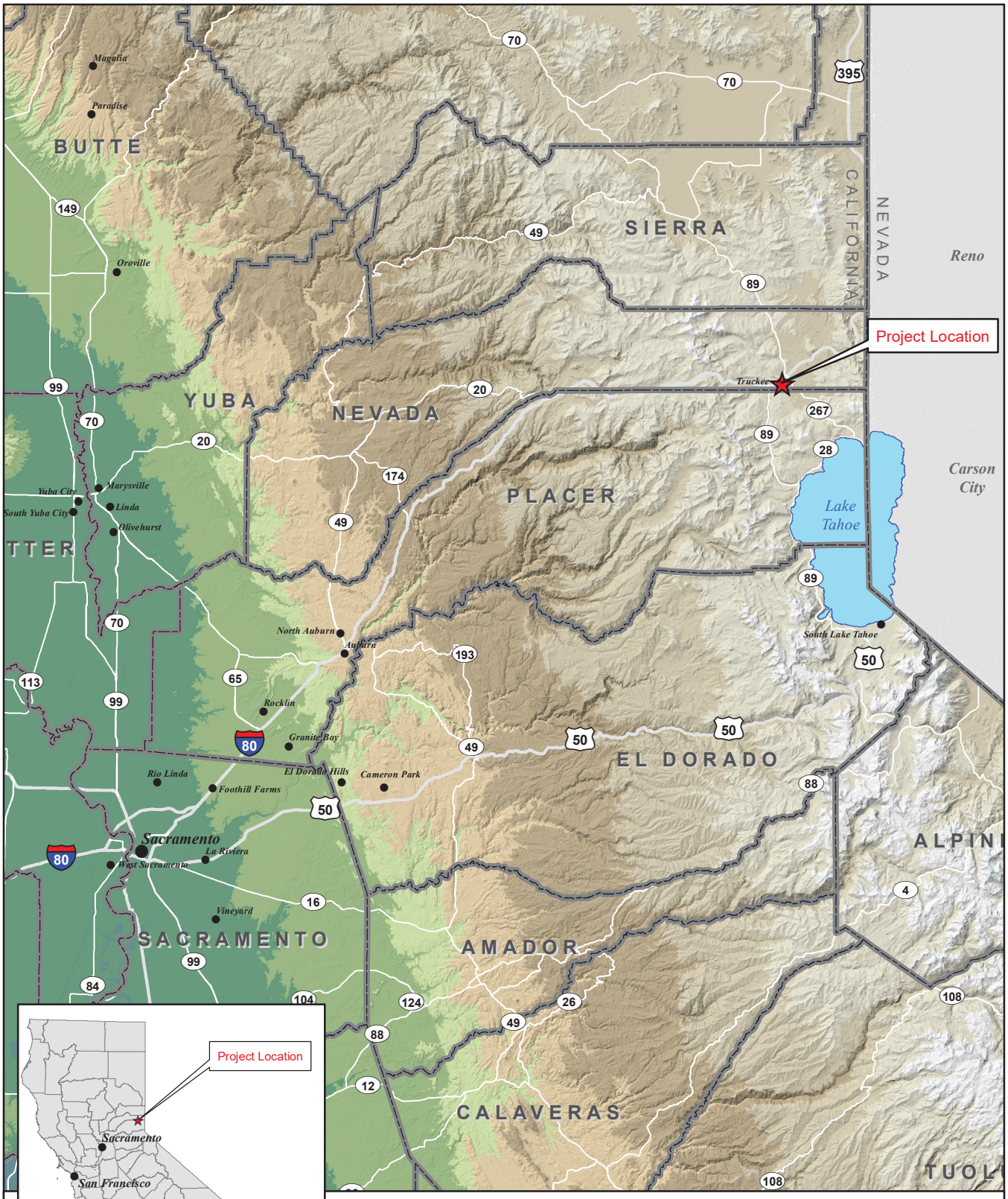

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 1: Regional Location Map

Sources: CalAtlas. Map date: June 14, 2016.

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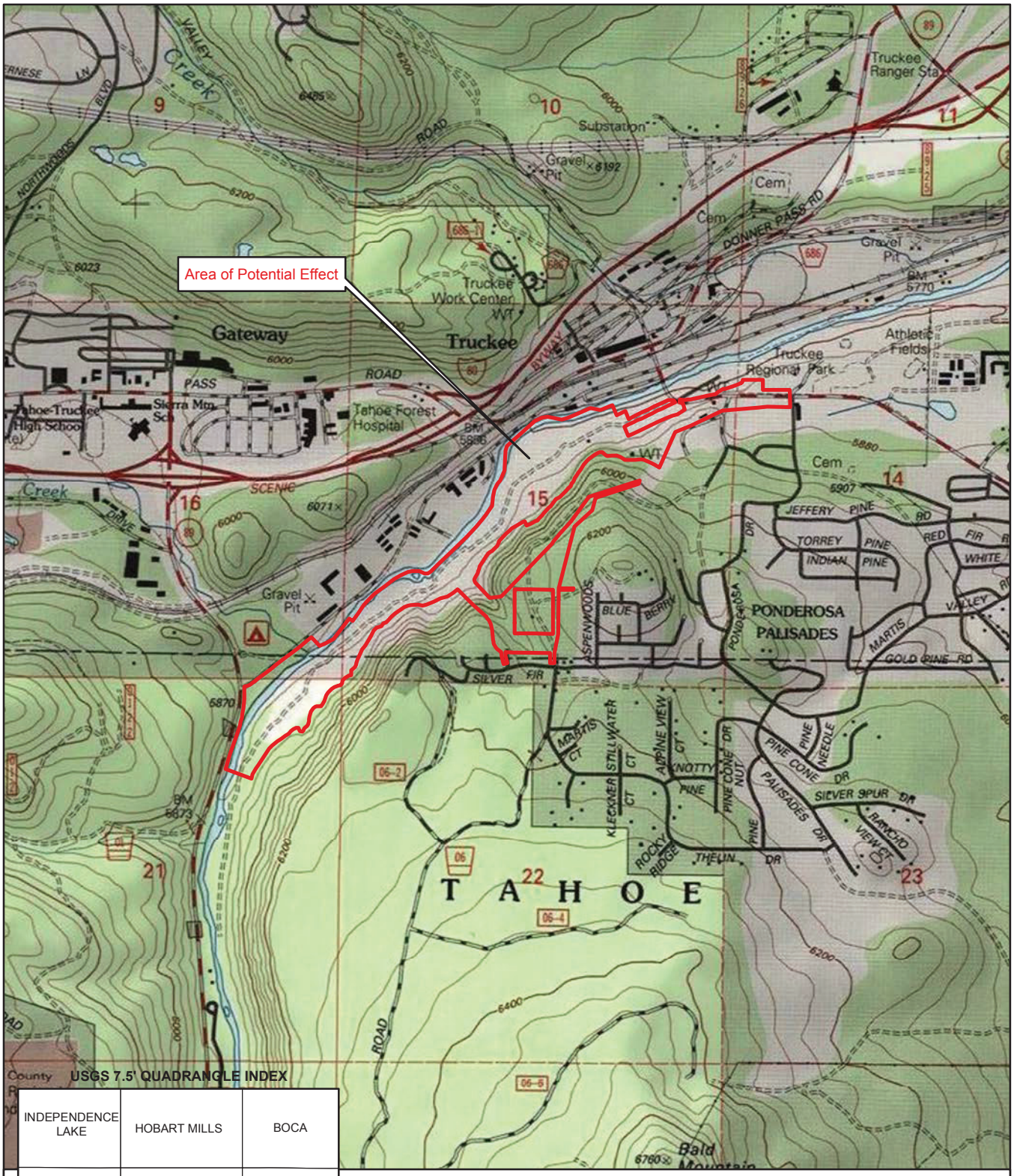

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 2: Project Vicinity

Truckee Quadrangle

Data sources: Mark Thomas and Company, "Cultural Resources Inventory of the Truckee Legacy Trail Phase 4 Project," August 2017; ArcGIS Online USGS Topographic Map Service. Map date:October 24, 2017.

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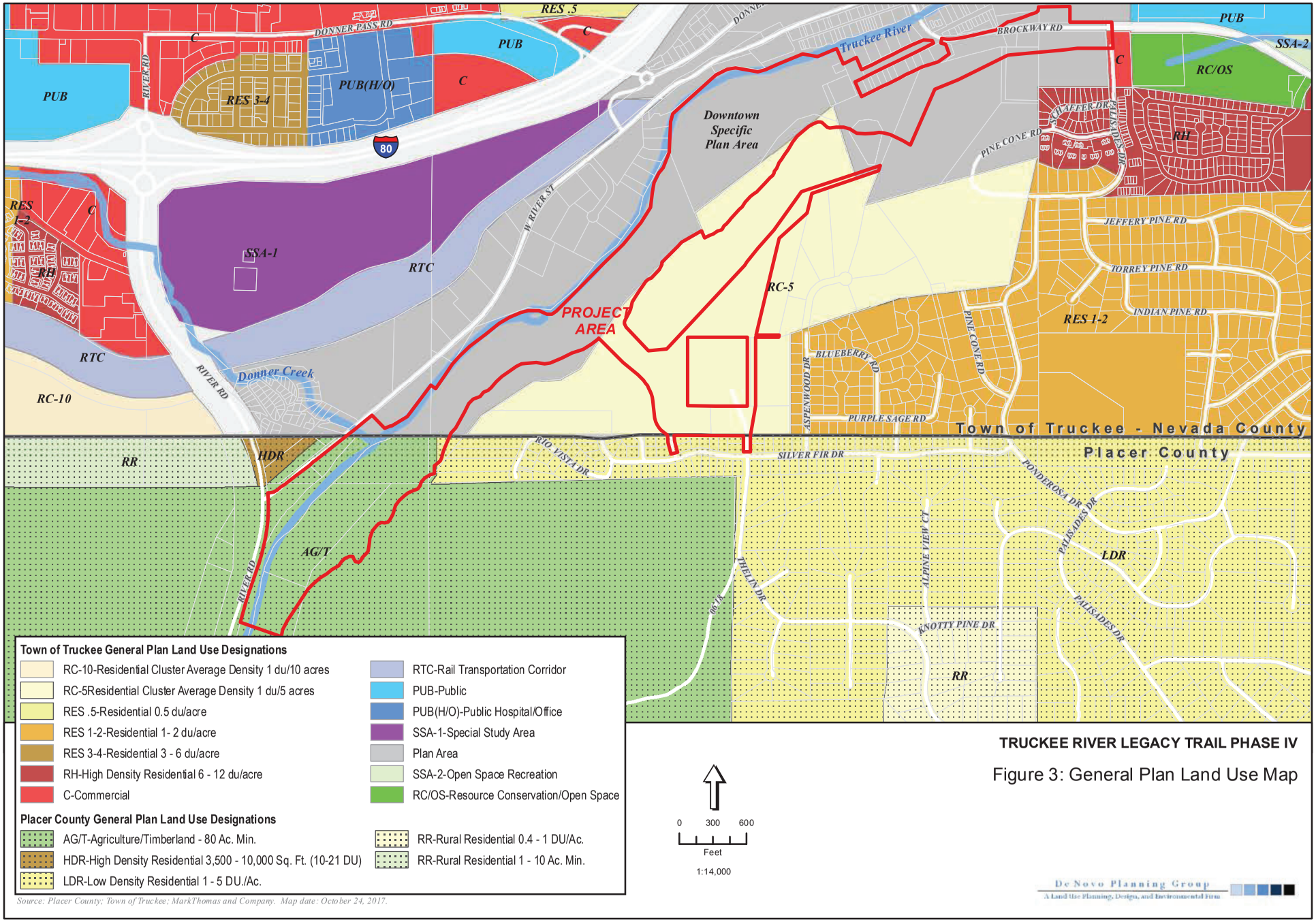

Source: Placer County; Town of Truckee; MarkThomas and Company. Map date: October 24, 2017.

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 3: General Plan Land Use Map

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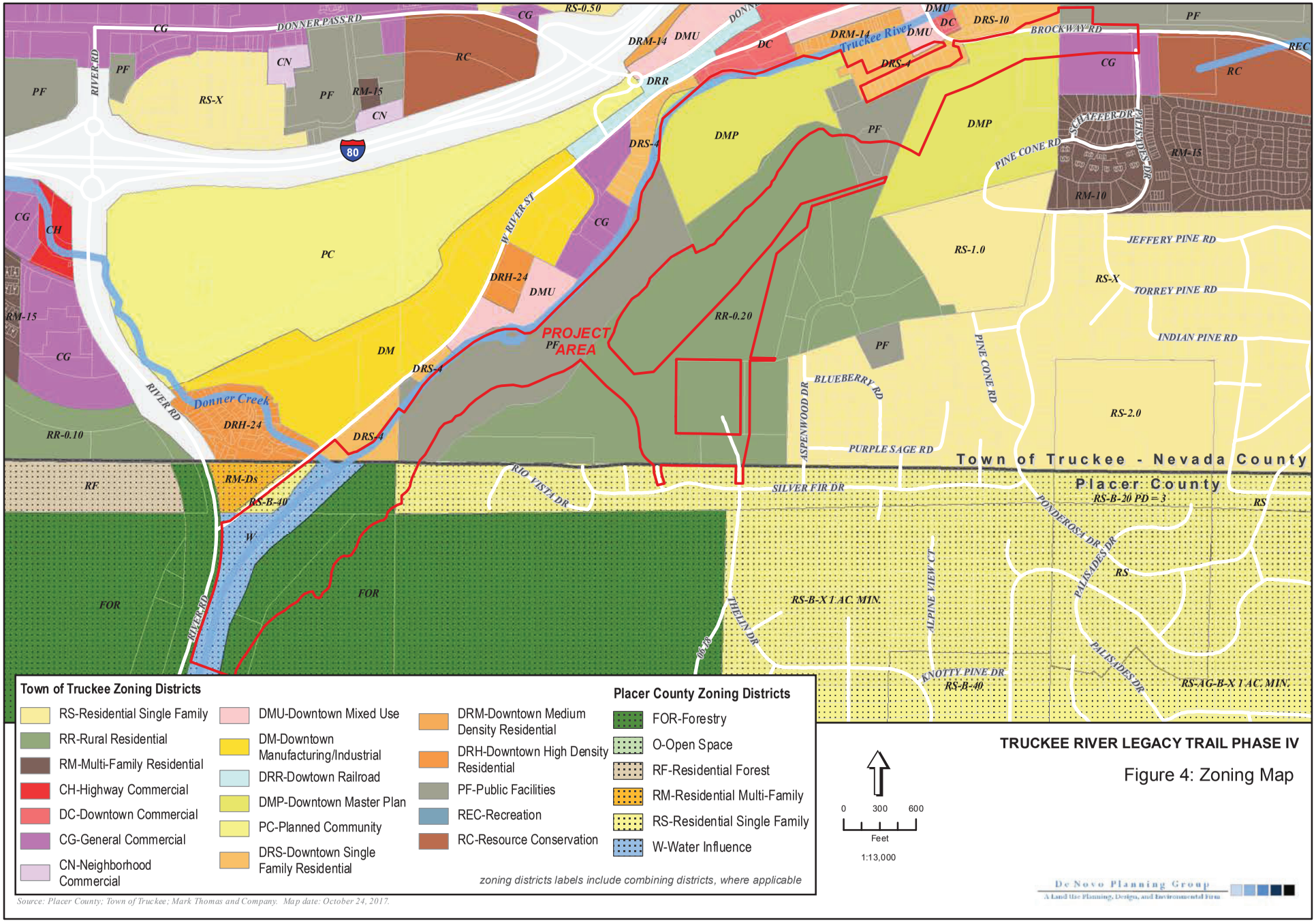

Town of Truckee Zoning Districts

- RS-Residential Single Family
- RR-Rural Residential
- RM-Multi-Family Residential
- CH-Highway Commercial
- DC-Downtown Commercial
- CG-General Commercial
- CN-Neighborhood Commercial
- DMU-Downtown Mixed Use
- DM-Downtown Manufacturing/Industrial
- DRR-Dowtown Railroad
- DMP-Downtown Master Plan
- PC-Planned Community
- DRS-Downtown Single Family Residential
- DRM-Downtown Medium Density Residential
- DRH-Downtown High Density Residential
- PF-Public Facilities
- REC-Recreation
- RC-Resource Conservation

Placer County Zoning Districts

- FOR-Forestry
- O-Open Space
- RF-Residential Forest
- RM-Residential Multi-Family
- RS-Residential Single Family
- W-Water Influence

zoning districts labels include combining districts, where applicable

0 300 600
Feet
1:13,000

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 4: Zoning Map

Source: Placer County; Town of Truckee; Mark Thomas and Company. Map date: October 24, 2017.

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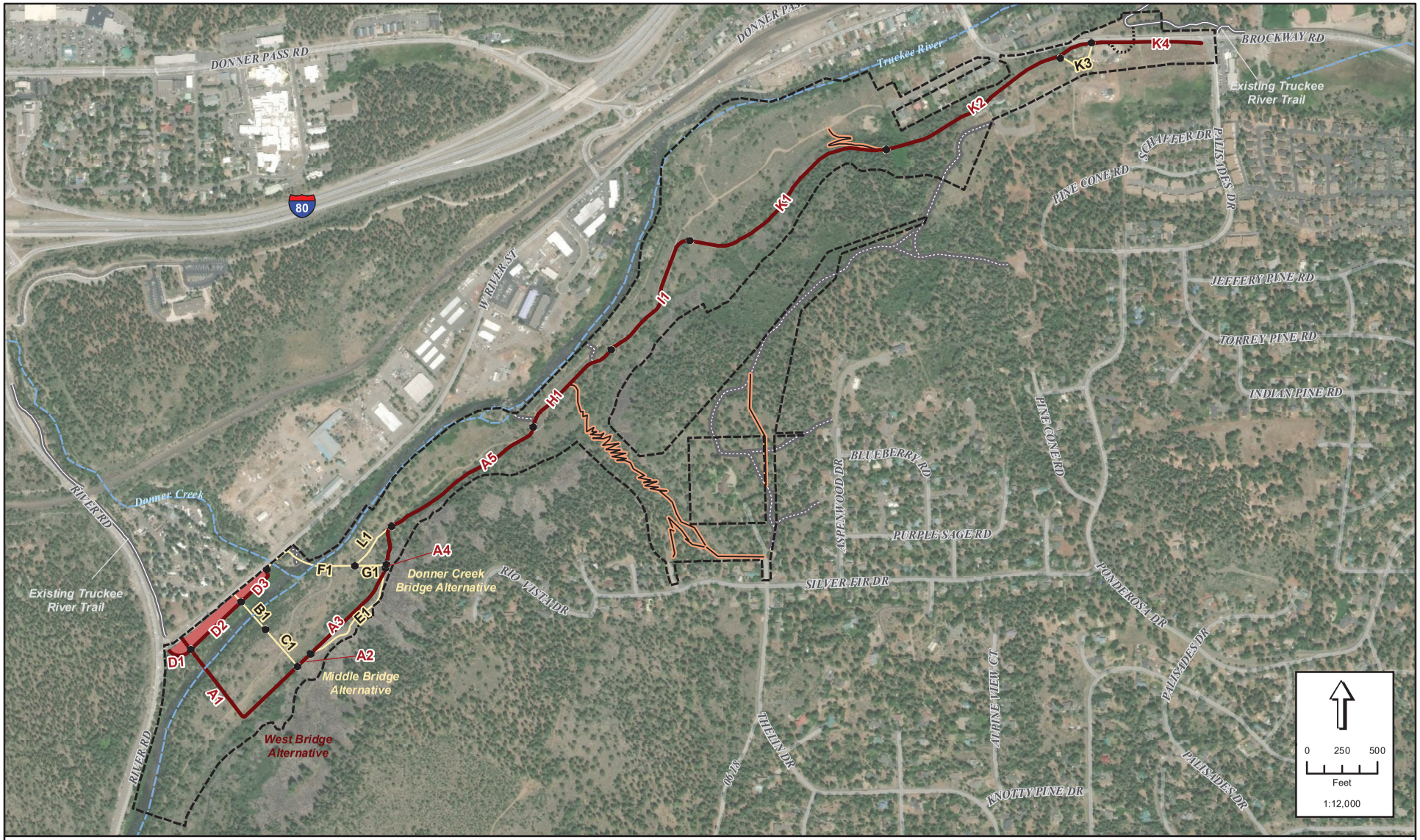

Legend

Proposed Trail

- Proposed Trail Alignment
- Alternate Alignment Scenarios
- Proposed Soft Surface Trail
- Trail Segment Start/End Stations
- Parking Lot - Paved

Future Phase

- Roundabout

Other Trails and Roads

- Existing Trail - Paved
- Existing Trail - Soft Surface

- Area of Potential Effects (APE)

TRUCKEE LEGACY TRAIL PHASE IV

Figure 5a: Proposed Trail Alignment

Data source: Mark Thomas and Company, TRL_Denovo_12-11-2018; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.

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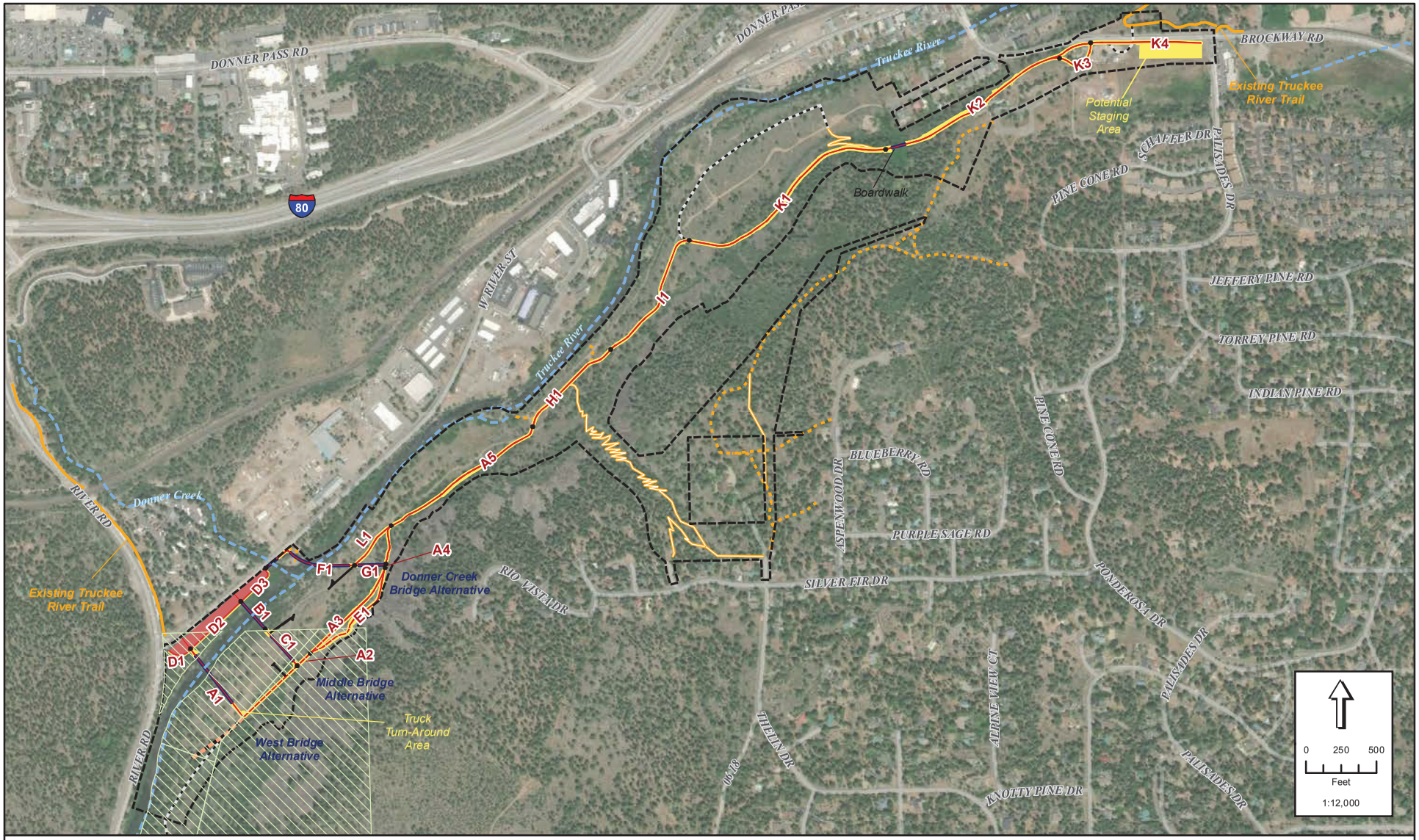

Existing Features

- Area of Potential Effects (APE)
- US Forest Service Parcels
- Truckee River and Donner Creek
- Existing Trail - Paved
- Existing Trail - Soft Surface
- TTSD Access Road

Project Features

- Trail Segment Start/End Stations
- Trail Alignment - Paved
- Boardwalk/Bridge
- Access Road
- Paved Parking Lot
- Paved Trail and Other Temporary Impacts

Future/Proposed Features

- Future Phases/Trails
- Proposed Soft Trail

TRUCKEE LEGACY TRAIL PHASE IV

Figure 5b: Conceptual Map

Data source: Mark Thomas and Company, TRL_Denovo_12-11-2018; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 28, 2019.

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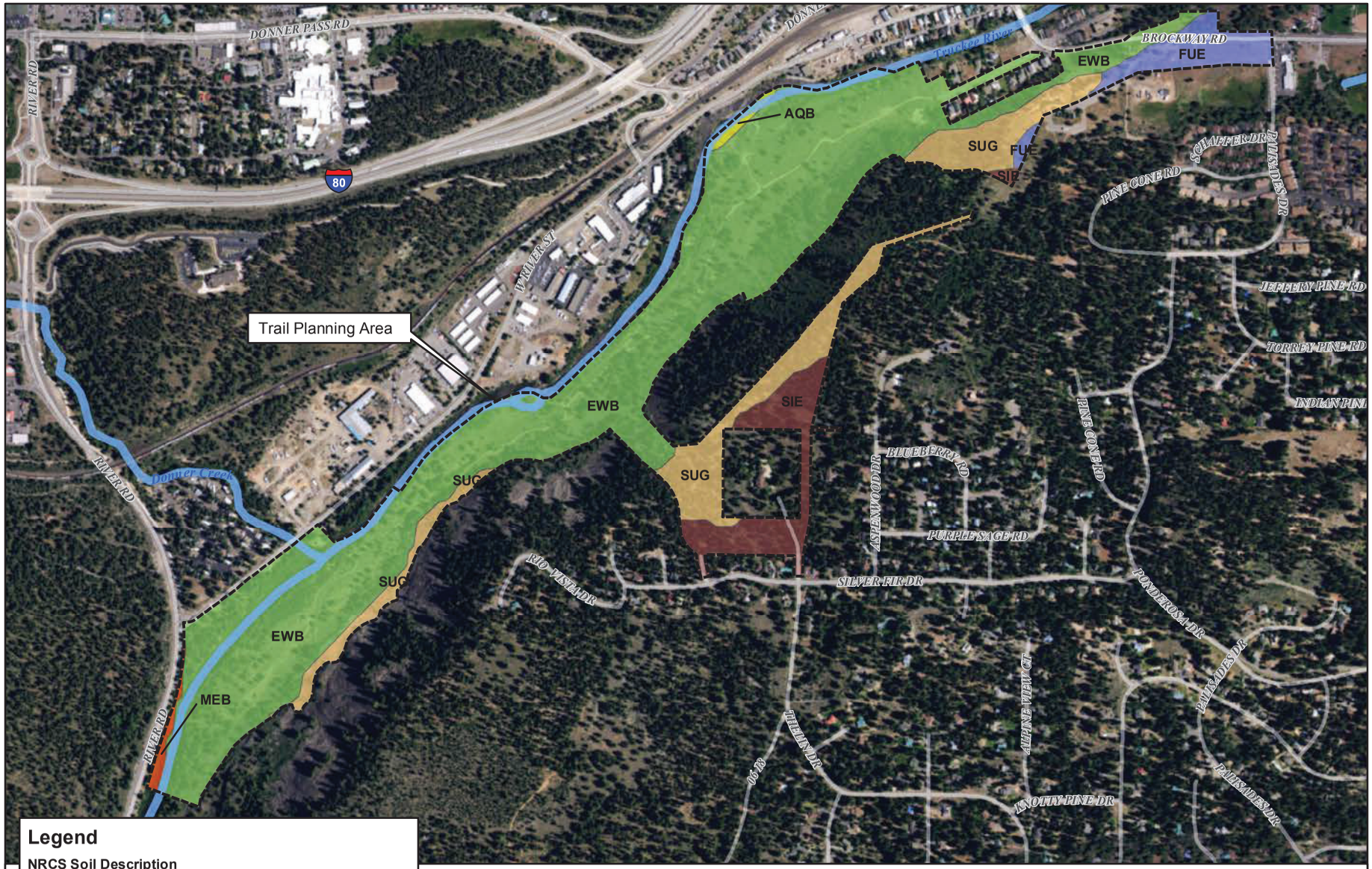

Legend

NRCS Soil Description

- AQB: Aquolls and Borolls, 0-5% slopes
- EWB: Inville-Riverwash-Aquolls complex, 2-5% slopes
- FUE: Kyburz-Trojan complex, 9-30% slopes
- SUG: Rubble land-Rock outcrop complex
- MEB: Martis-Euer variant complex, 2-30% slopes
- SIE: Sierraville-Trojan-Kyburz complex, 2-30% slopes

0 500 1,000
Feet
1:12,000

Data source: Placer County GIS; City of Truckee; NRCS Soil Survey, Tahoe National Forest Area CA719) accessed 10/24/2017; ArcGIS Online Aerial Imagery Service. Map date: October 24, 2017.

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 6: Soils Map

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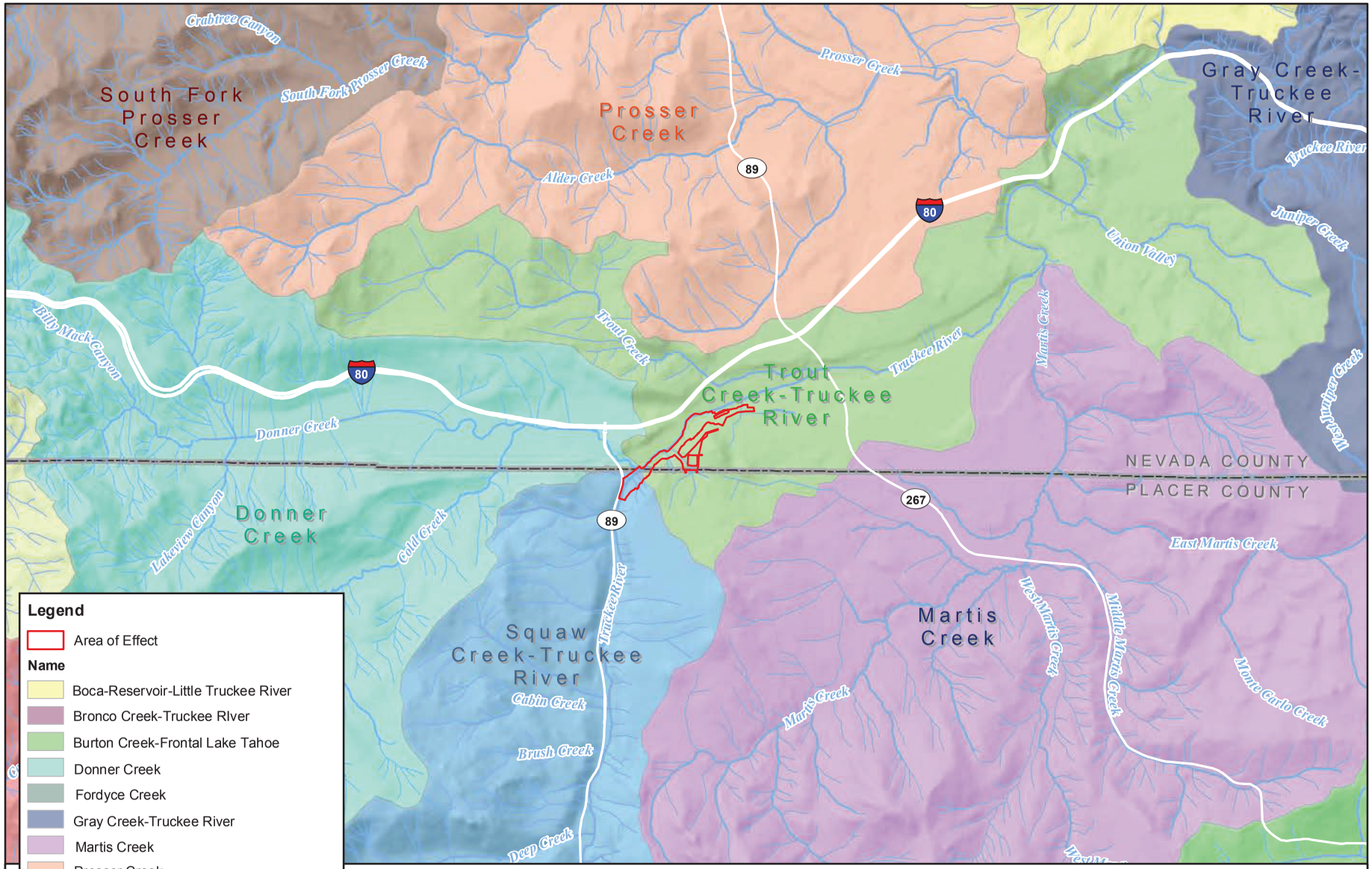

Data source: Placer County GIS; City of Truckee; USGS National Hydrography Dataset; USGS Watershed Boundary Dataset.
Map date: October 24, 2017.

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 7: Watersheds

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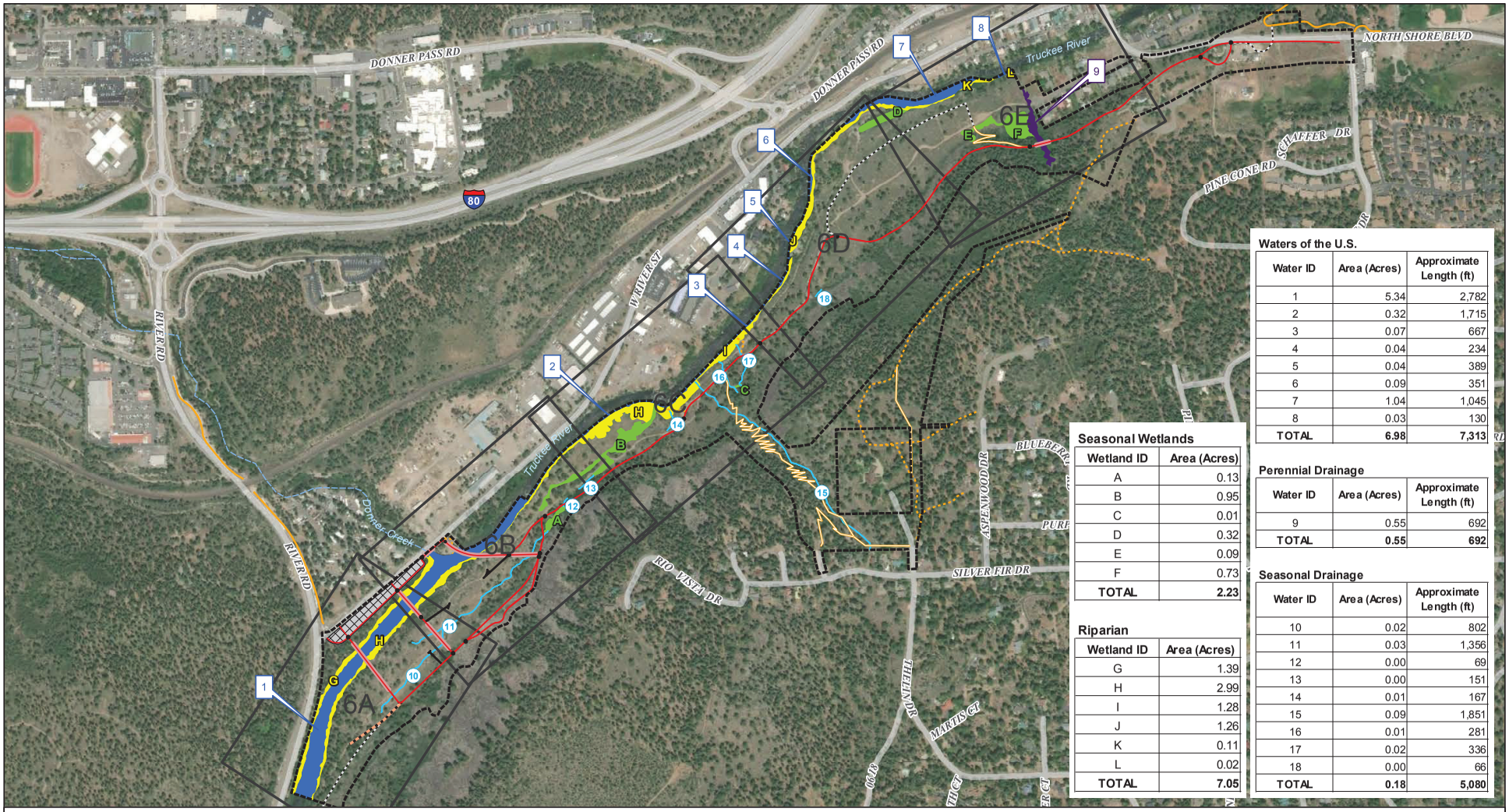
APPENDIX A: AQUATIC RESOURCE DELINEATION MAPS



Waters of the U.S.

Water ID	Area (Acres)	Approximate Length (ft)
1	5.34	2,782
2	0.32	1,715
3	0.07	667
4	0.04	234
5	0.04	389
6	0.09	351
7	1.04	1,045
8	0.03	130
TOTAL	**6.98**	**7,313**

Perennial Drainage

Water ID	Area (Acres)	Approximate Length (ft)
9	0.55	692
TOTAL	**0.55**	**692**

Seasonal Drainage

Water ID	Area (Acres)	Approximate Length (ft)
10	0.02	802
11	0.03	1,356
12	0.00	69
13	0.00	151
14	0.01	167
15	0.09	1,851
16	0.01	281
17	0.02	336
18	0.00	66
TOTAL	**0.18**	**5,080**

Seasonal Wetlands

Wetland ID	Area (Acres)
A	0.13
B	0.95
C	0.01
D	0.32
E	0.09
F	0.73
TOTAL	**2.23**

Riparian

Wetland ID	Area (Acres)
G	1.39
H	2.99
I	1.28
J	1.26
K	0.11
L	0.02
TOTAL	**7.05**

Legend

- Waters of the U.S. (6.98 ac; 7,313 linear ft)
- Perennial Drainage (0.55 ac; 692 linear ft)
- Seasonal Drainage (0.18 ac; 5,080 linear ft)
- Seasonal Wetland (2.23 ac)
- Riparian (7.05 ac)
- Area of Potential Effects (APE) (146.32 ac)
- Trail Segment Start/End Stations
- Trail Alignment - Paved
- Bridge or Boardwalk
- Existing Trail - Paved
- Existing Trail - Soft Surface
- Future Trail (by Others)
- Proposed Soft Trail
- TTSD Access Road
- Bridge Access Road
- Parking Lot

0 250 500
Feet

1:8,400

1 inch = 700 feet

Data source: Placer County GIS; Town of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.

TRUCKEE LEGACY TRAIL PHASE IV

Jurisdictional Map Index

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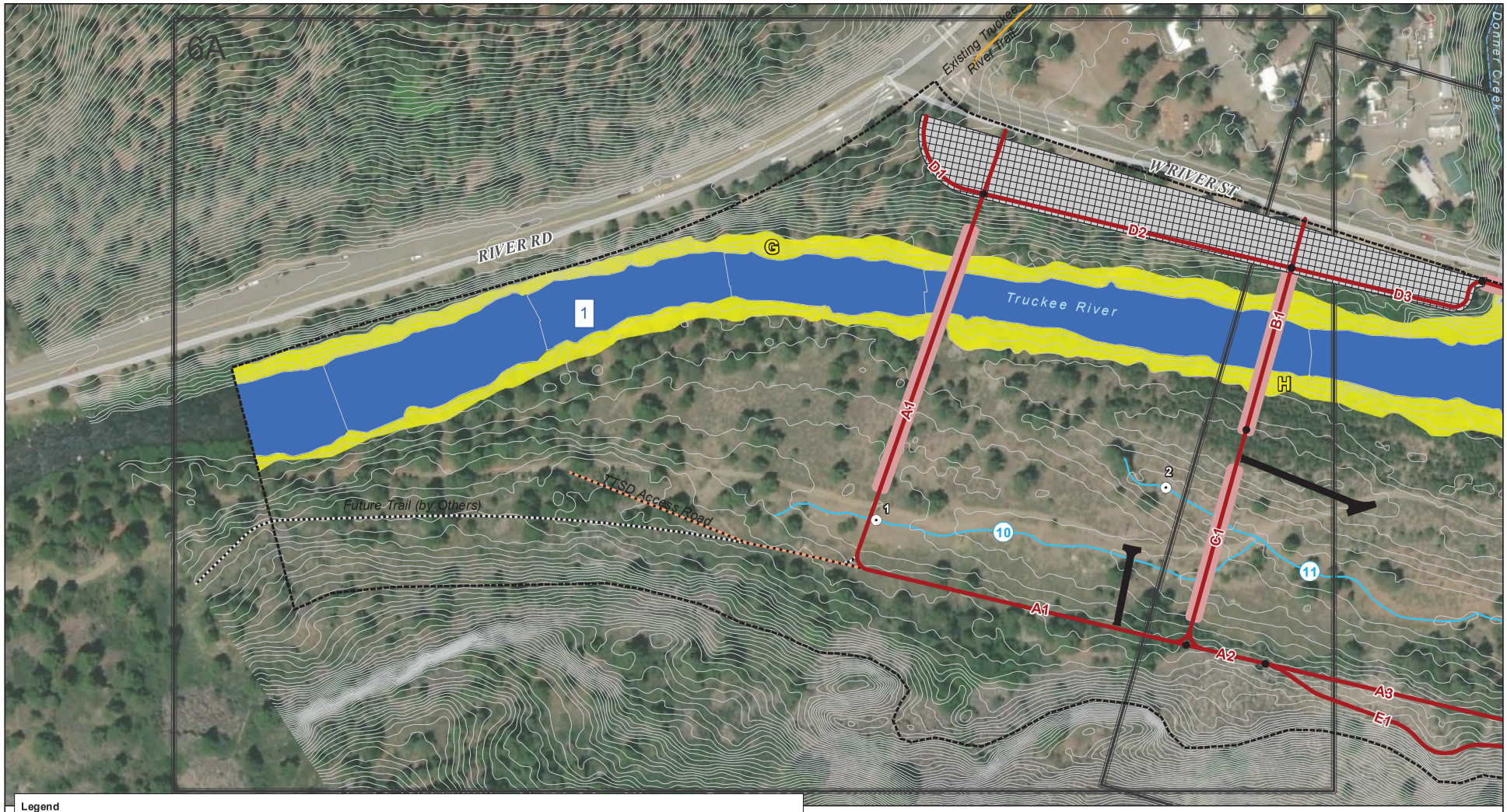

Legend

- Area of Potential Effects (APE) (146.32 ac)
- Waters of the U.S. (6.98 ac; 7,313 linear ft)
- Perennial Drainage (0.55 ac; 692 linear ft)
- Seasonal Drainage (0.18 ac; 5,080 linear ft)
- Seasonal Wetland (2.23 ac)
- Riparian (7.02 ac)
- Data Point
- Trail Segment Start/End Stations
- 2-ft Elevation Contours
- Trail Alignment - Paved
- Bridge or Boardwalk
- Existing Trail - Paved
- Existing Trail - Soft Surface
- Future Trail (by Others)
- Proposed Soft Trail
- TTSD Access Road
- Bridge Access Road
- Parking Lot

0 75 150
Feet
1:1,800
1 inch = 150 feet

Data source: Mark Thomas and Company; TRL_Denovo_12-11-2018; TRL_Wetlands_190214; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.

TRUCKEE LEGACY TRAIL PHASE IV

Jurisdictional Map Index A

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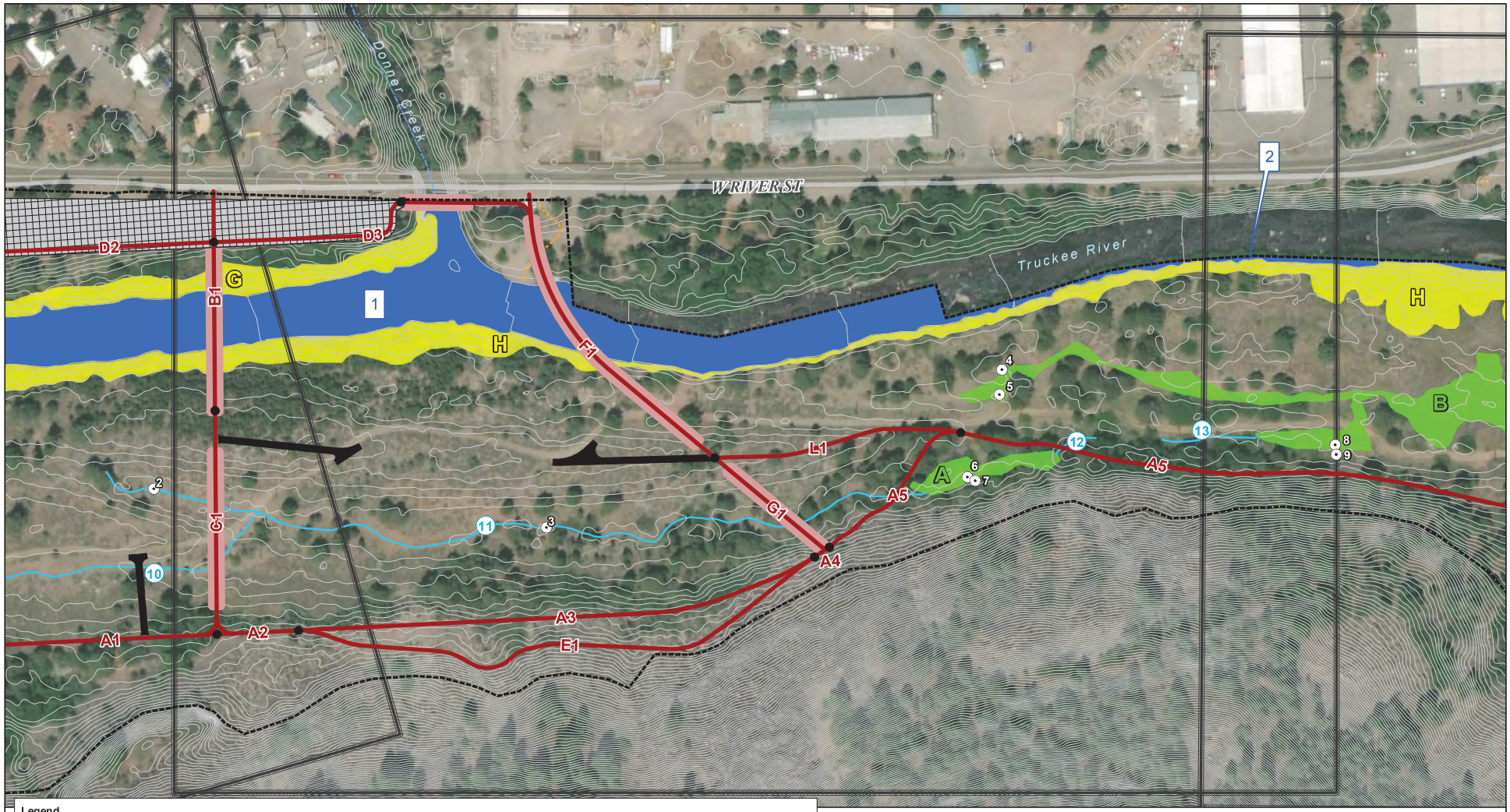

Legend

- Area of Potential Effects (APE) (146.32 ac)
- Waters of the U.S. (6.98 ac; 7,313 linear ft)
- Perennial Drainage (0.55 ac; 692 linear ft)
- Seasonal Drainage (0.18 ac; 5,080 linear ft)
- Seasonal Wetland (2.23 ac)
- Riparian (7.02 ac)
- Data Point
- Trail Segment Start/End Stations
- 2-ft Elevation Contours
- Trail Alignment - Paved
- Bridge or Boardwalk
- Existing Trail - Paved
- Existing Trail - Soft Surface
- Future Trail (by Others)
- Proposed Soft Trail
- TTSD Access Road
- Bridge Access Road
- Parking Lot

0 75 150
Feet
1:1,800
1 inch = 150 feet

TRUCKEE LEGACY TRAIL PHASE IV

Jurisdictional Map Index B

De Novo Planning Group
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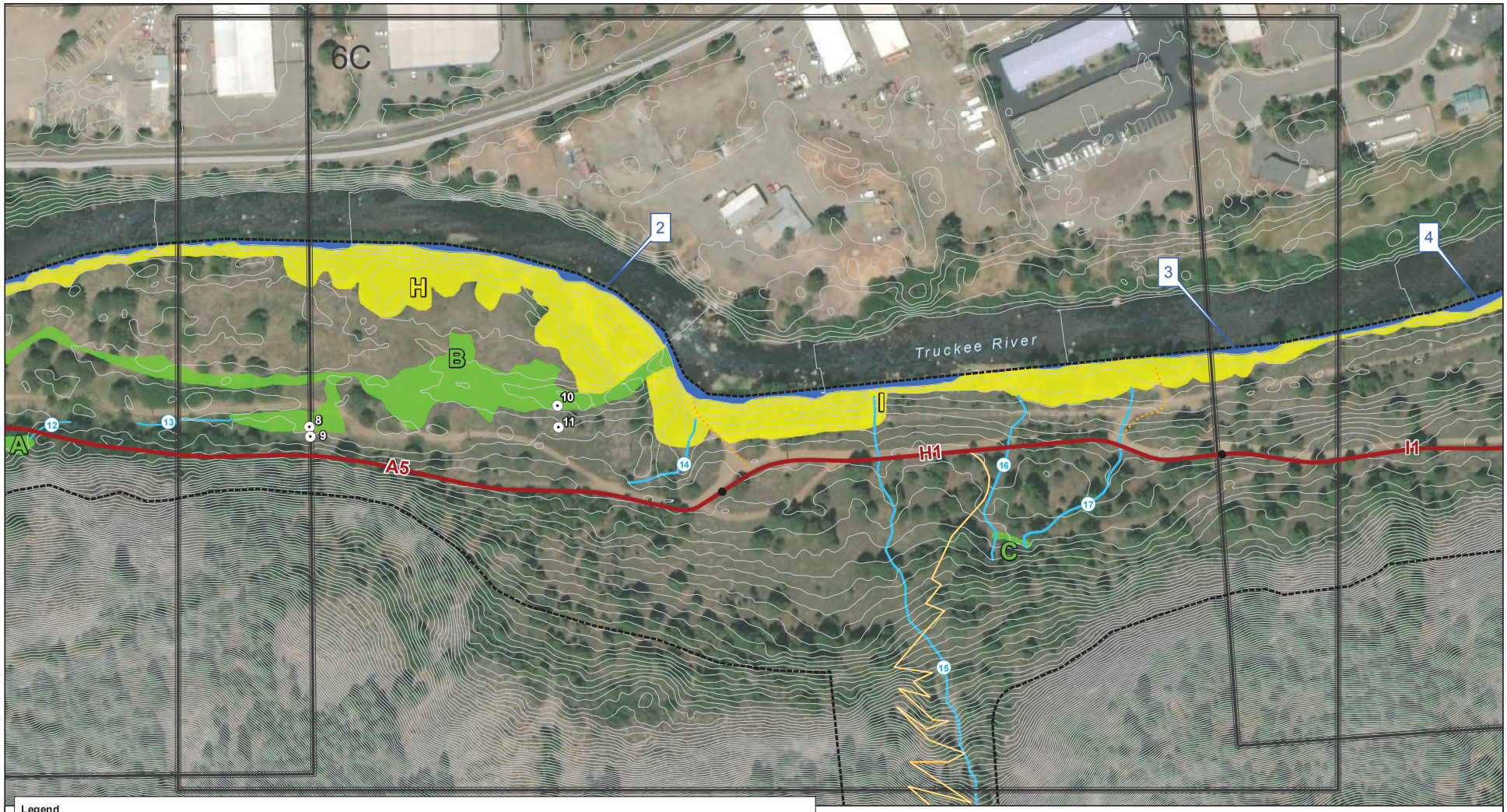
Data source: Mark Thomas and Company; TRL_Denovo_12-11-2018; TRL_Wetlands_190214; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.



Legend

- Area of Potential Effects (APE) (146.32 ac)
- Waters of the U.S. (6.98 ac; 7,313 linear ft)
- Perennial Drainage (0.55 ac; 692 linear ft)
- Seasonal Drainage (0.18 ac; 5,080 linear ft)
- Seasonal Wetland (2.23 ac)
- Riparian (7.02 ac)
- Data Point
- Trail Segment Start/End Stations
- 2-ft Elevation Contours
- Trail Alignment - Paved
- Bridge or Boardwalk
- Existing Trail - Paved
- Existing Trail - Soft Surface
- Future Trail (by Others)
- Proposed Soft Trail
- TTSD Access Road
- Bridge Access Road
- Parking Lot

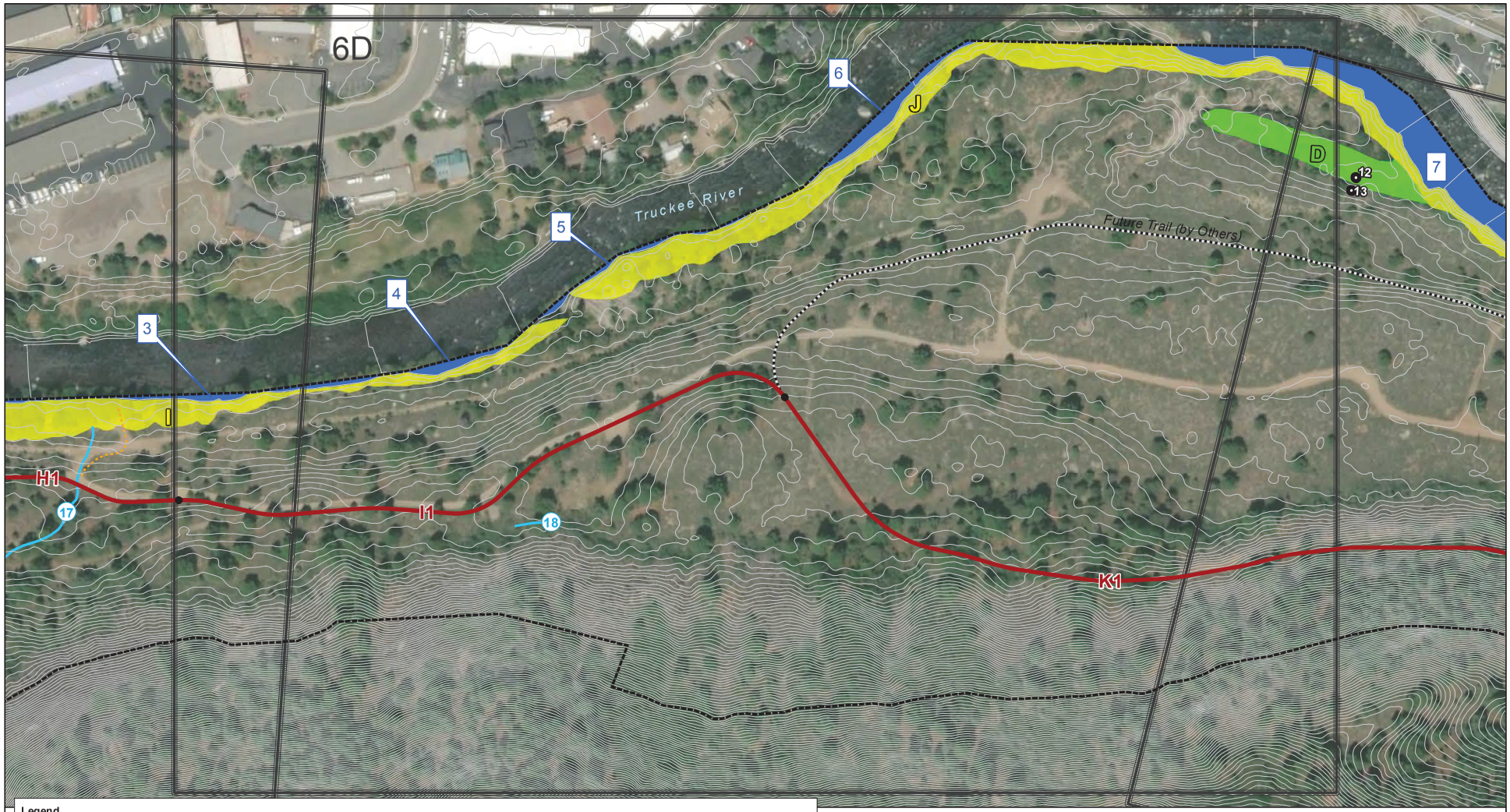
0 75 150
Feet
1:1,800
1 inch = 150 feet

TRUCKEE LEGACY TRAIL PHASE IV

Jurisdictional Map C

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

Data source: Mark Thomas and Company; TRL_Denovo_12-11-2018; TRL_Wetlands_190214; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.



Legend

- Area of Potential Effects (APE) (146.32 ac)
- Waters of the U.S. (6.98 ac; 7,313 linear ft)
- Perennial Drainage (0.55 ac; 692 linear ft)
- Seasonal Drainage (0.18 ac; 5,080 linear ft)
- Seasonal Wetland (2.23 ac)
- Riparian (7.02 ac)
- Data Point
- Trail Segment Start/End Stations
- 2-ft Elevation Contours
- Trail Alignment - Paved
- Bridge or Boardwalk
- Existing Trail - Paved
- Existing Trail - Soft Surface
- Future Trail (by Others)
- Proposed Soft Trail
- TTSD Access Road
- Bridge Access Road
- Parking Lot

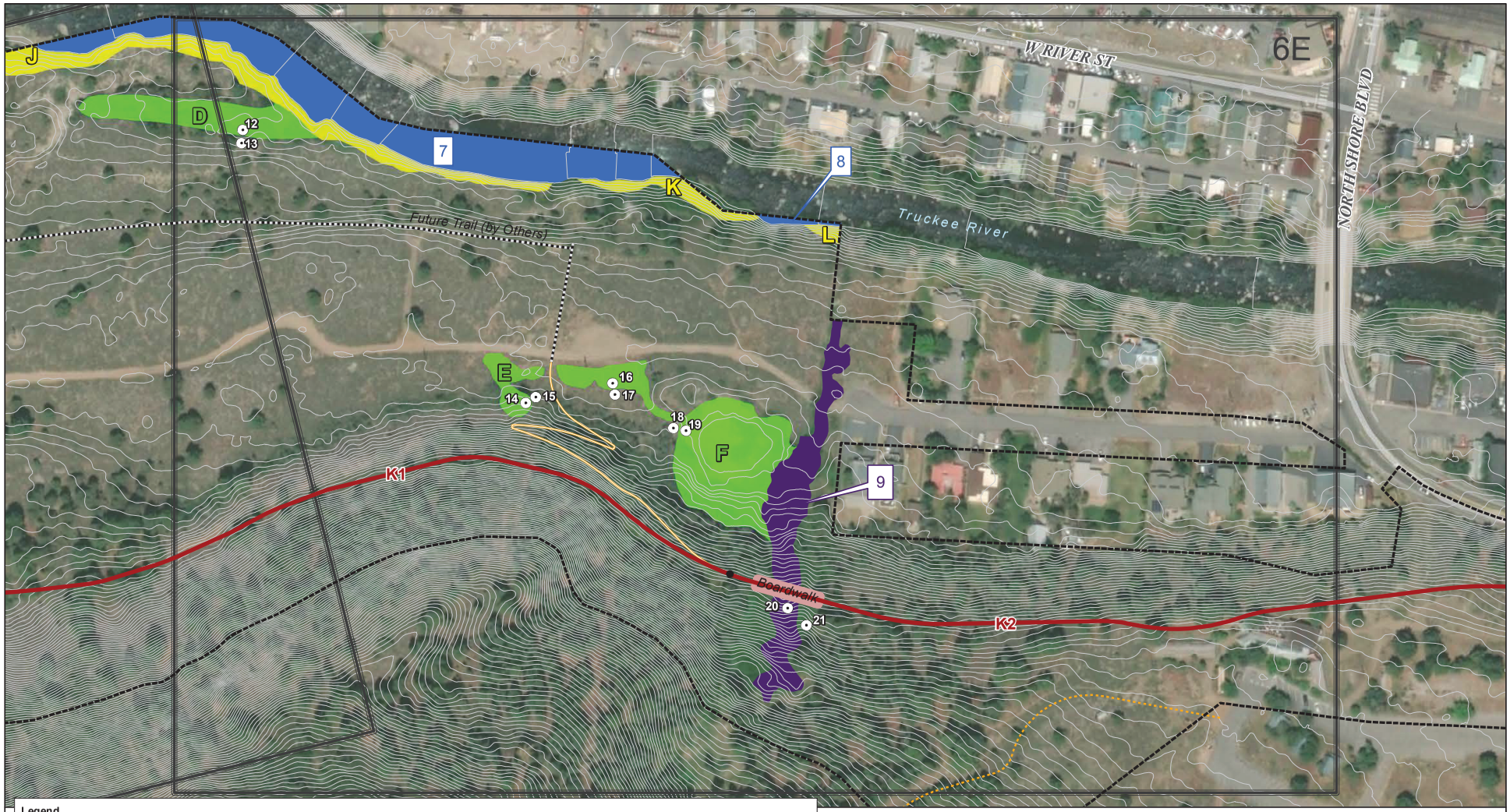
0 75 150
Feet
1:1,800
1 inch = 150 feet

TRUCKEE LEGACY TRAIL PHASE IV

Jurisdictional Map Index D

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

Data source: Mark Thomas and Company; TRL_Denovo_12-11-2018; TRL_Wetlands_190214; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.



Legend

- Area of Potential Effects (APE) (146.32 ac)
- Waters of the U.S. (6.98 ac; 7,313 linear ft)
- Perennial Drainage (0.55 ac; 692 linear ft)
- Seasonal Drainage (0.18 ac; 5,080 linear ft)
- Seasonal Wetland (2.23 ac)
- Riparian (7.02 ac)
- Data Point
- Trail Segment Start/End Stations
- 2-ft Elevation Contours
- Trail Alignment - Paved
- Bridge or Boardwalk
- Existing Trail - Paved
- Existing Trail - Soft Surface
- Future Trail (by Others)
- Proposed Soft Trail
- TTSD Access Road
- Bridge Access Road
- Parking Lot

0 75 150
Feet
1:1,800
1 inch = 150 feet

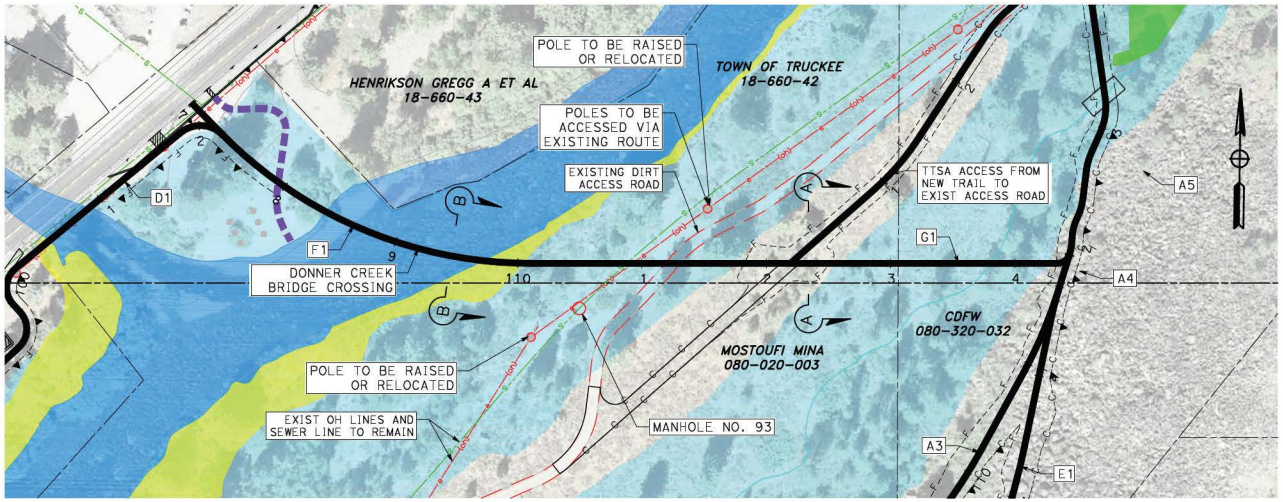
Data source: Mark Thomas and Company, TRL_Denovo_12-11-2018, TRL_Wetlands_190214; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.

TRUCKEE LEGACY TRAIL PHASE IV

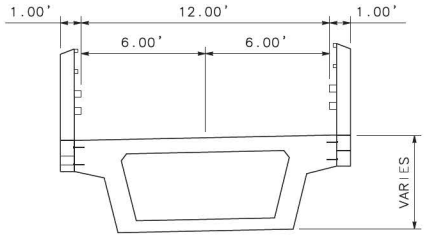
Jurisdictional Map Index E

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

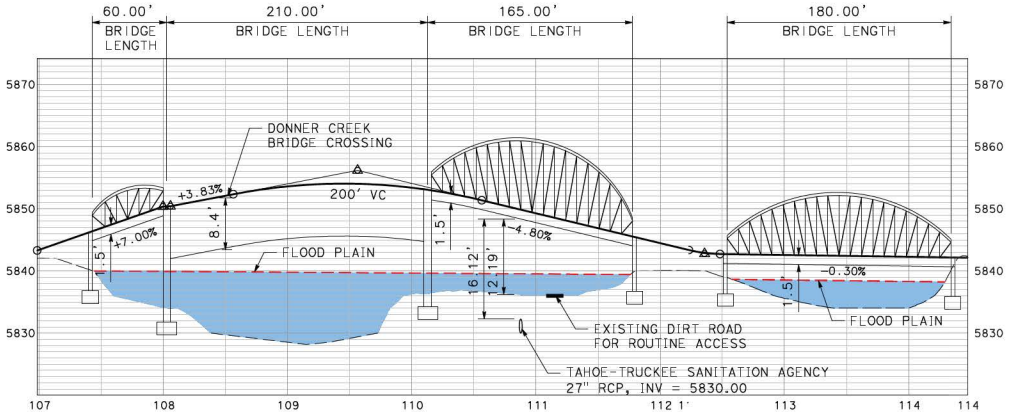
APPENDIX B: SUPPORTING MAPS



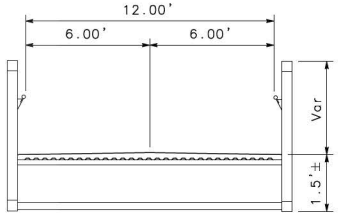
PLAN
SCALE: 1" = 100'



SECTION B-B
SCALE: 1" = 6'



PROFILE - DONNER CREEK BRIDGE CROSSING ALTERNATIVE (F1, G1)
SCALE: Horiz 1" = 100'
Vert 1" = 20'



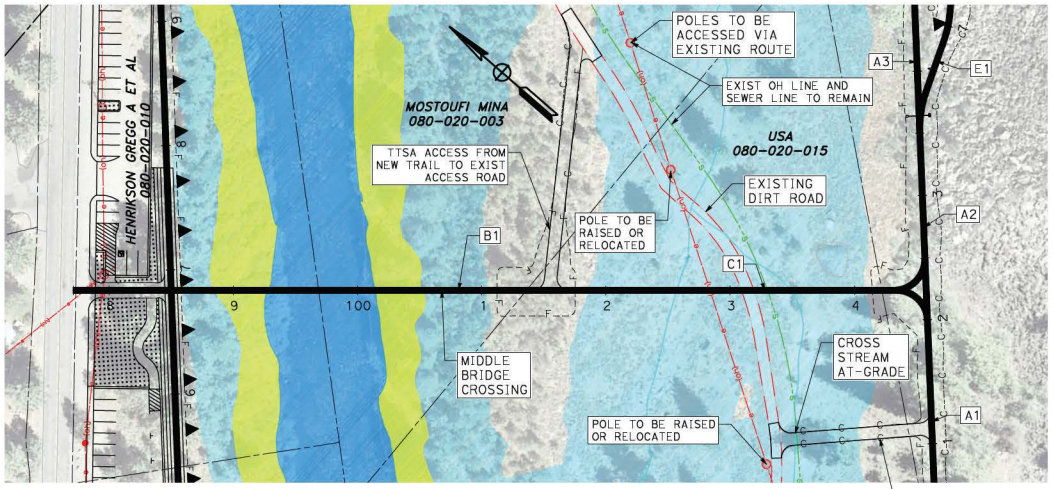
SECTION A-A
NO SCALE

LEGEND

OH ELECTRIC LINE AND POLE
SEWER LINE

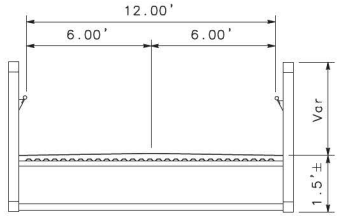
TRUCKEE LEGACY TRAIL
BRIDGE ALTERNATIVE

MARK THOMAS



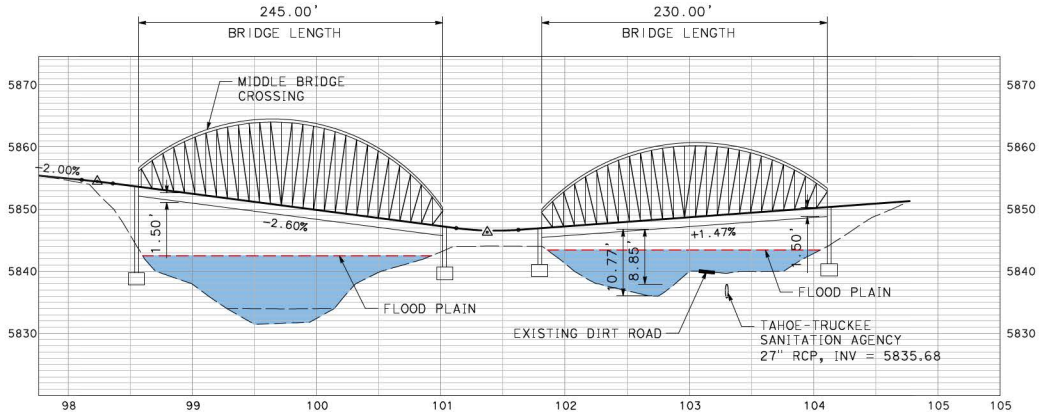
PLAN

SCALE: 1" = 100'



TYPICAL SECTION

SCALE: 1" = 6'



PROFILE - MIDDLE BRIDGE CROSSING ALTERNATIVE (B1, C1)

SCALE: Horiz 1" = 100'
Vert 1" = 20'

LEGEND

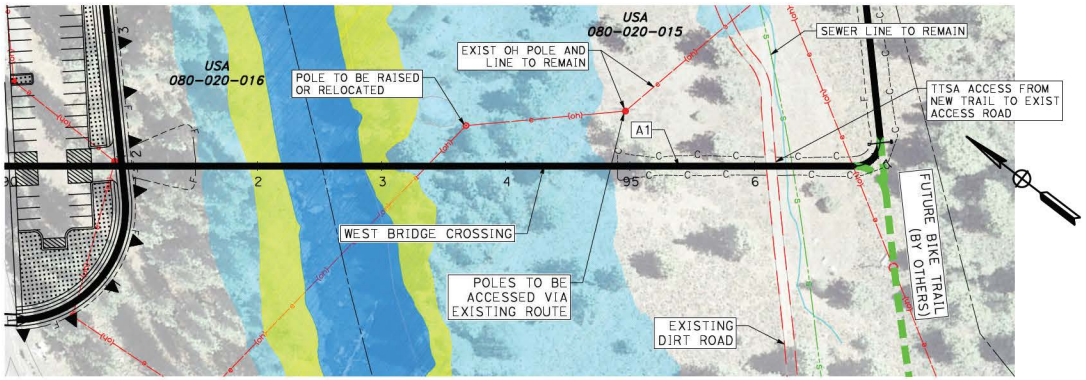
OH ELECTRIC LINE AND POLE
SEWER LINE

TRUCKEE RIVER LEGACY TRAIL

BRIDGE ALTERNATIVE

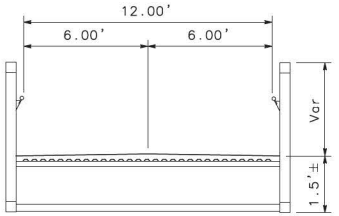
TOWN OF TRUCKEE

MARK THOMAS



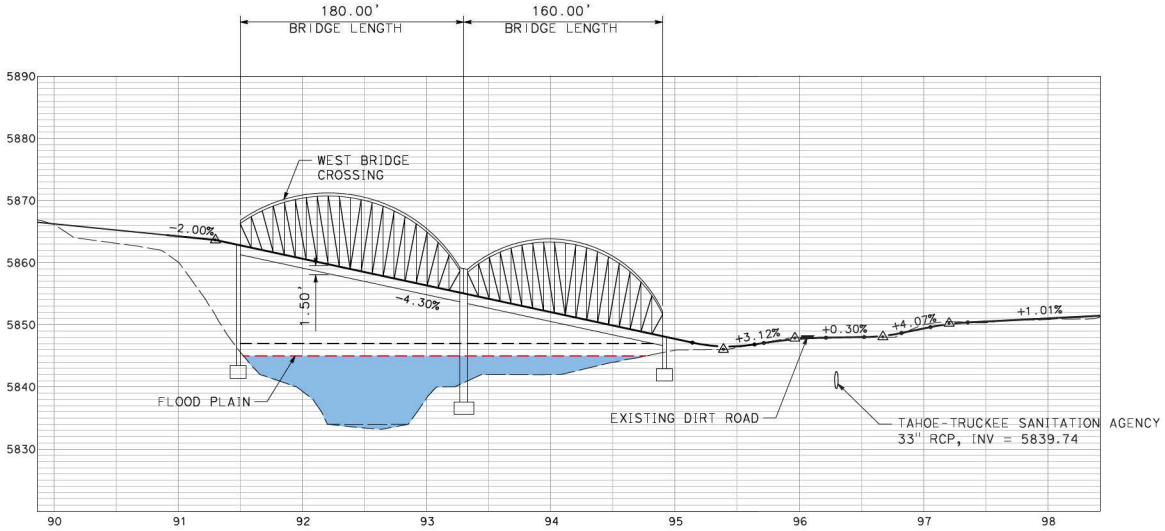
PLAN

SCALE: 1" = 100'



TYPICAL SECTION

SCALE: 1" = 6'



PROFILE - WEST BRIDGE CROSSING ALTERNATIVE (A1)

SCALE: Horiz 1" = 100'
Vert 1" = 20'

LEGEND

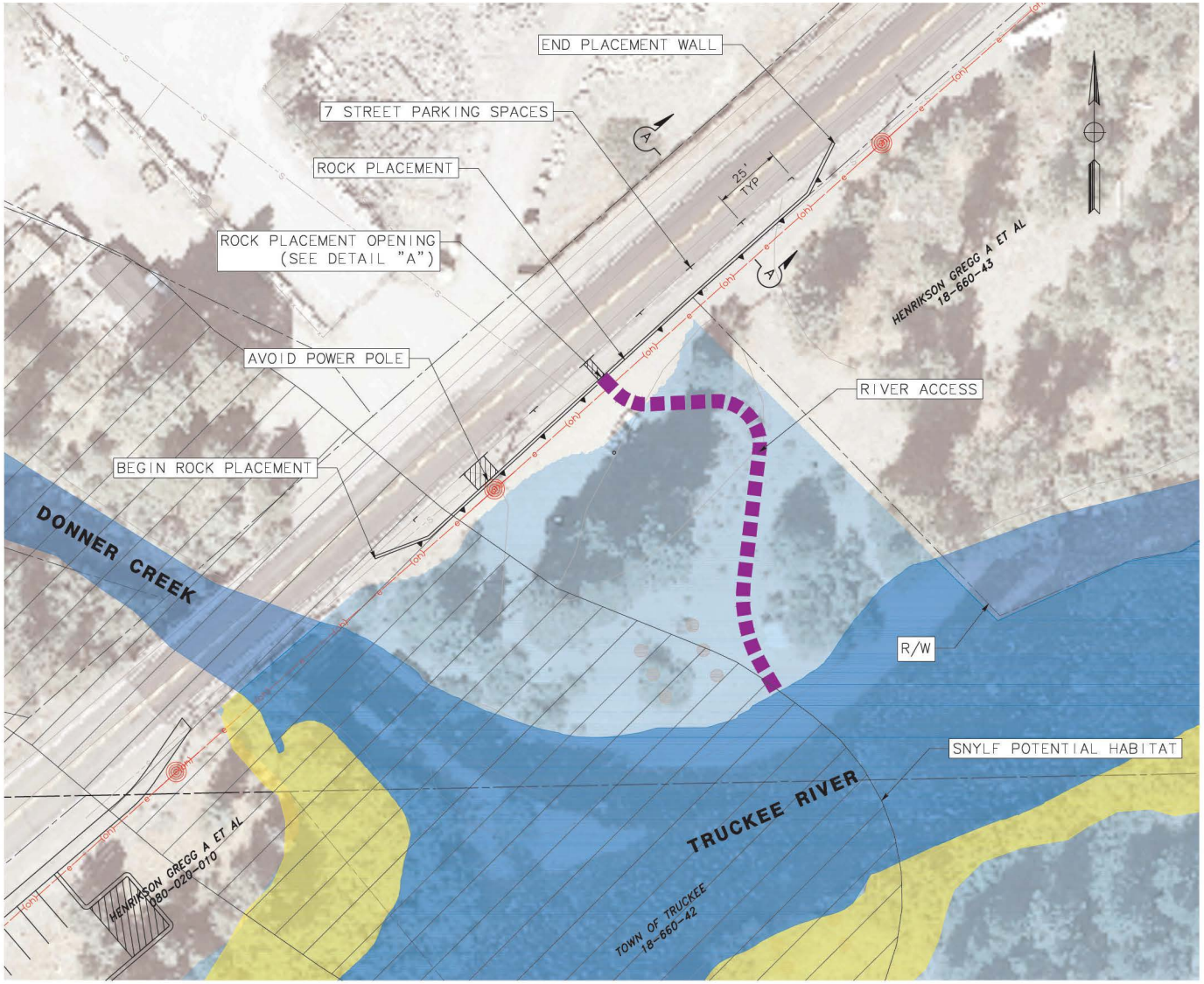
OH ELECTRIC LINE AND POLE

SEWER LINE

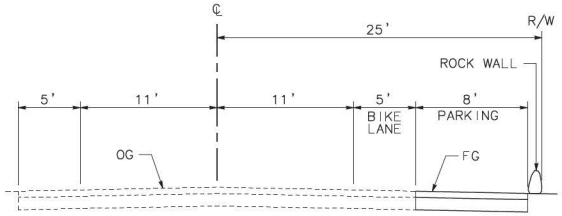
TRUCKEE RIVER LEGACY TRAIL

BRIDGE ALTERNATIVE

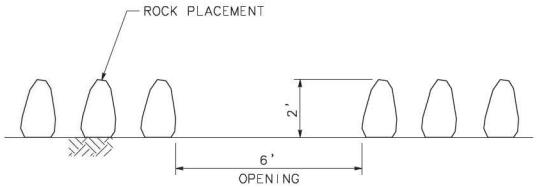
MARK THOMAS



PLAN
SCALE: 1" = 20'



SECTION A-A
NO SCALE



DETAIL "A"
NO SCALE

LEGEND

SNYLF (SIERRA NEVADA YELLOW-LEGGED FROG) POTENTIAL HABITAT

EXISTING OVERHEAD POWER LINE

0 20 40 80
Graphic Scale

TRUCKEE RIVER LEGACY TRAIL
RIVER ACCESS EXHIBIT

MARK THOMAS

APPENDIX C: PHOTOGRAPHS

Truckee River with riparian habitat along the banks.

Truckee River with riparian habitat along the southern banks.

Truckee River with riparian habitat along the banks.

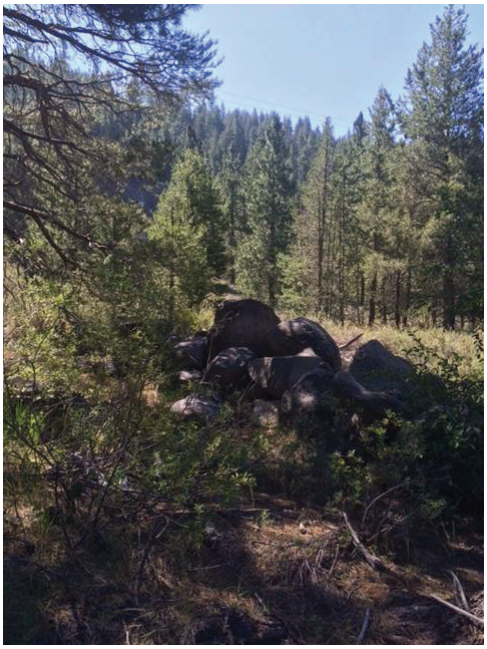
The large meadow area in the central portion of the APE.

Dirt road that traverses the APE.

Typical sage brush habitat throughout the APE.

Typical sage brush and eastside pine habitat throughout the APE.

Typical sage brush and eastside pine habitat throughout the APE.



APPENDIX D: PLANT LIST

Abies concolor	White Fir
Achillea millefolium	Common Yarrow
Alnus incana ssp. *tenuifolia*	Thinleaf Alder
Amelanchier alnifolia	Saskatoon Serviceberry
Artemisia dracunculus	Tarragon sagewort
Artemisia tridentata vasevana	Mountain Big Sagebrush
Barbarea orthoceras	American Wintercress
Bromus inermis	Smooth Brome
Carex douglasii	Douglas Sedge
Carex lanuginosa	Wooly Sedge
Carex nebrascensis	Nebraska Sedge
Comus stolonifera	Red-osier Dogwood
Elymus glaucus	Blue Wildrye
Elymus triticoides	Creeping Wildrye
Epilobium brachycarpum	Annual willow herb
Gayophytum sp.	Smokeweed
Hordeum brachyantherum	Meadow Barley
Iva axillaris	Iva (poverty weed)
Juncus triformis	Yosemite dwarf rush
Juncus balticus	Baltic Rush
Lonicera involucrate	Twinberry Honeysuckle
Lupinus lepidus	Prairie Lupine
Mentha arvensis	Field Mint
Mimulus guttatus	Common Large Monkeyflower
Penstemon rydbergii var oreocharis	Rydberg's penstemon

Phalaris arundinacea	Reed canary grass
Pinus contorta	Lodgepole Pine
Pinus jefferii	Jeffery Pine
Poa pratensis	Kentucky Bluegrass
Populus balsamifera ssp. *trichocarpa*	Black Cottonwood
Populus tremuloides	Quaking Aspen
Potentilla gracilis	Northwest Cinqnefoil (slender cincquefoil)
Purshia tridentata	Antelope Bitterbrush
Rosa woodsii	Wood's Rose
Salix geyeriana	Geyer's willow
Salix lasiolepis	Arroyo willow
Salix lemmonii	Lemmon's Willow
Sedella pumila intergerrimus	Sierra mock stonecrop
Senecio intergerrimus	Lambstongue groundsel
Solidago canadensis	Canada Goldenrod
Sitanion hystrix (= *Elvmus elvmoides)*	Bottlebrush Squirreltail
Trifolium longipes	Long-stalk Clover

APPENDIX E: WETLAND DATA SHEETS

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 6/16/17

Applicant/Owner: Town of Truckee State: CA Sampling Point: 1

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Adjacent to river, snow melt flow zone Local relief (concave, convex, none): concave Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3136500139 Long: -120.201957727 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓

Are Vegetation ____, Soil ✓, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

Seasonal snowmelt flow in low point in topography. Just south of dirt road flows east toward larger wetland area. 2004 and 2016 surveys didn't show strong evidence of hydrology, but were limited by drought conditions.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Baltic rush (Juncus balticus ater)	5		FacW
2. Kentucky blue grass (Poa pratensis)	20		Fac
3. Reed Canary Grass (Phalaris arundinacea)	5		FacW
4. Slender cinquefoil (Potentilla gracilis)	10		Fac
5. Yosemite dwarf rush (Juncus triformis)	5		FacW
6.			
7.			
8.			
9.			
10.			
11.			
	45 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 55

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species 15	x 2 = 30
FAC species 30	x 3 = 90
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: 45 (A)	120 (B)

Prevalence Index = B/A = 2.66

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

Snow melt flow area, low point in depression just north of road that flows east to main snow melt flow area and ultimately into wetland area.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2							Sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Soils don't have strong hydric characteristics. Some cobbles in profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ✓ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology is seasonal snowmelt channeled to low point in topo. Flows to east to larger wetland area and ultimately to truckee river.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 6/16/17

Applicant/Owner: Town of Truckee State: CA Sampling Point: 2

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Adjacent to river, snow melt flow zone Local relief (concave, convex, none): concave Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3147486607 Long: -120.201214762 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓

Are Vegetation ____, Soil ✓, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

Seasonal snowmelt flow in low point in topography. Just north of dirt road flows east toward main flow channel and larger wetland area. 2004 and 2016 surveys didn't show strong evidence of hydrology, but were limited by drought conditions.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Baltic rush (Juncus balticus ater	5		FacW
2. Kentucky blue grass (Poa pratensis)	20		Fac
3. Reed Canary Grass (Phalaris arundinacea)	5		FacW
4. Slender cinquefoil (Potentilla gracilis)	5		Fac
5. Yosemite dwarfrush (Juncus triformis)	5		FacW
6.			
7.			
8.			
9.			
10.			
11.			
	40 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 60

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species 15	x 2 = 30
FAC species 25	x 3 = 75
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: 40 (A)	105 (B)

Prevalence Index = B/A = 2.62

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

Snow melt flow area, low point in depression that flows east.

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2							Sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Soils don't have strong hydric characteristics. Some cobbles in profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ✓ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology is seasonal snowmelt channeled to low point in topo. Flows to east to larger wetland area and ultimately to truckee river.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 6/16/17

Applicant/Owner: Town of Truckee State: CA Sampling Point: 3

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Adjacent to river, snow melt flow zone Local relief (concave, convex, none): concave Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3156908924 Long: -120.199429277 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓

Are Vegetation ____, Soil ✓, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

Seasonal snowmelt flow in low point in topography. South of dirt road flows east toward main flow channel and larger wetland area. 2004 and 2016 surveys didn't show strong evidence of hydrology, but were limited by drought conditions.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Baltic rush (Juncus balticus ater	5		FacW
2. Kentucky blue grass (Poa pratensis)	20		Fac
3. Reed Canary Grass (Phalaris arundinacea)	5		FacW
4. Sierra mock stonecrop (Sedella pumila)	5		Fac
5. Yosemite dwarfrush (Juncus triformis)	5		FacW
6.			
7.			
8.			
9.			
10.			
11.			
	40 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 60

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species 10	x 2 = 20
FAC species 30	x 3 = 90
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: 40 (A)	110 (B)

Prevalence Index = B/A = 2.75

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

Snow melt flow area, low point in depression that flows east. In area that becomes more wooded with plant stratum more confined to low point, and upland forest trees not far outside flow area.

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2							Sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Soils don't have strong hydric characteristics. Some cobbles in profile.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ✓ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ✓ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No _____ Depth (inches): _____

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology is seasonal snowmelt channeled to low point in topo. Flows to east to larger wetland area and ultimately to truckee river.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 4

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): _____ Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3174454608 Long: -120.198065345 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Site limited by drought, just outside wetland point that receives water from seasonal snowmelt.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Purshia Tridentata (Antelope Bitterbrush)	25		Upl
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Salidago Canadnensis (Canada Golden-rod)	25		FacU
2. Kentucky blue grass (Poa pratensis)	25		Fac
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species _____	x 1 =	_____
FACW species _____	x 2 =	_____
FAC species _____	x 3 =	_____
FACU species 50	x 4 =	200
UPL species 25	x 5 =	125
Column Totals: 75 (A)		325 (B)

Prevalence Index = B/A = 4.3

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Upland location, doesn't contain hydrolphytes.

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100						Sand
10-16	10YR 3/2	100						Sand, many cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric characteristics.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area outside wetland. No hydrology present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 5

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3173577366 Long: -120.197988012 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓

Are Vegetation ____, Soil ✓, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

Site south side of the Truckee River. Hydrology is limited by the drought. Area part of larger wetland area that receives water seasonally from snowmelt flows.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Poa Pratensis (Kentucky Bluegrass)	5		FacU
2. Solidago Canadensis (Canada Golden-rod)	5		FacU
3. Carex Lanuginosa (Wooly Sedge)	10		OBL
4. Juncus Balticus (Baltic Rush)	50	Y	FacW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 10	x 1 = 10
FACW species 50	x 2 = 100
FAC species ____	x 3 = ____
FACU species 10	x 4 = 40
UPL species ____	x 5 = ____
Column Totals: 70 (A)	150 (B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/2		5YR 4/3					Sandy with some cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ✓ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Low-chroma soils with redox.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Slightly saturated in upper 12in.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 6

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3170010981 Long: -120.197833904 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓

Are Vegetation ____, Soil ✓, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

Site south side of road, receives water from snowmelt flow channel. Area part of larger wetland area that receives water seasonally from snowmelt flows. Drought.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Poa Pratensis (Kentucky Bluegrass)	5		FacU
2. Solidago Canadensis (Canada Golden-rod)	5		FacU
3. Carex Lanuginosa (Wooly Sedge)	10		OBL
4. Juncus Balticus (Baltic Rush)	50	Y	FacW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	50	x 2 =	100
FAC species		x 3 =	
FACU species	10	x 4 =	40
UPL species		x 5 =	
Column Totals:	70 (A)		150 (B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/2		5YR 4/3					Sandy with some cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ✓ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Low-chroma soils with redox.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): _____

Water Table Present? Yes ___ No ___ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Slightly saturated in upper 12in.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 7

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): _____ Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3174454608 Long: -120.198065345 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Site limited by drought, just outside wetland point that receives water from seasonal snowmelt.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Purshia Tridentata (Antelope Bitterbrush)	25		Upl
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Salidago Canadnensis (Canada Golden-rod)	25		FacU
2. Kentucky blue grass (Poa pratensis)	25		Fac
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species 50	x 4 =	200
UPL species 25	x 5 =	125
Column Totals: 75 (A)		325 (B)

Prevalence Index = B/A = 4.3

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Upland location, doesn't contain hydrolphytes.

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100						Sand
10-16	10YR 3/2	100						Sand, many cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric characteristics.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area outside wetland. No hydrology present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 8

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3181067647 Long: -120.196400162 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓

Are Vegetation ____, Soil ✓, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

Site south side of road, receives water from snowmelt flow channel, main connection to larger larger wetland area that receives water seasonally from snowmelt flows. Drought.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Poa Pratensis (Kentucky Bluegrass)	5		FacU
2. Solidago Canadensis (Canada Golden-rod)	5		FacU
3. Carex Lanuginosa (Wooly Sedge)	10		OBL
4. Juncus Balticus (Baltic Rush)	50	Y	FacW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 10	x 1 = 10
FACW species 50	x 2 = 100
FAC species ____	x 3 = ____
FACU species 10	x 4 = 40
UPL species ____	x 5 = ____
Column Totals: 70 (A)	150 (B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/2		5YR 4/3					Sandy with some cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ✓ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Low-chroma soils with redox.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Slightly saturated in upper 12in.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 9

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3180779245 Long: -120.196362249 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Hydrology is limited by the drought.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Salidago Canadnensis (Canada Golden-rod)	20		FacU
2. Kentucky blue grass (Poa pratensis)	30		Fac
3. Elymus Glaucus (Blue Wild-rye)	20		FacU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species 30	x 3 = 90
FACU species 40	x 4 = 160
UPL species _____	x 5 = _____
Column Totals: 70 (A)	250 (B)

Prevalence Index = B/A = 3.57

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Upland location, doesn't contain hydrolphytes.

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100						Sand
10-16	10YR 3/2	100						Sand, many cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric characteristics.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area outside wetland. No hydrology present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 10

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3188475156 Long: -120.195421798 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓

Are Vegetation ____, Soil ✓, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

Site north side of road, receives water from snowmelt flow channel, area where snowmelt flows and ultimately drains to truckee river. Drought.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Poa Pratensis (Kentucky Bluegrass)	5		FacU
2. Solidago Canadensis (Canada Golden-rod)	5		FacU
3. Carex Lanuginosa (Wooly Sedge)	10		OBL
4. Juncus Balticus (Baltic Rush)	50	Y	FacW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	50	x 2 =	100
FAC species		x 3 =	
FACU species	10	x 4 =	40
UPL species		x 5 =	
Column Totals:	70 (A)		150 (B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/2		5YR 4/3					Sandy with some cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ✓ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Low-chroma soils with redox.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): ___

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 6

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Slightly saturated in upper 12in.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 11

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): none Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3187791727 Long: -120.195341698 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Hydrology is limited by the drought.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Purshia Tridentata (Antelope Bitterbrush)	25		Upl
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Salidago Canadnensis (Canada Golden-rod)	25		FacU
2. Poverty weed (Iva axillaris)	15		Fac
3. Kentucky blue grass (Poa pratensis)	25		Fac
4. Douglas knotweed (Polygonum douglasii)	10		FacU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	75 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species 40	x 4 = 160
UPL species 40	x 5 = 200
Column Totals: 80 (A)	360 (B)

Prevalence Index = B/A = 4.5

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Upland location, doesn't contain hydrolphytes.

SOIL

Sampling Point: 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100						Sand
10-16	10YR 3/2	100						Sand, many cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric characteristics.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area outside wetland. No hydrology present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 12

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): _____ Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3249144717 Long: -120.188956457 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil ✓, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Hydrology is limited by the drought.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Juncus Balticus (Baltic Rush)	60		FacW
2. Gayophytum Humile (Low Groundsmoke)	40		Fac
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 60	x 2 = 120
FAC species 40	x 3 = 120
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: 100 (A)	240 (B)

Prevalence Index = B/A = 2.4

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Area within a seep. Surface water not present. Juncus strong indicator given xeric conditions and upland plants are in the vicinity.

SOIL

Sampling Point: 12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10YR 2/1	100						Loam, Organic
2-16	7.5YR2.5/2	100						Loam, Many stones and cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Low-chroma soils present only as organics in uppermost horizon. No hydric characteristics in mineral horizons. Multiple drought years before investigation. Presence of wetland plants with the xeric environmental and UPL plants in the surrounding is a strong indicator of wetland in this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 2

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soils were not real damp, little glistening. No surface water.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 13

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): None Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3248619167 Long: -120.188926514 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Hydrology is limited by the drought.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Canada bluegrass (Poa compressa)	30		FacU
2. Douglas knotweed (Polygonum douglasii)	20		FacU
3. Poverty weed (Iva axillaris)	10		Fac
4. Kentucky blue grass (Poa pratensis)	10		Fac
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species 20	x 3 = 60
FACU species 50	x 4 = 200
UPL species _____	x 5 = _____
Column Totals: 70 (A)	260 (B)

Prevalence Index = B/A = 3.71

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Upland location, doesn't contain hydrolphytes.

SOIL

Sampling Point: 13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-2	10YR 4/2	100						Loam, Organic
2-16	7.5YR4/2	100						Loam, Many stones and cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric characteristics.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area outside wetland. No hydrology present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 14

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): _____ Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3244876981 Long: -120.186873645 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil ✓, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Hydrology is limited by the drought.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Juncus Balticus (Baltic Rush)	60		FacW
2. Gayophytum Humile (Low Groundsmoke)	40		Fac
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 60	x 2 = 120
FAC species 40	x 3 = 120
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: 100 (A)	240 (B)

Prevalence Index = B/A = 2.4

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Area within a seep. Surface water not present. Juncus strong indicator given xeric conditions and upland plants are in the vicinity.

SOIL

Sampling Point: 14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100						Loam, Organic
2-16	7.5YR2.5/2	100						Loam, Many stones and cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Low-chroma soils present only as organics in uppermost horizon. No hydric characteristics in mineral horizons. Multiple drought years before investigation. Presence of wetland plants with the xeric environmental and UPL plants in the surrounding is a strong indicator of wetland in this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 2

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soils were not real damp, little glistening. No surface water.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 15

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): None Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3245304977 Long: -120.186841161 Datum: NAD 83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

Hydrology is limited by the drought.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Canada bluegrass (Poa compressa)	30		FacU
2. Douglas knotweed (Polygonum douglasii)	20		FacU
3. Poverty weed (Iva axillaris)	10		Fac
4. Kentucky blue grass (Poa pratensis)	10		Fac
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species 20	x 3 = 60
FACU species 50	x 4 = 200
UPL species _____	x 5 = _____
Column Totals: 70 (A)	260 (B)

Prevalence Index = B/A = 3.71

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Upland location, doesn't contain hydrolphytes.

SOIL

Sampling Point: 15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 4/2	100						Loam, Organic
2-16	7.5YR4/2	100						Loam, Many stones and cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric characteristics.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Area outside wetland. No hydrology present.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 16

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): _____ Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3244876981 Long: -120.186873645 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No ✓

Are Vegetation _____, Soil ✓, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Hydrology is limited by the drought. Area is an overflow or subsurface flow area from pond.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Juncus Balticus (Baltic Rush)	60		FacW
2. Gayophytum Humile (Low Groundsmoke)	40		Fac
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 60	x 2 = 120
FAC species 40	x 3 = 120
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: 100 (A)	240 (B)

Prevalence Index = B/A = 2.4

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Area is an overflow or subsurface flow area from pond. Surface water not present. Juncus strong indicator given xeric conditions and upland plants are in the vicinity.

SOIL

Sampling Point: 16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100						Loam, Organic
2-16	7.5YR2.5/2	100						Loam, Many stones and cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Low-chroma soils present only as organics in uppermost horizon. No hydric characteristics in mineral horizons. Multiple drought years before investigation. Presence of wetland plants with the xeric environmental and UPL plants in the surrounding is a strong indicator of wetland in this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 2

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soils were not real damp, little glistening. No surface water.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 17

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Meadow Local relief (concave, convex, none): none Slope (%): >5%

Subregion (LRR): MLRA22A Lat: 39.3247039876 Long: -120.186470176 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

Outside wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: _____)			
1. Elymus Glaucus (Blue Wild-rye)	80		FacU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species 80	x 4 =	320
UPL species	x 5 =	
Column Totals: 80 (A)		320 (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

Cover by Percent: Elymus, 80%.

SOIL

Sampling Point: 17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/3		N/A					Loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No recorded data.

Remarks:

outside wetland

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 18

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Meadow Local relief (concave, convex, none): none Slope (%): >5%

Subregion (LRR): MLRA22A Lat: 39.3247039876 Long: -120.186470176 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

Outside wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: _____)			
1. Elymus Glaucus (Blue Wild-rye)	60		FacU
2. Canada bluegrass (Poa compressa)	10		FacU
3. Douglas knotweed (Polygonum douglasii)	10		FacU
4.			
5.			
6.			
7.			
8.			
	80 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species 80	x 4 =	320
UPL species	x 5 =	
Column Totals: 80 (A)		320 (B)

Prevalence Index = B/A = 4

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/3		N/A					Loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

No hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

No recorded data.

Remarks:

outside wetland

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 19

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): None Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3247173213 Long: -120.186033956 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✓ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ✓

Are Vegetation ____, Soil ✓, or Hydrology ✓ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

Hydrology is limited by the drought.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ = Total Cover		
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
	____ = Total Cover		
Herb Stratum (Plot size: ____)			
1. Juncus Balticus (Baltic Rush)	20	Y	FacW
2. Gayophytum Humile (Low Groundsmoke)	2		Fac
3. Poverty weed (Iva axillaris)	5		Fac
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	27 = Total Cover		
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
	____ = Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species 20	x 2 = 40
FAC species 7	x 3 = 21
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: 27 (A)	61 (B)

Prevalence Index = B/A = 2.25

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

Area within ice pond. Surface water not present. Plant cover low.

SOIL

Sampling Point: 19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/1	100						Loam, Organic
2-16	7.5YR2.5/2	100						Loam, Many stones and cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ✓ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Low-chroma soils present only as organics in uppermost horizon.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ✓ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Surface Soil Cracks (B6)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ✓ Depth (inches): _____

Water Table Present? Yes ___ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 2

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soils damp, little glistening. No surface water. Pond appears to be filled at times from adjacent seep.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Truckee Trail Phase IV City/County: Nevada County Sampling Date: 7/27/16

Applicant/Owner: Town of Truckee State: CA Sampling Point: 20

Investigator(s): Steve McMurtry Section, Township, Range: Section 15-21, T17N, R16E

Landform (hillslope, terrace, etc.): Beside low flow from base of steep slope Local relief (concave, convex, none): _____ Slope (%): <1%

Subregion (LRR): MLRA22A Lat: 39.3242694011 Long: -120.185074102 Datum: NAD83

Soil Map Unit Name: EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

Hydrology is limited by the drought. Area is a seep with flow.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Red-osier Dogwood (Cornus Stolinifera)	33		FacW
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: _____)			
1. Salix Geyerana (Geyer Willow)	33		Obl
2. Four-line Honeysuckle (Lonicera Involucrata)	33		Fac
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	33	x 1 =	33
FACW species	33	x 2 =	67
FAC species	33	x 3 =	100
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✓ 2 - Dominance Test is >50%

✓ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ 5 - Wetland Non-Vascular Plants[1]

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Area within a seep.

SOIL

Sampling Point: 20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100						Loam, Organic
>6	N/A	100						Loam, Many stones and cobbles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1) (**except MLRA 1**)
- ✓ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Profile below 6 inches primarily rock, not soil. Low chroma in upper 6 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9) (**except MLRA 1, 2, 4A, and 4B**)
- ___ Salt Crust (B11)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Stunted or Stressed Plants (D1) (**LRR A**)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water-Stained Leaves (B9) (**MLRA 1, 2, 4A, and 4B**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Raised Ant Mounds (D6) (**LRR A**)
- ___ Frost-Heave Hummocks (D7)

Field Observations:

Surface Water Present? Yes ___ No ___ Depth (inches): 1

Water Table Present? Yes ___ No ___ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): ___

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Water present.

APPENDIX F: SIGNED STATEMENT FROM PROPERTY OWNERS ALLOWING ACCESS

CONSENT FOR ACCESS TO PROPERTY

NAME: _____

ADDRESS OF PROPERTY: _____

I (We) consent to the officers, employees, agents, contractors, subcontractors, consultants, and other authorized representatives of the United States Army Corps of Engineers ("USACE") entering the above-referenced properties for the following purpose(s):

- to perform an aquatic resources delineation
- to verify an aquatic resources delineation

I (We) give this written permission voluntarily with knowledge of my (our) right to refuse and without threats or promise of any kind.

Signature: _____

Name (Print): _____

Date: _____

Property Owner Contact Information

_____
_____
_____

APPENDIX G: AQUATIC RESOURCE EXCEL SHEET

Appendix D: Biological Resources Assessment

BIOLOGICAL RESOURCES ASSESSMENT

TRUCKEE RIVER LEGACY TRAIL – PHASE 4

TRUCKEE, NEVADA AND PLACER COUNTY, CA

MAY 15, 2019

Prepared for:

Town of Truckee
Engineering Division
10183 Truckee Airport Road
Truckee, CA 96161
Tel: 530-582-7700
Fax: 530-582-7710
www.townoftruckee.com

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

BIOLOGICAL RESOURCES ASSESSMENT

TRUCKEE RIVER LEGACY TRAIL – PHASE 4

TRUCKEE, NEVADA AND PLACER COUNTY, CA

MAY 15, 2019

Prepared for:

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TABLE OF CONTENTS

INTRODUCTION

The purpose of this report is to disclose and analyze the potential effects on biological resources within the Biological Study Area, hereinafter referred to as Area of Potential Effects (APE) for the Phase 4 of the Truckee River Legacy Trail. This report is based in-part on recent fields studies, research, and records searches, as well as field surveys and research performed in approximately 2007 as detailed in *Listed and Sensitive Species Assessment, Truckee Recreational Trail, Phase 4 and Martis Creek Realignment Area, Truckee, California* (JBR Environmental Consultants, Inc. 2007) and in *Delineation of Wetlands and Waters of the United States, Truckee Recreational Trail, Phase 4 and Martis Creek Realignment Area, Truckee, California* (JBR Environmental Consultants, Inc. 2007).

LITERATURE REVIEW AND SURVEYS

The Biological Evaluation/Biological Assessment of plants and wildlife was based on literature reviews, plant/wildlife data base records held by regulatory agencies, and extensive field surveys over a 10+ year span.

Biological evaluations of Phase 4 of the trail was initiated in 2006 when the Town contracted with JBR Environmental Consultants, Inc. JBR perform field surveys and evaluated the potential for special status plants and wildlife, as well as wetlands to occur within the boundary of the project. JBR conducted field surveys for sensitive plant and animal species, and wetlands on June 21 and 23, and July 6 and 13, 2006. The results of the field surveys and research performed is detailed in *Listed and Sensitive Species Assessment, Truckee Recreational Trail, Phase 4 and Martis Creek Realignment Area, Truckee, California* (JBR Environmental Consultants, Inc. 2007) and in *Delineation of Wetlands and Waters of the United States, Truckee Recreational Trail, Phase 4 and Martis Creek Realignment Area, Truckee, California* (JBR Environmental Consultants, Inc. 2007).

2016 RE-INITIATION OF INVESTIGATIONS

Following the previous field investigations by JBR Environmental Consultants in 2006-2007, the project went on hold. In 2016, the Town contracted with Mark Thomas and Company to begin evaluating alignments of the Phase 4 Trail. The intent of this effort was to identify opportunities and constraints with the objective of avoiding sensitive cultural and biological resources, and ultimately develop 30% plans for approval. De Novo Planning Group was hired to prepare a biological resources assessment of the project site. This involved an evaluation of the potential for special status plants and wildlife, wetlands, and general habitat documentation.

Prior to the field investigation, numerous maps, databases, and reports were reviewed including:

- Truckee, California, U.S. Geological Survey (USGS) 7.5-minute Quadrangle
- USGS National Hydrography Data Set
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps
- National Resource Conservation Service (NRCS) Soil Survey
- California Wildlife Habitat Relationships (CWHR) maps

- California Natural Diversity Database (CNDDB)
- California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants
- U.S. Fish and Wildlife Service's (USFWS) IPac
- U.S. Fish and Wildlife Service's (USFWS) Official List
- Truckee Trails and Bikeways Master Plan
- Sierra Nevada Forests Management Indicator Species Amendment Record of Decision (USDA Forest Service 2007)
- Tahoe National Forest Land and Resource Management Plan (USDA 1990)
- Migratory Landbird Conservation, Truckee River Legacy Trail Phase 3B Project. Tahoe National Forest, Truckee Ranger District. 2013
- Project Management Indicator Species Report, Truckee River Legacy Trail s Phase 3B Project. Tahoe National Forest, Truckee Ranger District 2013.
- Biological Evaluation for Sensitive Plants and Fungi, Truckee River Legacy Trail Phase 3B, Truckee Ranger District, Tahoe National Forest, 2013
- Weed Risk Assessment, Truckee River Legacy Trail Phase 3B Project, Tahoe National Forest Truckee Ranger District. 2013.
- Biological Evaluation/Biological Assessment, Birds Mammals, Amphibians, Reptiles, Fish, Invertebrates, Truckee River Legacy Trail Phase 3B, Truckee Ranger District, Tahoe National Forest 2013.

Field investigations were performed in the study area on July 27 and 28, 2016, August 19, 2016, September 23, 2016, June 16, 2017, and August 22, 2017. The surveys served several purposes. First, they served as reconnaissance of the site to establish the existing conditions of the site and to verify information gathered in the pre-field investigation. This included identification of the habitat types, hydrologic features, topography, soil characteristics, vegetation.

The field investigations followed the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2009). Field investigations were performed during the floristic period for species in the region. Field investigations during the winter period were deemed inappropriate do to the anticipated snow covering vegetative material. Due to the 2016 drought conditions, surveys were also performed in 2017 to represent the non-drought conditions. Field investigations were performed on foot using transects. In areas with high vegetative variation, transects were spaced approximately 10 feet apart. In areas with high vegetative monotony, transects were wider and the focus was on finding smaller vegetative inclusions among the monotony. All surveys were conducted on foot.

The field investigation included recording habitat, and the BSA was inspected for the presence, or potential for presence of wildlife. This included inspecting the trees for signs of active or remnant nests. The riparian corridor in the areas proposed for a bridge were intensively surveyed for birds. The timing of the field investigations coincided with the nesting season. The area was inspected for its upland and aquatic habitat functions. The Truckee River was inspected for backwater areas or other areas with slower moving waters for potential amphibian breeding habitat. The perennial drainage originating as a seep along the eastern boundary was investigated for amphibian visual

encounters. The timing of the field investigations coincided with multiple periods where visual encounters would be expected if present.

Tools used during the field investigations included a Trimble GeoExplorer XH Handheld (sub-foot unit), 30-meter tape measure, diameter tape, spade, Munsell color chart, Vortex 20-60x80 spotting scope, and Bushnell 10x42 binoculars.

PROJECT OVERVIEW

The proposed project (Truckee Legacy Trail Phase 4) travels through the Town of Truckee (Town) and unincorporated Placer County; the Town is acting as the Lead Agency. In April 2002, the Town adopted the original *Truckee Trails and Bikeways Master Plan*. The *Truckee Trails and Bikeways Master Plan* was updated most recently in 2015. *The Town of Truckee 2025 General Plan* provides a framework for the *Truckee Trails and Bikeways Master Plan*. Many land use, circulation, and conservation and open space policies contained within the Town of Truckee General Plan encourage the implementation of a non-motorized network that creates recreation and transportation opportunities in Truckee and neighboring jurisdictions. Furthermore, the *Placer County General Plan* identifies several goals and policies that encourage the development of properly-designed parks and recreational facilities and the development of a system of interconnected hiking, riding, and bicycling trails and paths, and the protection of the County's important historical, archaeological, paleontological, and cultural sites.

The *Truckee Trails and Bikeways Master Plan* set out a vision for the Truckee River Legacy Trail project, which upon completion, would link together Donner Lake area in the west of town to the Glenshire neighborhood in the east. Since 2002, phases 1, 2, 3A, and 3B of the Truckee River Legacy Trail have been completed, which connect to the proposed Phase 4 at the eastern end. In addition, a short section of trail along State Route (SR) 89 (the Mousehole Project) is completed. The Mousehole Project provides a tunnel under the Union Pacific Railroad tracks and a 10-foot wide multi-use path along State Route (SR) 89 between Deerfield Drive to West River Street providing a northwest connection to the proposed Phase 4 trail segment. The proposed Legacy Trail Phase 4 provides the missing link between these existing segments of trail. In addition, Phase 4 provides a connection to the future Placer County trail connection to Squaw Valley. For these reasons, the trail is an essential alternative transportation network between Truckee and Tahoe City.

When completed, the proposed project would feature approximately 1.9 miles of Class 1 (paved) bikeway and recreation trail between the Truckee River Regional Park (Brockway Road and Palisades Drive intersection) and West River Street near the intersection of SR 89 South. This section of the Legacy Trail would cross both public and private property and would also include an approximately 400-foot bridge across the Truckee River.

The proposed project would include improved public access to the Truckee River, a paved trailhead parking area adjacent to West River Street with a restroom facility, possibly a small concession stand, and amenities such as benches/trash cans/interpretive signage along the trail alignment. The proposed project may require relocation of power poles that are located on the site. Access roads are provided off of the main trail for utility providers to access their existing infrastructure via the

existing dirt roads on site. The parking lot, restrooms, river access area, and paved multi-use trail would be consistent the American Disabilities Act (ADA) Standards for Accessible Design (i.e. it would be ADA accessible).

Soft surface (i.e. unpaved) trails are also planned that would connect to an existing trail network located off of Silver Fir Circle, Thelin Court, and Aspenwood Road adjacent to USFS property and the Sawtooth trail system/06 Road, and to an existing dirt road on the Truckee Springs property. The paved and soft surface trails would be limited to non-motorized use, with an exception for regular maintenance and utility vehicle access.

Phase 4 of the Truckee River Legacy Trail is expected to be the second to last portion of the Truckee River Legacy Trail to be constructed. When complete, the entirety of the Truckee River Legacy Trail system would include an approximate 10-foot wide paved trail from Donner Memorial State Park in the west to the Glenshire neighborhood in the east. Most of the route would parallel the Truckee River.

PROJECT LOCATION

The project is located between Truckee Regional Park (at the intersection of Brockway Road and Palisades Drive) and SR 89 South (at the intersection of West River Street), in the Town of Truckee and portions of eastern Placer County.

The western portion of the project is located within the Tahoe National Forest. The project traverses lands owned by the Truckee-Donner Public Utilities District, Town of Truckee, the United States of America (Forest Service), the State of California (Department of Fish and Wildlife, Department of Transportation), Truckee Springs LLC, Redbank Properties LLC, Don & Nancy Davis Trust, Jonathan Shantz Trust, Thomas Young Trust, Gregg Henrikson Trust, Truckee Senior Neighborhood, LLC, Foothill Air-Conditioning and Heating/Davies/Fitch Partners, Jar-Hilltop, Mina Mostoufi, Henry Klehn Jr. and Brenda Willson Klehn Trust, Reynolds Family Partners, and the Truckee Donner Recreation and Park District.

The proposed project (also called the proposed action within this Initial Study) generally follows the path of the Truckee River along its south bank, in an area that is largely flat to rolling, with hilly terrain located within the southern portion of the trail planning area. The trail planning area correlates fully with the Area of Potential Effect (APE). The trail planning area includes all or part of the Town of Truckee Assessor's Parcel Numbers (APNs) 19-450-42, 19-300-75, 19-300-74, 19-300-31, 19-300-23, 19-300-21, 19-300-20, 19-300-18, 19-300-17, 19-300-16, 19-300-12, 19-300-05, 19-152-44, 19-140-17, 19-140-09, 19-140-08, 19-130-30, 19-130-29, 19-130-28, 19-130-27, 19-130-26, 18-660-43, 18-660-42, and all or part of Placer County APNs 080-020-015, 080-010-015, 080-020-008, 080-020-010, 080-020-003, and 080-320-032. The project's regional location is shown in Figure 1 and the project vicinity is shown in Figure 2.

HILLTOP MASTER PLAN

The Hilltop Master Plan Area is a planning sub-area of the Downtown Specific Plan generally located south of Brockway Road and west of Palisades Drive. A portion of the Hilltop Master Plan Area

overlaps the northeastern portion of the proposed project. The Hilltop Master Plan and Design Guidelines were adopted in August 2008 and provide policies and implementation measures to guide future development of the area. The Hilltop Master Plan and Design Guidelines includes multiple guidelines for bicyclists and pedestrians, including for the portion of the proposed project within the boundaries of the Hilltop Master Plan, located to the south and west of Brockway Road.

TRUCKEE SPRINGS MASTER PLAN

The Truckee Springs property consists of approximately 25.5 acres of undeveloped land at the western end of South River Street, adjacent to the Truckee River. A portion of the proposed project trail would traverse a portion of this area, towards the eastern end of the trail. The Truckee Springs project may develop this property for residential and/or hotel/lodging units.

EXISTING SITE USES

The proposed project trail planning area is currently on mostly vacant/undeveloped land, abutting the Truckee River. Depending on the proposed project's final alignment, portions of the trail planning area may run through or adjacent to residential land uses. There are existing soft surface trails that currently run through much of the proposed trail planning area. There are also existing access roads located sporadically throughout the trail planning area.

SURROUNDING LAND USES

The surrounding land uses consist primarily of vacant and/or undeveloped land. Additionally, the Truckee River runs along the north of the trail planning area, except where the trail would cross the Truckee River (via a bridge) at the western portion of the trail. Commercial developments and residential developments are currently located near the eastern edge of the trail planning area, and commercial developments exist, near the central and western portions of the trail planning area on the north side of the Truckee River. A small residential community also exists just north of the western edge of the trail planning area, east of SR 89 and north of West River Street. The eastern end of the trail would intersect with Truckee River Regional Park.

Furthermore, as described above, the trail planning area crosses the Hilltop Master Plan area. The Hilltop Master Plan area contains the following proposed uses: Downtown Commercial, Downtown Mixed Use, Downtown High Density Residential, Downtown Medium Density Residential, and Downtown Mixed Use. As described previously, the trail planning area crosses some of these land uses in the northeastern part of the trail planning area (near Brockway Road).

GENERAL PLAN AND ZONING DESIGNATIONS

The trail planning area includes the following Town of Truckee General Plan land uses: Residential Cluster Average Density 1 du/5 acres (RC-5) (in the south-central portion of the trail planning area) and a small amount of Commercial (in the far eastern portion of the trail planning area). The trail planning area also includes the following Plan Area: Downtown Specific Plan Area (along the alignment of the Truckee River). Additionally, the southwestern portion of the trail planning area is in unincorporated Placer County, and is currently primarily designated Agriculture/Timberland

(AG/T) by the Placer County General Plan Land Use Map, with a small portion of this area designated Low Density Residential 1 – 5 du/acre (LDR). See Figure 3 for the respective General Plan land uses for the trail planning area.

The trail planning area traverses the following Town of Truckee zoning districts: Downtown Master Plan (DMP), Downtown Mixed Use (DMU), Public Facilities (PF), Downtown Single Family Residential (DRS), Rural Residential (RR), and General Commercial (CG). The trail planning area also traverses the following Placer County zoning districts (in the portion of the trail planning area located outside of the Town of Truckee): Forestry (FOR), Water Influence (W), and Residential Single Family (RS). See Figure 4 for the respective zoning for the trail planning area.

PROJECT DESCRIPTION

The Town of Truckee is continuing with its implementation of the Truckee *Trails and Bikeways Master Plan*, originally adopted by the Town Council in April 2002. The *Truckee Trails and Bikeways Master Plan* was updated in 2007, 2012, and most recently in 2015. Within the most recent version of the Plan, the Truckee River Legacy Trail, which includes the proposed action, was given the highest priority rating, based on community benefit scores and the level of public support received through public workshops and online surveys.

The Truckee River Legacy Trail is the culmination of nearly 20 years of planning and collaboration between the Town and the community. The Truckee River Legacy Trail has been a public/private partnership between federal, state, and local agencies, non-profits organizations, and volunteers. The focal point of the trail is the Truckee River. The trail is designed to provide cyclists and pedestrians an essential alternative transportation facility with views of the river without encroaching on the fragile riparian areas along its banks.

The proposed action would develop Phase 4 of the Truckee River Legacy Trail from Palisades Drive/Brockway Road to the SR89/West River Street intersection. When completed, the proposed action would feature approximately 1.9 miles of Class 1 (paved) bikeway and multi-use trail between the Truckee River Regional Park (Brockway Road and Palisades Drive intersection) and SR 89 South (by West River Street). This section of the Truckee River Legacy Trail would cross both public and private property and would include an approximately 400-foot bridge across the Truckee River. Drainage crossings would have open bottom culverts or similar structures to avoid impacts to the seasonal drainage channels. The preferred trail alignment (West Bridge) is shown in Figure 5a (Proposed Trail Alignment).[1] The preferred alignment of the bridge is the western alignment located on the USFS parcel. Separately, Figure 5b provides a conceptual map of the entire APE, inclusive of the temporary impact areas that are associated with both the proposed alignment and the alternative alignments (including a truck turn-around area and a potential construction

[1] The preferred alignment is also called the "Proposed Project - West Bridge" within this Initial Study.

vehicle/equipment staging area), as well as the location of a (non-project) future soft surface trail connection.

The proposed action would connect to Truckee River Legacy Trail Phases 1-3B in the east, the Mousehole Project to the northwest (providing a connection to planned Phase 5 of the Truckee River Legacy Trail in the west), and nearby soft surface trails. Placer County is also planning a trail connection from the proposed bridge to Squaw Valley.

Figure 5c provides a Potential Phasing Plan for constructing the trail in shorter segments. This may be necessary to accommodate funding resources and opportunities, as well as property ownership challenges. If the project is phased, segments will likely be constructed from the east to the west, but may also be constructed from the west to east, provided they are connected to a previous segment. Multiple segments may be constructed at the same time. The phasing plan provides breakpoints for the segments that can provide an independent utility for the trail, such as river access, views, or connection to an existing trail, road, or public property.

The proposed project would provide a trailhead parking area adjacent to West River Street (with a restroom) and the option for a small kiosk or concession structure, and amenities such as benches/trash cans/interpretive signage along the trail alignment. The signage will include wayfinding/signage that informs trail users, and encourages them to stay on the designated trail (i.e. minimize dispersed recreation). Soft surface trails are also planned that will connect to an existing trail network located off of Silver Fir Drive and Aspenwood Drive and to an existing dirt road in Truckee Springs. The paved and soft surface trails will be limited to non-motorized use, with an exception for regular maintenance, utility, and emergency vehicle access. The project will also include a boardwalk across the spring above ice pond. The proposed action may require relocation of power poles that are located on the site.

The enhanced pedestrian access to the Truckee River on the Town of Truckee property will include paved parking spaces, improved walking surfaces, erosion prevention, trail amenities, and/or similar improvements. It is also anticipated that there will be a launch/take out established along the river in an area that has a short existing trail to the river. The existing vehicle access to the river will be decommissioned and sensitive disturbed areas will be restored.

The proposed bridge crossing(s) will include aesthetic features such as decorative railings or pilasters on the approaches. The addition of a "bulb-out" on the bridge to provide for an overlook of the Truckee River will also be considered. The trail alignment also accommodates a future roundabout at the entrance to the Hilltop Development at Brockway Road for future development in that area. The trail will then be re-aligned through the roundabout once it is constructed. Impacts for both of these scenarios have been included within this document.

The proposed action would be engineered to ensure that the existing Tahoe-Truckee Sanitation Agency (TTSA) pipelines that run near/adjacent to the proposed trail are not impacted by additional loading due to the trail and that maintenance access by TTSA can continue. Details for this loading would be developed during final project design. These TTSA pipelines would also be protected from

damage by construction activities. A connection to a TSD service line will also be required for the proposed restroom.

Utilities are located along the trail alignment and utility providers utilize the existing dirt roads within the project area to maintain the utility infrastructure. To continue to provide utility access across the property and across the bridge, short dirt access roads are provided from the existing dirt roads to the proposed trail to maintain access on either side of the proposed bridge.

ALTERNATIVES

The preferred trail alignment (West Bridge) is shown in Figure 5a (Proposed Trail Alignment). The two primary alternatives to the preferred trail alignment are the Middle Bridge Alternative and Donner Creek Bridge Alternative. The proposed project would construct only one of the bridge crossings over the Truckee River (e.g. the West Bridge under the proposed project, or either the Middle Bridge under the Middle Bridge Alternative or the Donner Bridge under the Donner Creek Bridge Alternative)[2], and one continuous trail alignment. It is noted that if the Donner Creek Bridge alternative was selected, there would be a need for a second bridge crossing across Donner Creek. This second bridge across Donner Creek would not be needed under the proposed project, or Middle Bridge alternative. Separately, there is an additional alignment alternative near the eastern edge of the proposed project (shown as "K3" in Figure 5a).

Project sponsors reviewed an alternative alignment (shown in Figure 5a) between the Middle Bridge and Donner Creek Bridge alignments, taking advantage of existing disturbance on the island within the floodplain that would result in the shortest bridge (bridge span B1) over the Truckee River. This alignment is less impactful as compared to the proposed alignment, as some of this alignment would follow an existing dirt road; it is relatively level; it does not cross eligible cultural resources, or wetlands; and it results in the shortest bridge over the Truckee River. This alternative alignment is contingent on a private property owner granting an easement that would bifurcate the parcel, resulting in the loss of buildable area. For purposes of the environmental analysis, the least intrusive crossing of this private parcel was evaluated. This alternative alignment is incorporated into the project environmental analysis as an option that is considered to have the same or less environmental impact.

AREA OF DISTURBANCE

Construction of the proposed project would impact between approximately 11.4 and 12.6 acres, depending on the exact alignment and bridge that is constructed. This would include between approximately 5.0 and 5.9 acres of permanent impact and between 6.6 and 6.7 acres of temporary disturbance, as provided in Tables 1 through 3 (note: depending on the alternative selected). These areas of disturbance were estimated based on the alignments developed by the proposed project engineer (Mark Thomas, 2019). The following tables (Tables 1 through 3) provide a breakdown of

[2] See "Figure 5a: Proposed Trail Alignment" for further detail.

the estimated area of disturbance associated with the proposed project (i.e. "Proposed Project – West Bridge) and the two alternatives (i.e. the Middle Bridge Alternative and the Donner Creek Bridge Alternative), respectively.

TABLE 1: PROPOSED PROJECT - WEST BRIDGE - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
Bridge Facilities			
Bridge Span (A1)	0.12	0.00	0.12
Subtotal	***0.12***	***0.00***	***0.12***
At-grade Facilities			
At-Grade Segments	1.92	4.74	6.66
Parking Area	1.68	0.19	1.87
Soft Surface Trail	0.98	0.00	0.98
Boardwalk (K2)	0.03	0.00	0.03
Trail Modification (near Brockway) (i.e. Future Roundabout)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97
Subtotal	***4.87***	***6.43***	***11.30***
Total	***4.99***	***6.55***	***11.42***

Notes: 1) The area of disturbance calculations for bridges include the bridge area, however, it is noted that the bridge does not have an on-ground physical impact (permanent or temporary) given that they are spans with limited piles. Abutment areas are included in the at-grade area calculations.
2) Segments D1, D2, and D3 are shown within the Parking Area.
3) Numbers may not add up due to rounding.

Source: Mark Thomas, 2019.

TABLE 2: MIDDLE BRIDGE ALTERNATIVE - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
Bridge Facilities			
Bridge Span (B1)	0.07	0.00	0.07
Bridge Span (C1)	0.66	0.00	0.66
Subtotal	*0.73*	*0.00*	*0.73*
At-grade Facilities			
At-Grade Segments	1.93	4.47	6.40
Parking Area	1.68	0.19	1.87
Soft Surface Trail	0.98	0.00	0.98
Boardwalk (K2)	0.03	0.00	0.03
New TTSA access	0.05	0.10	0.16
Trail Modification (near Brockway) (i.e. Future Roundabout Connection)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97
Bridge access road	0.06	0.02	0.07
Subtotal	*4.99*	*6.28*	*11.27*
Subtotal (Bridge and at-grade Facilities)	***5.72***	***6.28***	***12.00***
At-grade Options			
At-grade Segment (A3)	0.19	0.37	0.56
At-grade Segment (E1)	0.18	0.42	0.60
Total w/ A3	***5.91***	***6.65***	***12.56***
Total w/ E1	***5.90***	***6.70***	***12.60***

Notes: 1) The area of disturbance calculations for bridges include the bridge area, however, it is noted that the bridge does not have an on-ground physical impact (permanent or temporary) given that they are spans with limited piles. Abutment areas are included in the at-grade area calculations.
2) Segments D1, D2, and D3 are shown within the Parking Area.
3) Numbers may not add up due to rounding.
Source: Mark Thomas, 2019.

TABLE 3: DONNER CREEK BRIDGE ALTERNATIVE - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
Bridge Facilities			
Bridge Spans (F1) – Donner Creek and Truckee River	0.15	0.00	0.15
Bridge Span (G1)	0.05	0.00	0.05
Subtotal	*0.20*	*0.00*	*1.20*
At-grade Facilities			
At-Grade Segments	1.93	4.45	6.38
Parking Area	1.68	0.19	1.87
Soft Surface Trail	0.98	0.00	0.98
Boardwalk (K2)	0.03	0.00	0.03
New TTSA access	0.05	0.10	0.16
Trail Modification (near Brockway) (i.e. Future Roundabout Connection)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97
Bridge access road	0.07	0.01	0.08
Subtotal	*5.00*	*6.25*	*11.26*
Subtotal (Bridge and at-grade Facilities)	***5.20***	***6.25***	***11.46***
At-grade Options			
At-grade Segment (A3)	0.19	0.37	0.56
At-grade Segment (E1)	0.18	0.42	0.60
Total w/ A3	***5.39***	***6.62***	***12.02***
Total w/ E1	***5.38***	***6.67***	***12.06***

Notes: 1) The area of disturbance calculations for bridges include the bridge area, however, it is noted that the bridge does not have an on-ground physical impact (permanent or temporary) given that they are spans with limited piles. Abutment areas are included in the at-grade area calculations.
2) Segments D1, D2, and D3 are shown within the Parking Area.
3) Numbers may not add up due to rounding.
Source: Mark Thomas, 2019.

The plan and profiles for the trail segments, which includes the cut and fill, are included in Appendix A. The area disturbed includes the footprint of the trail facility and an approximately 10-foot buffer on each side of the full length of the segment to account for construction equipment disturbance. In some more sensitive areas (i.e. near wetlands), the buffer is reduced to avoid and minimize impacts to the wetlands. Table 4 provides a breakdown of the estimated area of disturbance for the facilities that would be on-ground.

TABLE 4: ON-GROUND FACILITIES - AREA OF DISTURBANCE (ACRES)

Facility	*Permanent*	*Temporary*	*Total*
At-Grade Segments			
A1	0.02	0.33	0.35
A2	0.03	0.06	0.08
A3	0.19	0.37	0.56
A4	0.01	0.01	0.02
A5	0.35	0.74	1.10
C1 (only for Middle Bridge Alternative)	0.03	0.06	0.09
E1 (option)	0.18	0.42	0.60
F1 (for Donner Creek or Middle Bridge Alternatives)	0.02	0.03	0.05
G1 (only for Donner Creek Bridge)	0.01	0.01	0.02
H1	0.18	0.36	0.55
K1	0.38	0.99	1.37
I1	0.23	0.47	0.70
K2 (includes sidewalks)	0.36	0.98	1.34
K3 (option)	0.09	0.16	0.25
K4	0.18	0.43	0.61
L1 (only for Middle Bridge/Donner Creek Bridge Alternative)	0.08	0.15	0.23
Bridge			
A1 (Proposed Project – West Bridge)	0.12	0.00	0.59
B1 (Middle Bridge Alternative)	0.07	0. 00	0.35
C1 (Middle Bridge Alternative)	0.66	00	3.30
F1 (Donner Creek Bridge Alternative – Donner Creek Bridge)	0.03	00	0.14
F1 (Donner Creek Bridge Alternative – Truckee River Bridge)	0.12	00	0.62
G1 (Donner Creek Bridge Alternative)	0.05	00	0.26
Boardwalks			
K2	0.03	0.00	0.03
Parking Area			
Trailhead Parking Lot	1.66	0.00	1.66
D1 (w/in parking lot)	0.00	0.03	0.03
D2 (w/in parking lot)	0.00	0.08	0.08
D3 (w/in parking lot)	0.02	0.09	0.11
Subtotal	***1.68***	***0.19***	***1.87***
Other Segments			
Soft Surface Trails (all)	0.98	0.00	0.98
West Bridge access road (under proposed project)	0.03	0.00	0.03
Middle Bridge access road (under Middle Bridge Alt.)	0.06	0.02	0.07
Donner Creek Bridge access road (Under Donner Creek Bridge Alt.)	0.07	0.01	0.08
New TTSA access road (only under Alternatives)	0.05	0.10	0.16
Trail Modification (near Brockway Rd.) (i.e. Future Roundabout Connection)	0.26	0.51	0.77
Truck Turn-around Area (for construction trucks)	0.00	0.02	0.02
Potential Staging Area (for construction vehicles)	0.00	0.97	0.97

Notes: 1) Segments D1, D2, and D3 are shown within the Parking Area.

2) Numbers may not add up due to rounding. Source: Mark Thomas, 2019.

The trail segments were designed to minimize impacts to riparian and wetlands to the extent feasible by either avoiding through design or constructing a boardwalk or bridge that spans these areas. The boardwalk/bridge would still result in some loss of natural light on the underside of the boardwalk and vegetated areas would become largely barren. Also, the bridge would include piles to support the bridge, which will have very little impact to the wetland. As such, portions of the boardwalk/bridge areas are classified as permanent impact within this study. However, in general, although the boardwalk is expected to generate a permanent impact (due to shading and being close to grade), the bridge span would not have a permanent impact to riparian and wetlands.

The trail segments portion of the project, which excludes the bridge and boardwalk portions of the project, would include approximately 0.0073 acres of impacts to wetlands (0.0035 permanent impact and 0.0038 temporary impact). These impacts are irrespective of the bridge that is selected. The bridge and boardwalk portion of the project would include impacts that range from approximately 0.0425 to 0.0680 acres of impacts to wetlands, depending on the bridge that is selected. Therefore, the total wetland impact (inclusive of the impact to the trail segments, bridges, and boardwalk) is anticipated to range between approximately 0.0498 to 0.0753 acres. Table 5, below, provides a summary of area of impact to wetlands (by wetland type) from the trail segments (excluding bridges and boardwalk segments). Table 6 provides a summary of the area of impact to wetlands (by wetland type) from the bridge and boardwalk segments.

TABLE 5: SUMMARY OF TRAIL SEGMENT WETLAND IMPACTS (PERMANENT AND TEMPORARY) (ACRES)

Facility	*Wetland Type*			*Grand Total*
	Riparian	*Waters of the U.S.*	*Seasonal Drainage*	
Trail Segments(A5/H1)				
A5				
Paved Trail Permanent	0	0	0.0020	0.0020
Paved Trail Temporary	0	0	0.0009	0.0009
H1				
Paved Trail Permanent	0	0	0.0015	0.0015
Paved Trail Temporary	0	0	0.0029	0.0029
Permanent Subtotal	***0***	***0.0000***	***0.0035***	***0.0035***
Temporary Subtotal	***0***	***0.0000***	***0.0038***	***0.0038***
Grand Total	**0**	**0.0000**	**0.0073**	**0.0073**

Source: Mark Thomas GIS, 2019.

TABLE 6: SUMMARY OF BRIDGE & BOARDWALK WETLAND IMPACTS (PERMANENT AND TEMPORARY) (ACRES)

Facility	*Wetland Type*			*Grand Total*
	Riparian	*Waters of the U.S.*	*Seasonal Drainage*	
Proposed Project – West Bridge Alternative				
West Bridge (A1)				
A1 Bridge Permanent	0.0139	0.0181	0	0.0320
Paved Trail Permanent	0	0	0.0002	0.0002
Paved Trail Temporary	0	0	0.0005	0.0005
Access Road - A1	0	0	0.0002	0.0002
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0139***	***0.0276***	***0.0005***	***0.0420***
Temporary Subtotal	***0.0000***	***0.0000***	***0.0005***	***0.0005***
Grand Total	**0.0139**	**0.0276**	**0.001**	**0.0425**
Middle Bridge Alternative				
Middle Bridge (B1/C1)				
B1 Bridge Permanent	0.0221	0.0238	0	0.0459
C1 Bridge Permanent	0	0	0.0006	0.0006
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0221***	***0.0333***	***0.0006***	***0.0560***
Grand Total	**0.0221**	**0.0333**	**0.0006**	**0.0560**
Donner Bridge Alternative				
Donner Bridge (F1/G1)				
F1 Bridge (Donner Creek) Permanent	0.0028	0.0099	0	0.0127
F1 Bridge (Truckee River) Permanent	0.0086	0.0369	0	0.0455
G1 Bridge Permanent	0	0	0.0003	0.0003
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0114***	***0.0563***	***0.0003***	***0.0680***
Grand Total	**0.0114**	**0.0563**	**0.0003**	**0.0680**

Source: Mark Thomas GIS, 2019.

TRUCKEE RIVER LEGACY TRAIL SEGMENTS

Trail Head Parking Area: The proposed action (i.e. the proposed project, also called the "Proposed Project – West Bridge" within this Initial Study) includes a trailhead parking area, a portion of which is located on USFS land (with the remaining portion owned by Placer County). The parking area is bounded by SR 89, West River Street, Donner Creek and the upper bank of the Truckee River. The final parking area design is estimated to range between 90-100 parking spaces. A permanent rest room facility is also planned for this area. There is also the option for a small kiosk for a vendor or trail information, along with a signage and wayfinding plan to ensure users stay on the trail system and out of sensitive environmental areas. Portions of the parking area may be used for snow storage in the winter and will require adequate stormwater conveyance and treatment infrastructure.

The parking area will have a trail segment D (shown as D1-D3 in Figure 5a) located along the southern perimeter of the parking area which would function to move trail users from the parking area to the main trail. This trail segment located in the parking area would be 10-foot wide, paved with asphalt concrete, with 2-foot graded shoulders on each side. The parking lot will affect approximately 1.68 acres. The effects of constructing segments D1-D3 along the southern boundary of the parking lot

will have additional temporary impacts of approximately 0.19 acres. The USFS land affected for the parking lot is estimated to be approximately 0.59 acres (out of a total of approximately 1.87 acres).

Main Trail Segments: The proposed action includes the construction of a trail system that is approximately 1.9 miles long and generally traverses from east to west. The trails within the main trail system would be 10-foot wide, paved with either asphalt or concrete, with 2-foot graded shoulders on each side. The main trail begins near the intersection of Palisades Drive and Brockway Road where it provides connectivity to an existing trail system (i.e. Phases 1-3B of the Truckee River Legacy Trail System). Only a portion of the trail system is located on USFS land.

- **K4:** The first segment of the main trail (shown as K4 in Figure 5a) travels approximately 1200 feet to intersect with segment K2 on top of the bluff, west along Brockway Road where it connects with trail segment K2.
- **K3 (Alternative Scenario):** Segment K3 makes use of the existing Old Brockway Road and travels to the south for approximately 200 feet where it connects to segment K2. This is not considered the permanent trail location, but provides an alternative to the private property owner.
- **K2:** Segment K2 would be a new trail that extends approximately 1500 feet to the west where it connects to segment K1 just south of the existing residential homes on South River Street. Segment K2 crosses a perennial stream/seep (spring) just east of the intersection with segments K1. The crossing will be a boardwalk and will be engineered such that the water flow is maintained.
- **Soft surface Trail:** There is a soft-surface spur trail that will drop in elevation at a maximum of approximately 10% grades with switch-backs to ultimately provide connectivity to the existing dirt road/trail located in the Truckee Springs property that connects to South River Road.
- **K1:** Segment K1 traverses approximately 1700 feet to the west along the grade of an abandoned railroad grade where it gradually loses elevation before it reaches a sage flat near an existing dirt road. This segment crosses a mapped avalanche zone to avoid a steep switchback alignment.
- **I1:** Segment I1 traverses approximately 975 feet to the west along the sage flat generally following an existing dirt road. The beginning of this segment crosses a mapped avalanche zone.
- **H1:** This segment traverses approximately 800 feet to the west along the sage flat near an existing dirt road. This segment will require a crossing at three seasonal drainages. The crossings will be engineered such that the seasonal water flow is maintained. A soft surface trail connection occurs within this segment.
- **Soft Surface Trail**: This soft surface graded trail would connect the Truckee River Legacy Trail Phase 4 to Silver Fir Circle and/or Thelin Court and existing trail networks (shown as the Proposed Soft Trail in Figure 5a). Beginning at the main trail, it would follow alongside the west side of an unnamed swale, using switchbacks to gain over 250 feet in elevation to Silver Fir Drive.

- **A5:** Segment A5 generally follows existing dirt roads to the west for approximately 1550 feet along the base of the talus slope where it intersects with two trail segment variations (segments A3 and E1), as well as the first river crossing segment (Donner Creek Bridge crossing alternative).
- **L1 (Alternative Scenario):** Segment L1 would be built to access the Donner Creek Bridge or the Middle Bridge crossing alternative. This may also be an option to crossing the floodplain bypass area. This option is less environmentally impactful than the preferred alternative due to using portions of an existing dirt road located above the floodplain. However, in this scenario the trail traverses the only buildable area on the underlying private property and bifurcates the property. This segment would cutoff of the A5 segment and traverse to the west along the top of the 'island' in the floodplain.
- **A4**: Segment A4 is a short segment that connects Segment A5 to A3. Under the Donner Creek Bridge Alternative, this segment would also act as the terminus for optional segment G1.
- **G1 (Alternative Scenario)**: Segment G1 is an optional bridge connector segment that would only be developed under the Donner Creek Bridge Alternative. Segment G1 is one option that would connect Segment F1 (a section containing bridges over the Truckee River and Donner Creek) to the main trail.
- **F1 (Alternative Scenario)**: Segment F1 is a bridge segment that would only be developed under the Donner Creek Bridge Alternative. It would contain two bridges – one over the Truckee River and a prefabricated bridge over Donner Creek. It would connect either to segment G1 or segment L1 on its eastern end, and the parking area (at segment D3) on its western end.
- **A3:** Segment A3 traverses approximately 800 feet to the west on the base of the talus slope on a more northern route.
- **E1 (Alternative Scenario):** Segment E1 traverses approximately 850 feet to the west on the base of the talus slope on a more southern route. This would replace Segment A3
- **A2:** At the western end of segment variations A3 and E1 is a connection with segment A2. Segment A2 traverses to the west for approximately 250 feet along the base of the talus slope where it intersects with segment A1, as well as the second river crossing segment (the Middle Bridge crossing alternative).
- **C1 (Alternative Scenario):** Segment C1 would develop a bridge crossing connecting segment that would only be developed under the Middle Bridge Alternative. It would connect to Segment B1 (Optional), which would cross the Truckee River before crossing into the trailhead parking area.
- **B1 (Alternative Scenario):** Segment B1 would only be developed under the Middle Bridge Alternative. It would develop a bridge crossing over the Truckee River that would connect to the trailhead parking area.
- **A1:** Segment A1 traverses approximately 700 feet to the west where it intersects with the third river crossing segment (West Bridge). Each of the river crossing segments connect to segment D, which provides direct access to the trailhead parking lot.

- **D1, D2, D3:** Segment D connects to the existing Mousehole Project 10-foot wide multi-use path, which would ultimately provide direct bicycle and pedestrian access to planned Phase 5 of the Truckee River Legacy Trail System. Segment D1 would connect to the West Bridge crossing alternative; segments D1 and D2 would connect to the Middle Bridge crossing alternative; and segments D1, D2, and D3 would connect to the Donner Creek Bridge crossing alternative. Additionally, in the case that the Donner Creek bridge crossing alternative is selected as the bridge alternative, a pre-manufactured bridge over Donner Creek would be constructed to connect segment D1 to the proposed Donner Creek bridge crossing.

The trail system will include wayfinding and educational signage to ensure users stay on the trail system and out of sensitive environmental areas. This new trail would be constructed using sustainable construction techniques and would utilize grade reversals and rolling dips to minimize erosion and long-term trail degradation. Full bench construction will be minimized. The trail segments would be placed out of the drainage and wetland areas that have been mapped within the APE. Trail construction would follow guidelines and protocols described in detail in the complete set of National Quality Standards for Trails (Forest Service Handbook 2353.15).

River Crossing Segment Alternatives: The proposed action includes the construction of a river crossing. Three bridge locations (the West, Middle, and Donner Creek bridge crossings) (see Appendix A for each bridge crossing alternative's Plan/Profile) were evaluated and the West Bridge location is the preferred alternative. It is noted that all three bridge crossing alternatives span the Truckee River with very limited piles to support the structure. The actual area physically disturbed is much less than the bridge area calculation. In addition to the preferred alternative (West Bridge), there is a Middle Bridge crossing alternative, a portion of which is located on USFS land, and third alternative (Donner Creek Bridge) crossing, which is not on USFS land.

The West Bridge crossing alternative has abutments on the north side of the river and on the south side of the river outside of the floodplain. The Middle bridge crossing alternative has abutments on a high spot (island) above the Truckee River floodplain on the south side of the river and has abutments on the north side of the river (outside of the floodplain). This design was specifically tailored to avoid and minimize adverse effects to biological resources and water quality.

The bridge crossing for each of the alternatives would be 12-foot wide between railings. Trail segments along the river crossings would have grades of 5% or less. The bridge crossing alignments may have pop-outs that jut over the river to allow fishing and standing outside of the travel corridor. The aesthetics of the bridge crossings would be developing during final design and would be appropriate for the visual context of the corridor and in accordance with the guidelines in the U.S. Department of Agriculture (USDA) Built Environment Image Guide. The potential aesthetic considerations would include railings, truss configuration/type, railing finishes, and considerations of railing height. Finishes would be earth tones, non-shiny, and durable, which would blend with the surrounding environment.

The river crossing segments connect to the main trail segment to the south along the base of the talus hillside. The main trail segment generally traverses east to west along the base of the talus hillside and in the sage and eastside pine flats. Graded access roads for utility access to the existing dirt road will be required across the trail alignment.

The Middle bridge crossing alternative has abutments on a high spot (island) above the Truckee River floodplain on the south side of the river and has abutments on the north side of the river (outside of the floodplain). The Middle bridge crossing alternative has a second bridge to cross the floodplain/riparian area that is separated by an island from the main channel of the Truckee River. The West Bridge crossing alternative has abutments on the north side of the river and on the south side of the river outside of the floodplain.

The bridges would be constructed on concrete footings excavated into native soil and depth would be determined based on scour equations and/or bedrock depth. The proposed locations were determined using the narrowest channel locations found onsite where the bridge will span the Truckee River and floodplain area with limited piles to support the structure. The West Bridge and Middle Bridge alternatives provide the best trail alignments, requiring the least of out-of-way travel for Placer County trail users that need to cross the bridge.

Construction Equipment Access Route. Equipment used to construct the bridge, trail segments, and parking area, as well as to implement the restorative actions would use the equipment access routes. Most equipment access routes are confined to a 30-foot swath of land that will contain the 10-foot paved trail with 2-foot wide shoulders (14 feet wide total) and 10 feet buffered on both sides of the paved trail as a temporary impact area. In addition, there are existing dirt roads through the area that will be used for equipment access. The 10 feet on both sides of the equipment access routes act as a temporary impact area (20 feet of temporary impact area) that would be rehabilitated to their desired condition after construction is completed following the requirements of the resource protection measures, and per the complete set of National Quality Standards for Trails (Forest Service Handbook 2353.15).

In addition, construction access or staging areas outside of the trail footprint may also be required. This would take the form of expanded disturbance areas near bridges and bridge piers, and room for large construction equipment such as cranes. As shown in Figure 5b, a truck turn-around area of approximately 0.02 acres is assumed to be located along A1, outside of any riparian or wetland areas. In addition, as also shown in Figure 5b, a potential staging area for construction vehicles/equipment was assumed to be located adjacent to trail segment K4 (approximately 0.97 acres in size). The impact analysis throughout this Initial Study/Mitigated Negative Declaration takes into account the truck turn-around area and the potential staging area, as well as all other temporary impact areas.

The temporary impact area would be rehabilitated by sub-soiling, removing temporary berms and re-contouring where overland flows can be reestablished. Other drainage would be provided as needed, and disturbed areas would be mulched. Native seed would be used as needed to aid in quick re-vegetation of the disturbed areas and to control erosion. Certain areas could be covered with weed-free certified natural material as needed such as pine needles, mulch, slash and debris

to prevent erosion and to cover the former area no deeper than 4-inches of depth. The area two feet off of the pavement on either side of the trail will be decomposed granite. Where construction equipment crosses the sewer line, metal plates or temporary bridges will be used. Construction staging and storage will be limited to previously disturbed areas and will be restored at the completion of the project.

User Management/Education/Wayfinding: The trail will have indirect permanent impacts on aquatic resources, riparian habitat, water quality, etc. because the trail (and more particularly the parking lot) will draw more users to the site for boat launch, swimming, and picnicking activities. It is expected that there will be high use of the trail (similar to the use at the East River Street bridge, which increased when the parking lot was improved). To minimize use and disturbance to sensitive areas in proximity to the parking lot and trail system, the Town would install railings and signs along the parking lot edge closest to the river to keep people out of the riparian areas, and provide wayfinding signage that directs users to the river access area on Town of Truckee property to the east of Donner Creek. The parking lot railings will connect to the bridge railings. This is intended to prevent people from accessing the river area near the parking lot. The parking lot will also include trash containers, pet waste stations, and a restroom facility.

The Town will provide a river access point on the Town property located just east of Donner Creek and the trailhead parking lot. The Town would install a 10-foot wide paved road shoulder on the east side of the West River Street Bridge to accommodate parallel parking spaces at the river access point. This would accommodate 4 to 5 parallel spaces directly adjacent to the river access area located on Town land. Amenities at the river access may include picnic tables, benches, trash cans, pet waste stations, and signage.

Small informational signs will be erected at strategic locations along the trail, parking lot, and river access to facilitate use of the trail and discourage use in sensitive environmental areas.

SOFT SURFACE GRADED TRAILS

The proposed project includes a soft-surface spur trail, located north of (and connecting to) segment K1 that will drop in elevation at a maximum of approximately 10% grade with switch-backs to ultimately provide connectivity to the existing dirt road/trail located in the Truckee Springs property that connects to South River Road. In addition, a separate soft surface graded trail would connect the Truckee River Legacy Trail Phase 4 to Silver Fir Circle and/or Thelin Court and existing trail networks, including the Sawtooth trail system. This graded trail would be a minimum of 4-feet wide and slopes would have a maximum grade of 10%. The soft surface graded trail locations shown are approximate and will be field fit and approved by the underlying property owner prior to construction. The permanent impact width of this trail would be approximately 10-feet, to accommodate grading. Beginning at the main trail, it would follow alongside the west side of an unnamed swale, using switchbacks to gain over 250 feet in elevation to Silver Fir Drive. One option is to remain on the west side of the swale and connect to Silver Fir Circle. A second option is to cross this swale, either at grade or on a drainage structure approximately 400 feet south of Silver Fir Circle, and connect to Thelin Court. A separate segment of the existing soft surface trail may be re-routed

to provide more privacy to nearby property owners. This connects to an existing dirt trail system and the proposed Hilltop Master Plan Area.

NEARBY MASTER PLAN AREAS

Portions of the northeastern section of the trail planning area would overlap with the Hilltop Master Plan area and the Truckee Springs Master Plan area. The Hilltop Master Plan area extends to the south of the northeastern portion of the trail planning area. The Hilltop Master Plan directly accommodates the proposed project along the frontage of the Hilltop Master Plan area. The proposed Truckee Springs Master Plan area is located to the northwest of the Hilltop Master Plan area, also in the eastern portion of the trail planning area. The proposed Truckee Springs Master Plan is not adopted yet and is therefore subject to change. The trail has been designed to avoid potential buildable areas in the Truckee Springs and Hilltop Master Plan area. A future modification to the trail alignment in the northeast corner of the trail planning area, near segment K4 and (optional) segment K3, would accommodate a roundabout planned for Brockway Road, as provided by the Hilltop Master Plan (shown as Roundabout in Figure 5a).

FUTURE TRAILS

The Truckee River Legacy Trail Phase 4 could serve as a hub or intersection, given that it will include parking. Placer County proposes a trail connection between Squaw Valley and the Legacy Trail Phase 4 bridge. However, the Truckee River Legacy Trail Phase 4 has independent utility, and is not dependent on any future potential trail connections. In addition, past proposals made by the Truckee Springs development have included additional on-site trails. These are not included within the current project but have been considered within the alignments to ensure connectivity.

MAINTENANCE ACTIVITIES

As described by the 2015 update to the *Truckee Trails and Bikeways Master Plan*, the proposed project would require maintenance strategies (and the Truckee River Legacy Trail system as a whole). In June 2014, Truckee residents voted in favor of Measure R, a sales tax increase dedicated specifically to dirt and paved trails construction and maintenance. On October 14, 2014, the Town Council adopted a proposal to use a portion of Measure R funds for winter maintenance of paved trails. The portions of the proposed project located within Truckee would be eligible for these funds. Areas of the trail in Placer County will be maintained by Placer County or established through an agreement between Placer County, the Town of Truckee and the USFS for maintenance responsibilities.

AGENCIES WHOSE APPROVAL MAY BE REQUIRED

- Placer County will be a Responsible Agency for the portion of the trail within their jurisdiction. The County Board of Supervisors will utilize this CEQA document for their discretionary approvals including adoption of the MMRP and subsequent Operations and Maintenance agreements.
- California Department of Fish and Game
- California Department of Transportation (Caltrans)

- Northern Sierra Air Quality Management District (NSAQMD)
- Regional Water Quality Control Board, Lahontan Region
- Tahoe-Truckee Sanitation Agency
- Truckee-Donner Public Utilities District
- U.S. Department of Interior, Fish & Wildlife Service
- U.S. Army Corps of Engineers
- U.S. Forest Service

ENVIRONMENTAL SETTING

REGIONAL SETTING

The APE is located within the Sierra Bioregion and is surrounded by six different bioregions: Sacramento Valley, San Joaquin Valley, and Bay/Delta to the west, Modoc to the north, Mojave to the south, and the Central Basin and Range in Nevada to the east.

The Sierra Bioregion is a vast and rugged mountainous area extending approximately 380 miles along California's eastern side and largely contiguous with Nevada. Its east face is a high, rugged multiple scarp, contrasting with the gentle western slope (about 2°) that disappears under sediments of the Great Valley. Deep river canyons are cut into the western slope. Their upper courses, especially in massive granites of the higher Sierra, are modified by glacial sculpturing, forming such scenic features as Yosemite Valley. The high crest culminates in Mt. Whitney with an elevation of 14,495 feet above sea level near the eastern scarp. The metamorphic bedrock contains gold bearing veins in the northwest trending Mother Lode. The northern Sierra boundary is marked where bedrock disappears under the Cenozoic volcanic cover of the Cascade Range.

Named for the Sierra Nevada mountain range it encompasses, the Sierra Bioregion includes forests, lakes, and rivers that generate much of the state's water supply. It shares Lake Tahoe with Nevada and features eight national forests, three national parks -- Yosemite, Kings Canyon and Sequoia -- numerous state parks, historical sites, wilderness, special recreation and national scenic areas, and mountain peaks.

Due to the relatively high elevations and its orientation in the Sierra Nevada mountain range, temperatures range from cool and moderate in the summer to repetitively below freezing in the winter. Precipitation in Truckee occurs as rainfall in the summer months and as a combination of rainfall and snowfall in the winter months. The majority of precipitation comes in the form of snowfall, which occurs in the winter months, with some rainfall in the spring. Average minimum temperature is 14.5 °F (January), while the average maximum temperature is 81.6 °F (July). Average annual precipitation is approximately 37 inches.

LOCAL SETTING

Most of the project area is composed of Great Basin sagebrush scrub, with some forested, riparian, and wetland areas. Jeffery pine *(Pinus jefferyi)* is the dominant tree in forested habitats, while brushy areas support mountain big sagebrush *(Artemisia tridentata vaseyana),* antelope bitterbrush

(Purshia tridentata), and yellow rabbitbrush (*Crysothamnus viscidiflorus*). Within the APE, black cottonwood *(Populus angustifolia)* trees border portions of the Truckee River. Aspens *(Populus tremuloides)* occur along the base of steep rocky slopes that form the southern border of the APE. The APE includes channels that may convey snowmelt during the spring melt. A large meadow area supporting willows *(Salix* sp.) and Nebraska sedge *(Carex nebrascensis)* was found in the central portion of the APE. Low areas that appeared to have been wetted earlier in the season were found south of a dirt road that traverses the western part of the APE. Flow on a slope in the eastern end of the APE supplied a large stand of willow, twinberry *(Lonicera involucrata)* and red-osier dogwood *(Cornus stolonifera).*

CALIFORNIA WILDLIFE HABITAT RELATIONSHIP SYSTEM

The California Wildlife Habitat Relationships (CWHR) is an information system for California's wildlife. CWHR contains life history, geographic range, habitat relationships, and management information on 694 species of amphibians, reptiles, birds, and mammals known to occur in the state. CWHR products are available to anyone interested in understanding, conserving, and managing California's wildlife. The CWHR habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly-occurring birds, mammals, reptiles and amphibians. There are 59 wildlife habitats in the CWHR System: 27 tree, 12 shrub, 6 herbaceous, 4 aquatic, 8 agricultural, 1 developed, and 1 non-vegetated. There are six wildlife habitat classifications within the APE out of 59 found in the state. The habitat classifications include: Barren, Eastside Pine, Sagebrush, Riverine, Montane Riparian, and Urban.

Habitat Descriptions

Barren habitat is defined by the absence of vegetation. It can be found with many different habitats, depending on the region of the state.

Eastside pine habitat occurs from about 4,000 to 6,500 feet elevation from Lake Tahoe north to Oregon, with small scattered stands that occur south to Inyo County. It is found on coarse, well-drained basaltic soils, in a drier, and colder setting, with all exposures represented. Stands are short to moderate height, 65 to 115 feet tall, with ponderosa pine being the dominant tree and some representation by Jeffrey pine, lodgepole pine, white fir, incense-cedar, Douglas-fir, California black oak and western juniper. Undergrowth typically includes one or more of the following shrubs: big sagebrush, antelope bitterbrush, manzanita, ceanothus, rubber rabbitbrush, mountain mahogany, creambush oceanspray and mountain snowberry. Prominent herbaceous plants include mule ears, arrowleaf balsamroot, Idaho fescue, pinegrass, bluebunch wheatgrass and bottlebrush squirreltail.

Sagebrush occurs at a wide range of middle and high elevations (1600 to 10,500 feet) along the east and northeast borders of California on dry slopes and flats. At lower elevations and on drier sites, species such as saltbrush, greasewood, creosotebush, and winterfat are found. At mid-elevations and on more mesic (wet) sites, species such as bitterbrush, curlleaf mountain mahogany, and western serviceberry are found. At high elevations this habitat intergrades with Ponderosa Pine and Aspen habitat types. Sagebrush stands are typically large, open, discontinuous stands of fairly

uniform height (1.6 to 9.8 feet). Plant density ranges from very open, widely spaced, small plants to large, closely spaced plants with canopies touching.

Montane riparian habitats are found in the Klamath, Coast and Cascade ranges and in the Sierra Nevada south to about Kern and northern Santa Barbara Counties, usually below 8000 feet elevation. Riparian areas are found associated with montane lakes, ponds, seeps, bogs and meadows as well as rivers, streams and springs. Water may be permanent or ephemeral. The growing season extends from spring until late fall, becoming shorter at higher elevations. Most tree species flower in early spring before leafing out.

Riverine habitats can occur in association with many terrestrial habitats. Riparian habitats are found adjacent to many rivers and streams. Riverine habitats are also found contiguous to lacustrine and fresh emergent wetland habitats. Streams begin as outlets of ponds or lakes (lacustrine) or rise from spring or seepage areas. All streams at some time experience very low flow and nearly dry up. Some streams, except for occasional pools, dry up seasonally every year. The temperature of the riverine habitat is not constant. In general, small, shallow streams tend to follow, but lag behind air temperatures, warming and cooling with the seasons. Rivers and streams with large areas exposed to direct sunlight are warmer than those shaded by trees, shrubs and high, steep banks. The constant swirling and churning of high-velocity water over riffles and falls result in greater contact with the atmosphere-and thus have a high oxygen content. In polluted waters, deep holes or low velocity flows, dissolved oxygen is lower (Smith 1974). Rivers and streams occur statewide, mostly between sea level and 8000 feet elevation.

Urban habitats are not limited to any particular physical setting. Three urban categories relevant to wildlife are distinguished: downtown, urban residential, and suburbia. The heavily-developed downtown is usually at the center, followed by concentric zones of urban residential and suburbs. There is a progression outward of decreasing development and increasing vegetative cover. Species richness and diversity is extremely low in the inner cover. The structure of urban vegetation varies, with five types of vegetative structure defined: tree grove, street strip, shade tree/lawn, lawn, and shrub cover. A distinguishing feature of the urban wildlife habitat is the mixture of native and exotic species.

SPECIAL-STATUS SPECIES

Special-status species are generally defined as: 1) species listed as a candidate, threatened, or endangered under the federal or state Endangered Species Act; 2) species considered rare or endangered under the California Environmental Quality Act; 3) plants listed as rare under California Fish and Game Code; 4) plants considered “rare, threatened, or endangered in California” by the California Native Plant Society (Lists 1B and 2); 5) animal listed as "species of special concern" by the state; and 6) animals fully protected in California by the Fish and Game Code.

The following discussion is based on a background search of special-status species that are documented in the California Natural Diversity Database (CNDDB), the California Native Plant Society’s (CNPS) Inventory of Rare and Endangered Plants, and the U.S. Fish and Wildlife Service’s

(USFWS) endangered and threatened species lists. The background search was regional in scope and focused on the documented occurrences within ten miles of the APE.

The search revealed 47 special status species within the 10-mile search radius (Figure 7). This included 26 plants, 2 amphibian, 8 birds, 1 fish, and 10 mammals. There were also 12 invertebrates, none of which are state or federal listed. Table 7 provides a list of the special-status species, their habitat, and current protective status.

TABLE 7: SPECIAL-STATUS SPECIES DOCUMENTED WITHIN 10-MILE RADIUS OF APE

SPECIES	STATUS (FED./CA/ CNPS)	GENERAL HABITAT	MICRO HABITAT	BLOOMING PERIOD
Plants				
Galena Creek rockcress *Arabis rigidissima var. demota*	--/--/1B.2	Broadleaved upland forest, upper montane coniferous forest.	Well-drained, stony soil underlain by basic volcanic rock. 2250-2560 M.	August
Threetip sagebrush *Artemisia tripartita ssp. tripartita*	--/--/2B.3	Upper montane coniferous forest.	Openings in the forest. Rocky, volcanic soils. 2200-2600 M.	August
Austin's astragalus *Astragalus austiniae*	--/--/1B.3	Alpine boulder and rock field, subalpine coniferous forest	Rocky. 2440-2965 M.	July-September
Upswept moonwort *Botrychium ascendens*	--/--/1B.2	Lower montane coniferous forest.	Grassy fields, coniferous woods near springs and creeks. 1500-2095 M.	July-August
Scalloped moonwort *Botrychium crenulatum*	--/--/2B.2	Bogs and fens, meadows and seeps, upper montane coniferous forest, lower montane coniferous forest, freshwater marsh.	Moist meadows, near creeks. 1185-3100 M.	June-September
Common moonwort *Botrychium lunaria*	--/--/2B.3	Meadows, subalpine coniferous forest, upper montane coniferous forest.	2760-3400M.	August
Mingan moonwort *Botrychium minganense*	--/--/1B.2	Lower montane coniferous forest, upper montane coniferous forest, bogs and fens.	Creek banks in mixed conifer forest. 1455-2105 M.	July-September
Bolander's bruchia *Bruchia bolanderi*	--/--/4.2	Lower montane coniferous forest, meadows and seeps, upper montane coniferous forest	Moss which grows on damp clay soils. Seems to colonize bare soil along streambanks, meadows, fens and springs.	--(Bryophyte)
Davy's sedge *Carex davyi*	--/--/1B.3	Subalpine coniferous forest, upper montane coniferous forest	1460-3230 M.	May-August
woolly-fruited sedge *Carex lasiocarpa*	--/--/2B.3	Bogs and fens, marshes and swamps.	Sphagnum bogs, freshwater marsh, lake margins. 1700-2100 M.	June-July
Mud sedge *Carex limosa*	--/--/2B.2	Bogs and fens, lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest.	In floating bogs and soggy meadows and edges of lakes. 1200-2700 M.	June-August
English sundew *Drosera anglica*	--/--/2B.3	Bogs and fens, meadows.	1300-2000 M.	June-September
Starved daisy *Erigeron miser*	--/--/1B.3	Upper montane coniferous forest.	Rocky, granitic outcrops. 1840-2620 M.	June-October
Donner Pass buckwheat *Eriogonum umbellatum var. torreyanum*	--/--/1B.2	Upper montane coniferous forest, chaparral, meadows.	Steep slopes and ridge tops; rocky, volcanic soils; usually in bare or sparsely vegetated areas. 1840-2620M.	July-September
American manna grass *Glyceria grandis*	--/--/2B.3	Bogs and fens, meadows and seeps, marshes and swamps.	Wet Meadow, ditches, streams, and ponds, in valleys and lower elevations in mountains. 60-2045M.	June-August
Plumas ivesia *Ivesia sericoleuca*	--/--/1B.2	Great basin scrub, lower montane coniferous forest, meadows, vernal pools.	Vernally mesic areas; usually volcanic substrates. 1450-2000M.	May-October

SPECIES	*STATUS (FED./CA/ CNPS)*	*GENERAL HABITAT*	*MICRO HABITAT*	*BLOOMING PERIOD*
long-petaled lewisia *Lewisia longipetala*	--/--/1B.3	Alpine boulder and rock field, subalpine coniferous forest.	Mesic rocky sites; in cracks of granite or gravelly volcanic soils. 2500-2925 M.	July- August
Santa Lucia dwarf rush *Juncus luciensis*	--/--/1B.2	Vernal pools, meadows, lower montane coniferous forest, chaparral, Great Basin scrub.	Vernal pools, ephemeral drainages, wet meadow habitat and streamsides. 300-2040M.	April-July
Three-ranked hump moss *Meesia triquetra*	--/--/4.2	Bogs and fens, meadows and seeps, upper montane coniferous forest, subalpine coniferous forest.	Moss growing on mesic soil. Saturated bogs, fens, seeps and meadows in coniferous to subalpine forests. 1300-2955 M.	July (Bryophyte)
Broad-nerved hump moss *Meesia uliginosa*	--/--/2B.2	Meadows and seeps, bogs and fens, upper montane coniferous forest, subalpine coniferous forest.	Moss on damp soil. Often found on the edge of fens or raised above the fen on hummocks/shrubs bases.	October (Bryophyte)
Hiroshi's flapwort *Nardia hiroshii*	--/--/2B.3	Meadows and seeps	Damp soil with granitic bedrock. 2195 M.	--(Bryophyte)
Robbins' pondweed *Potamogeton robbinsii*	--/--/2B.3	Marshes and swamps.	Deep water, lakes, 1530-3300 M.	July-August
Alder buckthorn *Rhamnus alnifolia*	--/--/2B.2	Meadows and seeps, lower montane coniferous forest, upper montane coniferous forest, montane riparian scrub.	Mesic sites. 1370-2130M.	May-July
Tahoe yellow cress *Rorippa subumbellata*	C/E/1B.1	Lower montane coniferous forest, meadows, and seeps.	Sandy beaches, on lakeside margins and in riparian communities; on decomposed granite sand. 1885-1900(2395)M.	May-September
marsh skullcap *Scutellaria galericulata*	--/--/2B.2	Marshes and swamps, lower montane coniferous forest, meadows and seeps.	Swamps and wet places. 0-2100M.	June-September
Munro's desert mallow *Sphaeralcea munroana*	--/--/2B.2	Great Basin scrub.	2000 M.	May-June

SPECIES	STATUS (FED./CA/ CNPS)	GENERAL HABITAT	MICRO HABITAT	PRESENCE
Amphibians				
northern leopard frog *Lithobates pipiens*	--/SSC	Native range is east of Sierra Nevada-Cascade crest. Near permanent or semi-permanent water in variety of habitats.	Highly aquatic species. Shoreline cover, submerged and emergent aquatic vegetation are important habitat characteristics.	Not Present
California red-legged frog *Rana aurora draytoni*	T/SSC	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Not Present
Foothill yellow-legged frog *Rana boylii*	S/C, SSC	Occurs in the Klamath, Cascade, north Coast, south Coast, Transverse, and Sierra Nevada Ranges up to approximately 6,000 feet	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Not Present
Sierra Nevada yellow-legged frog *Rana sierrae*	E, S/T		Always encountered within a few feet of water. Tadpoles may require 2-4 years to complete their aquatic development.	Potentially Present
Birds				
Cooper's hawk *Accipiter cooperii*	--/--	Woodland, chiefly of open, interrupted or marginal type.	Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Potentially Present
northern goshawk *Accipiter gentilis*	S/SSC	Within, and in the vicinity of coniferous forest, uses old nests, and maintains alternate sites.	Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typically nest trees.	Potentially Present
black swift *Cypseloides niger*	--/SSC	Coastal belt of Santa Cruz and Monterey Counties; Central and southern Sierra Nevada; San Bernardino and San Jacinto Mountains.	Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf.	Not Present
yellow warbler *Dendroica petechia brewsteri*	--/SSC	Riparian plant associations, prefers willows, cottonwoods, aspens, sycamores, and alders for nesting and foraging.	Also nests in montane shrubbery in open conifer forests.	Not Present
willow flycatcher *Empidonax traillii*	S/E	Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds or backwaters. 2000-8000 FT elevation	Requires dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches.	Not Present
Greater sandhill crane *Grus canadensis tabida*	S/T	Breeds in Siskiyou, Modoc, Lassen, Plumas, and Sierra Counties. Winters in the Central Valley, southern Imperial County, Lake Havasu National Wildlife Refuge, and the Colorado River Indian Reserve	Summers in open terrain near shallow lakes or freshwater marshes. Winters in plains and valleys near bodies of fresh water	Not Present

SPECIES	*STATUS (FED./CA/ CNPS)*	*GENERAL HABITAT*	*MICRO HABITAT*	*PRESENCE*
Bald eagle *Haliaeetus leucocephalus*	D, S/E	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within one mile of water.	Nests in large, old growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Potentially Present
Osprey *Pandion haliaetus*	--/--	Ocean shores, bays, fresh-water lakes, and larger streams.	Large nests built in tree-tops within 15 miles of good fish-producing body of water.	Potentially Present
Black-backed woodpecker *Picoides arcticus*	--/--	Coniferous forests in the Sierra Nevada and Cascades to the Siskiyou mountains.	Recently burned coniferous forest, areas with dense standing dead trees, and less commonly in unburned forests.	Potentially Present
great gray owl *Strix nebulosa*	S/E	Resident of mixed conifer or red fir forest habitat, in or on edge of meadows.	Requires large diameter snags in a forest with high canopy closure, which provide a cool sub-canopy microclimate.	Potentially Present
Fish				
Hardhead *Mylopharodon conocephalus*	S/SSC	Low to mid-elevation streams in the Sacramento-San Joaquin drainage. Also present in the Russian River.	Clear, deep pools with sand-gravel-boulder bottoms and slow water velocity. Not found where exotic centrarchids predominate.	Not Present
Lahontan Lake tui chub *Siphateles bicolor pectinifer*	S/SSC	Low to mid-elevation streams in the Sacramento-San Joaquin drainage. Also present in the Russian River.	Clear, deep pools with sand-gravel-boulder bottoms and slow water velocity. Not found where exotic centrarchids predominate.	Potentially Present
Lahontan cutthroat trout *Oncorhynchus clarkii henshawi*	T/--	Historically in all accessible cold waters of the Lahontan Basin in a wide variety of water temps and conditions.	Cannot tolerate presence of other salmonids. Requires gravel riffles in streams spawning.	Potentially Present
Insects				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T/--	Stream side habitats below 3,000 feet throughout the Central Valley.	Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant.	Not Present
Western bumble bee *Oncorhynchus clarkii henshawi*	S/--	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.		Potentially Present
Mammals				
Pallid bat *Antrozous pallidus*	S/SSC	Occurs throughout California except the high Sierra from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts	Potentially Present
Sierra Nevada mountain beaver *Aplodontia rufa californica*	--/SSC	Dense growth of small deciduous trees and shrubs, wet soil and abundance of forms in the Sierra Nevada and east slope.	Needs dense understory for food and cover. burrows into soft soil. Needs abundant supply of water.	Potentially Present

SPECIES	STATUS (FED./CA/ CNPS)	GENERAL HABITAT	MICRO HABITAT	PRESENCE
Townsend's big-eared bat *Corynorhinus townsendii*	S/SSC	Throughout California in a wide variety of habitats. Most common in mesic sites.	Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Potentially Present
North American wolverine *Gulo gulo luscus*	PT, S/T	Found in the north coast mountains and Sierra Nevada. Found in a wide variety of high elevation habitats.	Needs water source. Uses caves, logs, burrows for cover and den area. Hunts in more open areas. Can travel long distances.	Not Present
Western red bat *Lasiurus blossevillii*	--/SSC	Scattered throughout much of California at lower elevations, but also through mixed conifer forests.	Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	Potentially Present
Sierra Nevada snowshoe hare *Lepus americanus tahoensis*	--/SSC	Boreal riparian areas in the Sierra Nevada.	Thickets of deciduous trees in riparian areas and thickets of young conifers.	Potentially Present
western white-tailed jackrabbit *Lepus townsendii townsendii*	--/SSC	Sagebrush, subalpine conifer, juniper, alpine dwarf shrub and perennial grassland.	Open areas with scattered shrubs and exposed flat-topped hills with open stands of trees, brush and herbaceous understory.	Potentially Present
Sierra marten *Martes caurina sierrae*	S/--	Mixed evergreen forests with more than 40% crown closure along Sierra Nevada and Cascade Mtns.	Needs variety of different-aged stands, particularly old-growth conifers and snags which provide cavities for dens/nests.	Not Present
Fringed myotis *Myotis thysanodes*	S/--	Occurs throughout California except the southeastern deserts and the Central Valley	Found in a wide variety of habitats from low desert scrub to high elevation coniferous forests. Day and night roosts in caves, mines, trees, buildings, and rock crevices	Potentially Present
long-legged myotis *Myotis volans*	--/--	Most common in woodland and forest habitats above 4000 feet. Trees are important day roosts; caves and mines are night roosts.	Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.	Potentially Present
gray-headed pika *Ochotona princeps schisticeps*	--/--	Mountainous areas, generally at higher elevations, often above the tree line up to the limit of vegetation. At lower elevation.	Talus slopes, occasionally on mine tailings. Prefers talus-meadow interface.	Potentially Present

SPECIES	STATUS (FED./CA/ CNPS)	GENERAL HABITAT	MICRO HABITAT	PRESENCE
fisher - West Coast DPS *Pekania pennanti*	PT, S/CT	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percentage canopy closure.	Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.	Not Present
Sierra Nevada red fox *Vulpes vulpes necator*	S,C/T	Found from cascades down to the Sierra Nevada. Found in a variety of habitats from wet meadows to forested areas.	Use dense vegetation and rocky areas for cover and den sites. Prefer forests interspersed w/ meadows or alpine fell fields.	Potentially Present
Mollusk				
California floater *Anodonta californiensis*	S/--	Freshwater lakes and slow-moving streams and rivers. Taxonomy under review by specialists.	Generally in shallow water.	Potentially Present
Black juga *Juga nigrina*	S/--	Occurs throughout north central California, northwestern Nevada, and southwestern Oregon	Inhabits seepages, springs and creeks, in perennial flowing water	Potentially Present
Great Basin Rams-horn *Helisoma (Carinifex) newberryi*	S/--	Historically found scattered throughout the Great Basin at sites in Wyoming, Utah, Oregon, and California. The species is experiencing major declines in distribution and many of these populations are now extinct.	In California, it is known from six local drainages but probably survives in only four.	Potentially Present
Reptiles				
Western pond turtle *Clemmys marmorata*	S/SSC	Occurs from the Oregon border of Del Norte and Siskiyou Counties south along the coast to San Francisco Bay, inland through the Sacramento Valley, and on the western slope of Sierra Nevada	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Not Present

Notes: CNPS = California Native Plant Society
Status explanations:
Federal
E = endangered under the federal Endangered Species Act.
T = threatened under the federal Endangered Species Act.
PE = proposed for endangered under the federal Endangered Species Act.
PT = proposed for threatened under the federal Endangered Species Act.
C = candidate species for listing under the federal Endangered Species Act.
D = delisted from federal listing status.
S = USFS Sensitive
State
E = endangered under the California Endangered Species Act.
T = threatened under the California Endangered Species Act.
C = candidate for listing under the California Endangered Species Act.

FP = fully protected under the California Fish and Game Code.
SSC = species of special concern in California.
R = rare under the California Endangered Species Act

California Native Plant Society
1B = rare, threatened, or endangered in California and elsewhere.
2 = rare, threatened, or endangered in California, but more common elsewhere.
.1 = seriously endangered in California (over 80% of occurrences threatened-high degree and immediacy of threat).
.2 = fairly endangered in California (20-80% occurrences threatened).
.3 = not very endangered in California (<20% of occurrences threatened).

SOILS

The USDA/NRCS Web Soil Survey indicates the presence of four soil series occurring within the project site presented below. Soil resources identified in the APE include the following soil types, as shown in Figure 6:

- EWB- Inville-Riverwash-Aquolls complex (2-5% slopes)
- Aquolls and Borolls (0-5% slopes)
- FUE - Kyburz-Trojan complex (9-30% slopes)
- SUG - Rubble land-Rock outcrop complex
- MEB - Martis-Euer variant complex (2-30% slopes)
- SIE - Sierraville-Trojan-Kyburz complex (2-30% slopes)

Of the soils listed above, the soil pits were dug within the EWB soils, which is defined below in more detail.

EWB - Inville-Riverwash-Aquolls Complex, 2 to 5 percent slopes. The Inville-Riverwash-Aquolls complex is found between 5,500 and 6,300 feet msl. Typical vegetation on this complex includes sagebrush, bitterbrush and meadow-willow communities. Inville soils make up about 55 percent of the unit and Riverwash materials (stony, cobbly, gravelly fluvial material) make up 20 percent of the unit, located along streams and waterways. Aquolls make up about 15 percent of the unit. Inville soils are well drained and have a moderate erosion hazard. Aquolls soils are very poorly drained and have a severe erosion hazard. The EWB complex is the principal soil unit within the survey area.

HYDROLOGY

The APE is located within the southern portion of the Town of Truckee, located within the Sierra Nevada Mountains of California. The APE is found within the watershed of the Truckee River. A nearby segment of the Truckee River flows east along an alignment that is approximately adjacent to the north of the APE. The Truckee River is the sole outlet of Lake Tahoe and flows generally northeast to Truckee, then turns sharply to the east and flows down the mountain slope into Nevada, through Reno and Sparks, and along the northern end of the Virginia Range. At Fernley it turns north, flowing along the east side of the Pah Rah Range and ultimately emptying into the southern end of Pyramid Lake. The Truckee River is approximately 105 miles in length as it extends downstream between its origin (outlet) at Lake Tahoe and its terminal discharge into Pyramid Lake. The Truckee River Watershed is a closed system, having Pyramid Lake as its point of terminal discharge, and it does not have a natural outlet.

The overall watershed area for the Truckee River at its outfall at Pyramid Lake is about 3,115 square miles. Roughly 25% of the overall watershed is found in California and includes the higher elevations within the watershed. The middle and lower elevations of the watershed reside in Nevada and represent about 75% of the overall watershed area. The U.S. Geological Survey has subdivided the Truckee River Watershed into three (3) primary sub-basins (or regions with separate Hydrologic Unit Codes). These primary sub-basins are referred to as the Lake Tahoe sub-basin, the Middle Truckee River sub-basin, and the Pyramid-Winnemucca Lake sub-basin. The APE lies within the Middle

Truckee River sub-basin, within the Trout Creek-Truckee River and Squaw Creek-Truckee River sub-watersheds (Figure 7).

Major tributaries to the Truckee River include the Little Truckee River, Martis Creek, Donner Creek and Prosser Creek in California and Hunter Creek, Steamboat Creek and the North Truckee Drain in Nevada. Watershed elevations range from about 9,000 feet at mountain peaks, to about 5,700 feet in the Truckee River valley north of the APE, to about 4,500 feet at Reno and about 3,800 feet at Pyramid Lake. Additionally, rainfall within the APE generally drains into the Truckee River.

This perennial drainage on the eastern end of the APE originates as a seep and flows in a south to north direction where it connects to the Truckee River. This perennial drainage supports an artificially created ponded area (historical ice pond) from water flowing through a pipe. In September of 2016 the pond area was dry, while the perennial drainage was still flowing, therefore, the pond area is considered a seasonal wetland.

The seasonal drainages were dry during the June, July, and September 2016 field surveys. These rocky features show evidence of intermittent flows, which is anticipated to be strictly during the spring snow melt and/or periods of heavy precipitation. The site was revisited in June 2017. Seasonal drainages that were not apparent during the 2016 surveys, were noted in 2017 after a historically wet winter season.

The seasonal wetlands are associated with the seasonal drainages. These areas receive water from snowmelt during the spring, and are dry throughout the remainder of the year.

Aquatic Resources

The APE has four types of wetland features. Each are discussed below:

RIVERINE

Riverine, Upper Perennial, Rock Bottom – R3RB: The Truckee River borders most the APE on the north side. In some places, the entirety of the Truckee River is within the APE boundary, and in other areas it is all, or mostly, outside the APE boundary. The Truckee River is an interstate water and both the river and its tributaries, as well as adjacent wetlands in the APE, would be considered jurisdictional waters by the USACE. Within the APE, the Truckee River averages 80 feet wide and can be broken up into eight areas (Water IDs) totaling 6.98 acres and approximately 7,313 linear feet. Near the west end of the APE is the confluence of Donner Creek and Truckee River. The Donner Creek channel in this area average 36 feet wide. The water from the Truckee River is derived primarily from snow during the winter season, which is generally October through April. The Truckee River originates at the outlet of Lake Tahoe and flows approximately 110 miles to Pyramid Lake. The Truckee River is a designated “Traditional Navigable Water” (TNW).

There is also one perennial drainage totaling 0.55 acres and 692 linear feet located within the APE. This drainage originates as a seep and flows along the eastern boundary in a south to north direction where it connects to the Truckee River.

Riverine, Intermittent, Streambed - R4SB: There are nine seasonal drainages totaling 0.18 acres and 5,080 linear feet located within the APE. These drainages are generally rocky features that hold intermittent flows during the snow melt. The drainages on the far western end of the site function as a snow melt seasonal drainage and has limited bed characteristics.

Riverine, Ephemeral – R6: There are six seasonal wetlands totaling 2.23 acres located within the APE. Most these wetlands are dominated by Nebraska sedge (*Carex nebrascensis*) and are mostly within the 100-year flood plain or associated with the winter melt.

RIPARIAN

Riparian, lotic, forested - RP1FO: The Truckee River, which borders most the APE on the north side, has riparian area that transitions the mesic environmental along the river into the more xeric environment in the upland sage and bitter brush areas. The riparian areas have a variety of obligate and facultative plants including: mountain alder (Alnus incana ssp, tenuifolia), black cottonwood (*Populus balsamifera ssp. trichocalpa*), willows (*Salix* sp.), Nebraska sedge (*Carex nebrascensis*), and wooly sedge (*Carex lanuginose*). Within the APE, the delineation broke the riparian areas into six areas (Water IDs) totaling 7.05 acres.

Table 8 provides a summary of delineated features present within the APE. A jurisdictional map is provided in Figure 6. A detailed discussion of the rationale for the jurisdictional determination follows. The USACE, with oversight by the Environmental Protection Agency (EPA), will make the final U.S. jurisdictional determination.

TABLE 8: SUMMARY OF DELINEATED FEATURES

Aquatic Resource Name	Aquatic Resources Classification		Size (Acre)	Size (linear feet)
	Cowardin	Location (lat/long)		
Waters of the U.S.				
Truckee River – 1	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3149, -120.2020	5.34	2,782
Truckee River - 2	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3192, -120.1960	0.32	1,715
Truckee River - 3	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3209, -120.1930	0.07	667
Truckee River – 4	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3217, -120.1920	0.04	234
Truckee River – 5	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3226, -120.1910	0.04	389
Truckee River – 6	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3237, -120.1910	0.09	351
Truckee River – 7	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3252, -120.1880	1.04	1,045
Truckee River – 8	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3257, -120.1860	0.03	130
TOTAL			**6.98**	**7,313**
Perennial Drainage				
Perennial Drainage - 9	R3RB-Riverine, Upper Perennial, Rock Bottom	39.3246, -120.1850	0.55	692
TOTAL			**0.55**	**692**
Seasonal Drainage				
Seasonal Drainage – 10	R4SB – Riverine, Intermittent, Streambed	39.3141, -120.2014	0.02	802
Seasonal Drainage – 11	R4SB – Riverine, Intermittent, Streambed	39.3156, -120.1996	0.03	1,356
Seasonal Drainage – 12	R4SB – Riverine, Intermittent, Streambed	39.3174, -120.1975	0.00	69
Seasonal Drainage – 13	R4SB – Riverine, Intermittent, Streambed	39.3178, -120.1969	0.00	151

Seasonal Drainage – 14	R4SB – Riverine, Intermittent, Streambed	39.3190, -120.1947	0.01	167
Seasonal Drainage – 15	R4SB – Riverine, Intermittent, Streambed	39.3181, -120.1918	0.09	1,851
Seasonal Drainage – 16	R4SB – Riverine, Intermittent, Streambed	39.3198, -120.1933	0.01	281
Seasonal Drainage – 17	R4SB – Riverine, Intermittent, Streambed	39.3200, -120.1929	0.02	336
Seasonal Drainage – 18	R4SB – Riverine, Intermittent, Streambed	39.3215, -120.1909	0.00	66
TOTAL			**0.18**	**5,080**
Seasonal Wetlands				
Seasonal Wetland – A	R6 – Riverine, Ephemeral	39.3158, -120.1990	0.13	--
Seasonal Wetland – B	R6 – Riverine, Ephemeral	39.3196, -120.1930	0.95	--
Seasonal Wetland – C	R6 – Riverine, Ephemeral	39.3243, -120.1910	0.01	--
Seasonal Wetland – D	R6 – Riverine, Ephemeral	39.3249, -120.1890	0.32	--
Seasonal Wetland – E	R6 – Riverine, Ephemeral	39.3245, -120.1870	0.09	--
Seasonal Wetland – F	R6 – Riverine, Ephemeral	39.3247, -120.1860	0.73	--
TOTAL			**2.23**	
Riparian				
Riparian– G	RP1FO – Riparian, lotic, forested	39.3146, -120.2030	1.39	--
Riparian– H	RP1FO – Riparian, lotic, forested	39.3163, -120.2000	2.99	--
Riparian– I	RP1FO – Riparian, lotic, forested	39.3206, -120.1930	1.28	--
Riparian– J	RP1FO – Riparian, lotic, forested	39.3247, -120.1900	1.26	--
Riparian– K	RP1FO – Riparian, lotic, forested	39.3256, -120.1870	0.11	--
Riparian– L	RP1FO – Riparian, lotic, forested	39.3257, -120.1860	0.02	--
TOTAL			**7.05**	

SOURCE: PLACER COUNTY GIS; TOWN OF TRUCKEE; ARCGIS ONLINE AERIAL IMAGERY SERVICE.

NOXIOUS WEEDS

For the purpose of this analysis and future Project-specific assessments, a noxious weed is defined as a plant that could displace native plants and natural habitats, affect the quality of forage on rangelands, or affect cropland productivity. The California Department of Food and Agriculture (CDFA) lists weeds and assigns ratings (A–C) to each species on the list. The ratings reflect CDFA's view of the statewide importance of the pest, the likelihood that eradication or control efforts would be successful, and the present distribution of the pest in the state. These ratings are guidelines that indicate the most appropriate action to take against a pest under general circumstances. The rating system is explained below:

- A: an organism of known economic importance subject to state (or commissioner, when acting as a state agent) enforced action involving eradication, quarantine, containment, rejection, or other holding action.
- B: an organism of known economic importance subject to eradication, containment, control, or other holding action at the discretion of the individual county agricultural commissioner, or an organism of known economic importance subject to state-endorsed holding action and eradication only when found in a nursery.

- C: an organism subject to no state-enforced action outside of nurseries except to retard spread at the discretion of the commissioner, or an organism subject to no state-enforced action except to provide for pest cleanliness in nurseries.

2.0 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the natural resources of the state and nation including the California Department of Fish and Wildlife (CDFW) U.S. Fish and Wildlife Service (USFWS), the U.S. Army Corps of Engineers (USACE), and the National Marine Fisheries Service (NMFS). These agencies often respond to declines in the quantity of a particular habitat or plant or animal species by developing protective measures for those species or habitat type. The following is an overview of the federal, state and local regulations that are applicable to subsequent projects under the proposed project.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA), passed in 1973, defines an endangered species as any species or subspecies that is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Once a species is listed it is fully protected from a "take" unless a take permit is issued by the USFWS. A take is defined as the harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct, including modification of its habitat (16 USC 1532, 50 CFR 17.3). Proposed endangered or threatened species are those species for which a proposed regulation, but not a final rule, has been published in the Federal Register.

Migratory Bird Treaty Act

To kill, posses, or trade a migratory bird, bird part, nest, or egg is a violation of the Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., §703, Supp. I, 1989), unless it is in accordance with the regulations that have been set forth by the Secretary of the Interior.

Federal Bald and Golden Eagle Protection Act

The Federal Bald and Golden Eagle Protection Act provides regulations to protect bald and golden eagles as well as their nests and eggs from willful damage or injury.

Clean Water Act – Section 404

Section 404 of the CWA regulates all discharges of dredged or fill material into waters of the U.S. Discharges of fill material includes the placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §323.2(f)].

Waters of the U.S. include lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows [33 C.F.R. §328.3(a)]. Wetlands are defined as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 C.F.R. §328.3(b)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high-water mark (OHWM). The OHWM is defined by the USACEUSACE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. §328.3(e)].

The USACE is the agency responsible for administering the permit process for activities that affect waters of the U.S. Executive Order 11990 is a federal implementation policy, which is intended to result in no net loss of wetlands.

Clean Water Act – Section 401

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the Regional Water Quality Control Board. To obtain the water quality certification, the Regional Water Quality Control Board must indicate that the proposed fill would be consistent with the standards set forth by the state.

Rivers and Harbors Act of 1899

The Rivers and Harbors Act prohibits the obstruction or alteration of any navigable water of the United States. Requires authorization from the Corps for any excavation or deposition of materials into these waters or for any work that could affect the course, location, condition, or capacity of rivers or harbors.

Department of Transportation Act - Section 4(f)

Section 4(f) has been part of Federal law since 1966. It was enacted as Section 4(f) of the Department of Transportation (DOT) Act of 1966 and set forth in Title 49 United States Code (U.S.C.), Section 1653(f). In January 1983, as part of an overall recodification of the DOT Act, Section 4(f) was amended and codified in 49 U.S.C. Section 303. This law established policy on Lands, Wildlife and Waterfowl Refuges, and Historic Sites as follows:

> *It is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. The Secretary of Transportation shall cooperate and consult with the Secretaries of the Interior, Housing and Urban Development, and Agriculture, and with the States, in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of lands crossed by transportation activities or facilities. The Secretary of Transportation may approve a transportation program or project (other than any project for a park road or parkway under section 204 of title 23) requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of a historic*

site of national, state, or local significance (as determined by the Federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if: a) There is no prudent and feasible alternative to using that land; and b) The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

STATE

Fish and Game Code §2050-2097 - California Endangered Species Act

The California Endangered Species Act (CESA) protects certain plant and animal species when they are of special ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats.

CESA was expanded upon the original Native Plant Protection Act and enhanced legal protection for plants. To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

Fish and Game Code §1900-1913 California Native Plant Protection Act

In 1977 the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the state. The intent of the law was to preserve, protect, and enhance endangered plants. The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants. The NPPA includes provisions that prohibit the taking of plants designated as "rare" from the wild, and a salvage mandate for landowners, which requires notification of the CDFW 10 days in advance of approving a building site.

Fish and Game Code §3503, 3503.5, 3800 - Predatory Birds

Under the California Fish and Game Code, all predatory birds in the order Falconiformes or Strigiformes in California, generally called “raptors,” are protected. The law indicates that it is unlawful to take, posses, or destroy the nest or eggs of any such bird unless it is in accordance with the code. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is considered a take. This generally includes construction activities.

Fish and Game Code §1601-1603 – Streambed Alteration

Under the California Fish and Game Code, CDFW has jurisdiction over any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any lake or stream. Private landowners or project proponents must obtain a “Streambed Alteration Agreement” from CDFW prior to any alteration of a lake bed, stream channel, or their banks. Through this agreement, the CDFW may impose conditions to limit and fully mitigate impacts on fish and wildlife resources. These agreements are usually initiated through the local CDFW warden and will specify timing and

construction conditions, including any mitigation necessary to protect fish and wildlife from impacts of the work.

Public Resources Code § 21000 - California Environmental Quality Act

The California Environmental Quality Act (CEQA) identifies that a species that is not listed on the federal or state endangered species list may be considered rare or endangered if the species meets certain criteria. Under CEQA public agencies must determine if a project would adversely affect a species that is not protected by FESA or CESA. Species that are not listed under FESA or CESA, but are otherwise eligible for listing (i.e. candidate, or proposed) may be protected by the local government until the opportunity to list the species arises for the responsible agency.

Species that may be considered for review are included on a list of "Species of Special Concern," developed by the CDFW. Additionally, the California Native Plant Society (CNPS) maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. List 1A contains plants that are believed to be extinct. List 1B contains plants that are rare, threatened, or endangered in California and elsewhere. List 2 contains plants that are rare, threatened, or endangered in California, but more numerous elsewhere. List 3 contains plants where additional information is needed. List 4 contains plants with a limited distribution.

Public Resources Code § 21083.4 - Oak woodlands conservation

In 2004, the California legislature enacted SB 1334, which added oak woodland conservation regulations to the Public Resources Code. This new law requires a County to determine whether a project, within its jurisdiction, may result in a conversion of oak woodlands that will have a significant effect on the environment. If a County determines that there may be a significant effect to oak woodlands, the County must require oak woodland mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands. Such mitigation alternatives include: conservation using conservation easements; planting and maintaining an appropriate number of replacement trees; contribution of funds to the Oak Woodlands Conservation Fund for purchasing oak woodlands conservation easements; and/or other mitigation measures developed by the County.

California Wetlands Conservation Policy

In August 1993, the Governor of the State of California announced the "California Wetlands Conservation Policy." The goals of the policy are to establish a framework and strategy that will:

- Ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.
- Reduce procedural complexity in the administration of State and federal wetland conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetland conservation and restoration.

The Governor also signed Executive Order W-59-93, which incorporates the goals and objectives contained in the new policy and directs the Resources Agency to establish an Interagency Task Force to direct and coordinate administration and implementation of the policy.

Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act provides long-term protection of species and habitats through regional, multi-species planning before the special measures of the CESA become necessary.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act authorizes the SWRCB to regulate state water quality and protect beneficial uses.

LOCAL

Town of Truckee 2025 General Plan

CONSERVATION AND OPEN SPACE ELEMENT

P4.1 Provide for the integrity and continuity of biological resources open space, habitat and wildlife movement corridors and support the permanent protection and restoration of these areas, particularly those identified as sensitive resources.

P4.2 Protect sensitive wildlife habitat from destruction and intrusion by incompatible land uses where appropriate. All efforts to protect sensitive habitats should consider:

- Sensitive habitat and movement corridors in the areas adjacent to development sites, as well as on the development site itself.
- Prevention of habitat fragmentation and loss of connectivity.
- Use of appropriate protection measures for sensitive habitat areas such as non-disturbance easements and open space zoning.
- Off-site habitat restoration as a potential mitigation, provided that no net loss of habitat value results.
- Potential mitigation or elimination of impacts through mandatory clustering of development, and/or project redesign.

P4.4: Preserve riparian corridors, Donner Lake and aquatic and wetland areas through application of setbacks and other development standards that respect these resources.

P4.5: Development shall be prohibited within established setback areas for streams and waterways other than the Truckee River, except as otherwise allowed in the Development Code; such setbacks shall be between 20 and 50 feet on parcels less than 175 feet deep (depending on parcel depth), and 50 feet on parcels 175 feet deep or more.

P5.1: Require biological resource assessments for all development in areas where special status species may be present.

P5.2: Protect native plant species in undisturbed portions of a development site and encourage planting and regeneration of native plant species wherever possible in undisturbed portions of the biological study area.

P5.3: Protect to the extent possible federal or State-designated endangered, threatened, special status or candidate species.

P5.4: Support efforts to eradicate invasive and noxious weeds and vegetation on public and private property.

P9.1: Provide for links between open space areas, both within Truckee and beyond the Town limits, to create contiguous habitat areas and enhance public access through greater connectivity.

3.0 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed project will have a significant impact on biological resources if it will:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

IMPACTS AND MITIGATION

Impact 1: The proposed project has the potential to have direct or indirect effects on special-status amphibian species (Less than Significant with Mitigation)

Special-status amphibian species: There are five special status amphibian species that were evaluated for this project.

Northern leopard frog (*Lithobates pipiens*). The northern leopard frog is a California species of special concern. The northern leopard frog is a smooth-skinned green, brown, or sometimes yellow-green frog covered with large, oval dark spots, each of which is surrounded by a lighter halo. Adult body lengths range from 2 to 4.5 inches. The northern leopard frog requires a mosaic of habitats to meet the requirements of all its life stages and breeds in a variety of aquatic habitats that include slow-moving or still water along streams and rivers, wetlands, permanent or temporary pools, beaver ponds, and human-constructed habitats such as earthen stock tanks and borrow pits. Subadult northern leopard frogs typically migrate to feeding sites along the borders of larger, more permanent bodies of water and recently-metamorphosed frogs will move up and down drainages and across land to locate new breeding areas.

There are documented occurrences of this species within approximately nine miles of the APE. During field surveys, there was no observations of this species. The seasonal drainages and seasonal wetland areas are not appropriate habitat for this species. The Truckee River within the planning area is not conducive to this species given: 1) little available backwater or other off-channel aquatic habitat to provide off-channel breeding or non-breeding refugia for frogs; 2) swift flows throughout the APE; and; 3) a lack of nearby pond or lake complexes that support frog breeding populations. Additionally, the Truckee River supports salmonids (i.e. brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*), and rainbow trout (*Oncorhynchus mykiss*) populations. Such predatory fish are also not conducive to optimal environmental conditions for frogs. The small ephemeral drainage/seep on the eastside of the APE was assessed for the potential to provide habitat. The drainage is not conducive to this species given: 1) lacks appropriate depth to provide off-channel breeding, non-breeding refugia, or overwintering habitat for frogs; and; 2) a lack of nearby pond or lake complexes that support frog breeding populations. Based on these findings, the northern leopard frog is considered unlikely to occur in the APE. The project area does not support suitable habitat for northern leopard frog. Therefore, this project will not affect this species or its habitat, and no further analysis is necessary.

California red-legged frog (*Rana aurora draytonii*) is a federally threatened species with USFWS finalized designation of critical habitat within three locations in or adjacent to the Tahoe National Forest (USFWS 2010; 75 FR 12816). Locations include PLA-1, Michigan Bluff, NEV-1, Sailor Flat, and YUB-1, Oregon Creek. In the Sierra Nevada, the California red-legged frog historically occupied portions of the lower elevations west of the crest from Shasta County south to Tulare County (USFWS 2002). Almost all known California red-legged frog populations have been documented at elevations below about 1,050 meters (3,500 feet) with some historical sightings documented at elevations up to 1,500 meters (5,200 feet) (USFWS 2002). The project area does not support suitable

habitat for California red-legged frog. Therefore, this project will not affect this species or its habitat, and no further analysis is necessary.

Mountain yellow-legged frog (*Rana muscosa*) is listed as USFS R5 Sensitive and is a USFWS Candidate species, being part of the Sierra Nevada Distinct Population Segment (DPS). Recent genetic analysis combined with morphological and acoustic studies have described *Rana muscosa* as two separate species, *Rana muscosa* (mountain yellow-legged frog) and *Rana sierrae* (Sierra Nevada yellow-legged frog). Mountain yellow-legged frogs occur in the Sierra Nevada from around 4,500 feet to over 12,000 feet elevation, and inhabit ponds, lakes, and streams of sufficient depth for overwintering (Jennings and Hayes 1994). All age classes (subadult and adult frogs, and larvae) overwinter underwater; in high elevations they are restricted to relatively deep lakes (over 5 feet deep) that do not freeze solid in winter (Knapp 1994, Knapp and Matthews 2000). Frogs (subadults and adults) hibernate underwater in winter; winterkill of subadults and adults may occur due to oxygen deprivation over winter under ice, while larvae are more resistant (Bradford 1983). Little is known about their habitat requirements in spring, stream, and pond habitats where they are typically found in the Tahoe National Forest. Based on habitat characteristics of occupied locations, they are thought to overwinter in spring and stream habitats, possibly less than 3 feet deep, that do not freeze solid in winter, such as deep pools in stream channels. During spring thaw, frogs emerge to the surface to bask in the sun, or travel over ice and snow to other nearby bodies of water (Pope and Matthews 2001), while larvae seek warmer water near shore (after spring turnover in large bodies of water) (Bradford 1984).

The seasonal drainages and seasonal wetland areas are not appropriate habitat for this species. The Truckee River is not conducive to this species given: 1) little available backwater or other off-channel aquatic habitat to provide off-channel breeding or non-breeding refugia for frogs; 2) swift flows throughout the APE; and; 3) a lack of nearby pond or lake complexes that support mountain yellow-legged frog breeding populations. Additionally, the Truckee River supports salmonids (i.e. brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*), and rainbow trout (*Oncorhynchus mykiss*) populations. Such predatory fish are also not conducive to optimal environmental conditions for mountain yellow-legged frog. The small ephemeral drainage/seep on the eastside of the APE was assessed for the potential to provide habitat. The drainage is not conducive to this species given: 1) lacks appropriate depth to provide off-channel breeding, non-breeding refugia, or overwintering habitat for frogs; and; 2) a lack of nearby pond or lake complexes that support mountain yellow-legged frog breeding populations. Finally, mountain yellow-legged frog populations are not identified within 5 miles of the APE and no records are reported from any nearby Truckee River tributaries. Based on these findings, the mountain yellow-legged frog is considered unlikely to occur in the APE. The project area does not support suitable habitat for mountain yellow-legged frog. Therefore, this project will not affect this species or its habitat, and no further analysis is necessary.

Sierra Nevada yellow-legged frog (*Rana sierra*). The Sierra Nevada yellow-legged frog (SNYLF) is a California Threatened species and Federal Endangered species. Suitable habitat for the SNYLF includes streams, ponds and lakes, all of which is present within the biological planning area. Recent genetic analysis combined with morphological and acoustic studies have described *Rana sierrae* (SNYLF) as a separate species from *Rana muscosa* (mountain yellow-legged frog). Typical habitat

includes lakes, ponds, marshes, meadows, and streams at high elevations— typically ranging from about 4,500 to 12,000 feet, but can occur as low as about 3,500 feet in the northern portions of their range. SNYLFs are highly aquatic and adults can be found sitting on rocks along the shoreline, where there was little or no vegetation. They are rarely found more than 3.3 feet from water.

The CNDDB provides documented occurrences of this species within approximately four miles to the north of the APE.

The seasonal drainages and seasonal wetland areas are not appropriate habitat for this species. The small ephemeral drainage/seep on the eastside of the APE was assessed for the potential to provide habitat. The drainage is not conducive to this species given: 1) lacks appropriate depth to provide off-channel breeding, non-breeding refugia, or overwintering habitat for frogs; and; 2) a lack of nearby pond or lake complexes that support SNYLF breeding populations.

The Truckee River within the planning area is not conducive to this species given: 1) little available backwater or other off-channel aquatic habitat to provide off-channel breeding or non-breeding refugia for frogs; 2) swift flows throughout the APE; and; 3) a lack of nearby pond or lake complexes that support SNYLF breeding populations. Additionally, the Truckee River supports salmonids (i.e. brown trout (*Salmo trutta*), brook trout (*Salvelinus fontinalis*), and rainbow trout (*Oncorhynchus mykiss*) populations. Such predatory fish are also not conducive to optimal environmental conditions for mountain yellow-legged frog.

The proposed project includes a small section of the Donner Creek near the confluence with the Truckee River, which is documented by the USFS as potential habitat for SNYLF. Normally the USFS would require an amphibian habitat assessment (considering presence of predators, water flow regime, water depth, riparian vegetation, food availability, refugia, overwintering habitat, etc.) However, because of the reasons stated above, this additional analysis is deemed unnecessary and instead pre-construction surveys are recommended to mitigate this potential impact .to a **less than significant** level.

Conclusion: Implementation of the proposed project would involve limited disturbances to aquatic and wetland habitat. This habitat was evaluated for the potential for special status amphibians to be present. It was found that the Truckee River and Donner Creek confluence area provided little available backwater or other off-channel aquatic habitat to provide off-channel breeding or non-breeding refugia for frogs; the river flows are too swift throughout the APE; and; there is a lack of nearby pond or lake complexes that support frog breeding populations. The small ephemeral drainage/seep on the eastside of the APE was assessed for the potential to provide habitat. The drainage is not conducive to frogs for many of the same reasons that the Truckee River and Donner Creek area not conducive to frogs. Implementation of the following mitigation measure would reduce this impact to a **less than significant** level.

MITIGATION MEASURE

> ***Mitigation Measure BIO-1****: If any federal or state threatened, endangered, proposed, or Forest Service sensitive species previously unknown in the project area are detected or found within 250 feet of project activities, appropriate mitigation measures will be implemented*

based on input from the aquatics biologist, botanist, and/or wildlife biologist. Measures can include, but are not limited to, flagging and avoiding an area, implementing a species specific LOP, or designating a protected activity center.

***Mitigation Measure BIO-2**: The project proponent shall implement the following avoidance and minimization measures for Sierra Nevada yellow-legged frog (Rana sierra) for any work around Donner Creek (i.e. Donner Creek Bridge and/or restoration): Pre-construction surveys for the Sierra Nevada yellow-legged frog shall be conducted in all potential habitat by a qualified biologist prior to construction in the project area around Donner Creek Should the Sierra Nevada yellow-legged frog be identified, the impact will be mitigated through avoidance or relocation by a permitted biologist, as approved by the California Department of Fish and Game. To minimize effects to SNYLF during and after project implementation, tightly woven fiber netting or similar material shall not be used for erosion control or other purposes within 30 meters of Donner Creek. The Truckee River access shall not disturb additional area other than for restoration/revegetation within identified SNYLF habitat.*

Impact 2: The proposed project has the potential to have direct or indirect effects on special-status bird species (Less than Significant with Mitigation)

Special-status bird species: There are eight special-status bird species that are documented by the CDFW within a ten-mile radius of the APE including: Cooper's hawk (*Accipiter cooperii*), northern goshawk (*Accipiter gentilis*), black swift (*Cypseloides niger*), yellow warbler (*Dendroica petechia brewsteri*), willow flycatcher (*Empidonax traillii*), Bald eagle (*Haliaeetus leucocephalus*), Osprey (*Pandion haliaetus*), and Black-backed woodpecker (*Picoides arcticus*). There are an additional 20 migratory birds that are documented by the USFWS, and two USFS Sensitive species that were evaluated. Each are discussed below:

No/Low Potential for Presence - No Mitigation Necessary

Black swift (*Cypseloides niger*). The California Department of Fish and Wildlife lists the Black Swift as a Species of Special Concern. Black swift seems to be limited in range by its very particular choice of nesting sites: it requires shady, sheltered spots on vertical cliffs totally inaccessible to predators, and often nests on the damp rock behind waterfalls.

There are documented occurrences of Black swift within approximately ten miles of the APE. Field surveys did not reveal the presence of this species within the APE. There does not appear to be suitable habitat for this species in the APE. Implementation of the proposed project would have a **less than significant** impact on this species.

Greater sandhill crane (*Grus canadensis tabida*). This is a California State Threatened species and is listed as Sensitive on the Region 5 Forester's Sensitive Species List (USDA Forest Service 1998). The California Central Valley population of sandhill cranes is the most western of five distinct populations. A total of 276 cranes were recorded within the state during a breeding pair survey in 1988 (California Department of Fish and Game 1997). In California, greater sandhill cranes winter

primarily throughout the Sacramento, San Joaquin, and Imperial Valleys (Grinnell and Miller 1944). Current known breeding populations are located within Lassen, Modoc, Plumas, Shasta, Sierra, and Siskiyou Counties (James 1977, Littlefield 1982, California Department of Fish and Game 1994). In the Tahoe National Forest, a breeding population of approximately 11 pair occur within Carman Valley and Kyburz Flats on the Sierraville Ranger District.

California pairs of sandhill cranes generally nest in wet meadow, shallow lacustrine, and fresh emergent wetland habitat, with nests constructed of large mounds of water plants over shallow water (Zeiner et al. 1990, California Department of Fish and Game 1994). Studies in California during 1988 showed water depths averaging 2.3 inches (California Department of Fish and Game 1994). Open meadow habitats are also used (Littlefield 1989). On dry sites, nests are scooped-out depressions lined with grasses (Zeiner et al. 1990). Nesting territory size depends on the quality of available habitat.

The project area does not support ideal habitat for greater sandhill crane, and none are documented within ten miles of the planning area. The seasonal wetland areas do not provide the appropriate composition of vegetation and shallow water; however, the seasonal wetland areas are largely avoided by design. Implementation of the proposed project would have a **less than significant** impact on this species.

California spotted owl (*Strix occidentalis occidentalis)*. The California spotted owl is a management indicator species on all National Forests in the Sierra Nevada Bioregion, and is listed on the USFS R5 Sensitive Species List for the Tahoe National Forest. California spotted owls utilize various compositions of mixed conifer, ponderosa pine, red fir and montane hardwood forest types with high structural diversity, and dominated by medium (12-24”) and large (>24”) trees and with moderate to high levels of canopy cover (generally >40). Optimal habitat conditions involve mixtures of forest stands with differing compositions and densities. Spotted owl home range sizes are extremely variable across their range, and are suspected to be linked to availability of prey. California spotted owl home range is smallest in habitats at relatively low elevations that are dominated by hardwoods, intermediate in size in mixed-conifer forests, and largest in true fir forests. Recent research has assessed California spotted owl habitat at range of several hundred acres to several thousand acres.

Pure eastside pine habitat is not considered to be suitable unless it is well stocked and has a white fir understory which may provide stand structural components that make it marginally suitable. The probability of use as foraging habitat decreases as the basal area of ponderosa pine increases.

The project area does not support ideal habitat for this species. The eastside pine habitat and sagebrush habitat do not provide the composition of vegetation ideal for this species. The project area does not support suitable nesting or foraging habitat for California spotted owl. Therefore, this project will not affect this species or its habitat, and no further analysis is necessary. Implementation of the proposed project would have a **less than significant** impact on this species.

Moderate Potential for Presence

Cooper's hawk (Accipiter cooperii). The California Department of Fish and Wildlife lists the Cooper's hawk as a California raptor species without any specific listing. Cooper's hawk a medium-sized hawk found in mature forest, open woodlands, wood edges, and river groves. They nest in coniferous, deciduous, and mixed woods, typically those with tall trees and with openings or edge habitat nearby. They feed mostly on birds and small mammals.

There are documented occurrences of Cooper's hawk within approximately eight miles of the APE. During field surveys, there was no evidence of this species; however, this species could establish nests in any given breeding season along the Truckee River. The proposed project is not anticipated to result in any significant removal of habitat in any of the riparian areas along the Truckee River within the APE. The proposed project will result in some tree removal within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, bridge and trail alignments that are least likely to have adverse effects on biological resources were considered, and those with greater impacts were eliminated. Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced to a less than significant level. Mitigation Measure BIO-3 requires a preconstruction survey to be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Northern goshawk (*Accipiter gentilis*). The California Department of Fish and Wildlife lists the Northern goshawk as a Species of Special Concern. Northern goshawks occupy a variety of habitats including mature coniferous and deciduous forests. Nest sites are generally in stands of larger trees with dense canopy cover. Northern goshawks hunt in openings and in forested stands with an open understory that allow for catching prey in flight. Within a nest stand, northern goshawks may have as many as eight alternate nest sites. They eat a wide variety of small mammals and birds. They lay one to four eggs in early spring, with a clutch commonly producing two to three chicks. Young fledge at about five to six weeks old, but are dependent upon their parents for food until late summer or early fall. (USFWS, 2011).

There are documented occurrences of Northern goshawk within approximately two miles of the biological study area. Nesting habitat for this species is potentially present in the mature Jeffery pine (*Pinus jefferyi*) stands within the biological study area. During field surveys there was no evidence of nesting; however, this species could establish nests in any given breeding season. The proposed project will result in some tree removal within the biological study area. Preconstruction surveys will be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Yellow warbler (*Dendroica petechia brewsteri*). The California Department of Fish and Wildlife lists the yellow warbler as a Species of Special Concern. Yellow warblers generally occupy riparian vegetation in close proximity to water along streams and in wet meadows. They are found in willows, cottonwoods, and in numerous other species of riparian shrubs or trees. These birds feed mainly on animal matter, including ants, bees, wasps, caterpillars, beetles, true bugs, flies, and spiders, as well as some berries and similar small juicy fruits. They arrive in their breeding range in late spring and begin moving to their winter range again starting as early as July, or as soon as their young are fledged (CDFW, 2008).

There are documented occurrences of yellow warbler within less than two miles of the APE. Field surveys did not reveal the presence of this species within the APE. Potentially suitable yellow warbler habitat is present along the Truckee River within the APE. Additional potential habitat is present in the riparian stream on the steep slope near the eastern end of the APE. The proposed project is not anticipated to result in any significant removal of habitat in any of the riparian areas within the APE. The proposed project will result in some tree removal within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, bridge and trail alignments that are least likely to have adverse effects on biological resources were considered, and those with greater impacts were eliminated. Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced to a less than significant level. Mitigation Measure BIO-3 requires a preconstruction survey to be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Willow flycatcher (*Empidonax traillii*). The California Department of Fish and Wildlife lists the willow flycatcher as Endangered. Willow flycatchers occupy riparian and mesic (wet) upland thickets. They are a "sit and wait" predator of winged insects. They were historically common summer residents throughout California, breeding wherever extensive willow thickets occurred, however, they have been extirpated as breeding birds over much of their range in California. Today, they are rare to locally uncommon summer residents in wet meadow and montane riparian habitats at 2,000-8,000 ft. in the Cascade and Sierra Nevada ranges, and occur along the Kern, Santa Margarita, and San Luis Rey rivers. In the spring and fall, willow flycatchers are fairly common transients throughout the state's riparian willow.

There are documented occurrences of willow flycatchers within approximately three miles of the APE. Field surveys did not reveal the presence of this species within the APE. Potentially suitable willow flycatchers habitat is present in scattered locations along the Truckee River within the APE. The proposed project is not anticipated to result in any significant removal of habitat in any of the riparian areas along the Truckee River within the APE. The proposed project will result in some tree removal within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, bridge and trail alignments that are least likely to have adverse effects on biological resources were considered, and those with greater impacts were eliminated.

Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced. Preconstruction surveys will be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Bald eagle (*Haliaeetus leucocephalus*). The California Department of Fish and Wildlife lists the bald eagle as Endangered. This species is our national symbol and one of North America's largest birds, weighing about 8 to 14 pounds with a wingspan of 6½ to 8 feet. Females are larger than males. Adults are dark brown with a pure white head and tail. Younger birds are mostly brown, mottled with varying amounts of white. They acquire their adult plumage at 4 or 5 years of age. This species is a powerful predator, but they often feed on carrion, including dead fish washed up on shore. They are also known to steal food from Ospreys and other smaller birds. The highest concentrations of this species be found wintering along rivers or reservoirs in some areas.

There are documented occurrences of bald eagle within approximately six miles of the APE. During field surveys, there was no evidence of this species; however, this species could establish nests in any given breeding season along the Truckee River. The proposed project is not anticipated to result in any significant removal of habitat in any of the riparian areas along the Truckee River within the APE. The proposed project will result in some tree removal within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, bridge and trail alignments that are least likely to have adverse effects on biological resources were considered, and those with greater impacts were eliminated. Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced. Preconstruction surveys will be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of the Mitigation Measure BIO-3 the potential for an impact is reduced to a **less than significant** level.

Osprey (*Pandion haliaetus*). The California Department of Fish and Wildlife lists the osprey as a California raptor species without any specific listing. This is a very distinctive fish-hawk, formerly classified with other hawks but now placed in a separate family of its own. They are found along coastlines, lakes, and rivers almost worldwide, the osprey is often seen flying over the water, hovering, and then plunging feet-first to catch fish in its talons. After a successful strike, the bird rises heavily from the water and flies away, carrying the fish head-forward with its feet. Bald Eagles sometimes chase Ospreys and force them to drop their catch.

There are documented occurrences of osprey within approximately two miles of the APE. During field surveys, there was no evidence of this species; however, this species could establish nests in any given breeding season along the Truckee River. The proposed project is not anticipated to result in any significant removal of habitat in any of the riparian areas along the Truckee River within the APE. The proposed project will result in some tree removal within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, bridge and trail alignments

that are least likely to have adverse effects on biological resources were considered, and those with greater impacts were eliminated. Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced to a less than significant level. Mitigation Measure BIO-3 requires a preconstruction survey to be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Black-backed woodpecker (*Picoides arcticus*). This species is not listed under federal or state regulations, but is generally considered rare. They are typically found in boreal forests of firs and spruces. They favor areas of dead or dying conifers, and may concentrate at burned or flooded areas with many standing dead trees. They are also found in undamaged forests of pine, Douglas-fir, hemlock, tamarack, and spruce, especially spruce bogs.

There are documented occurrences of this species within approximately nine miles of the APE. During field surveys, there was no evidence of this species; however, this species could establish itself in any given breeding season. The proposed project is not anticipated to result in any significant removal of habitat within the APE. The proposed project will result in some tree removal within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, bridge and trail alignments that are least likely to have adverse effects on biological resources were considered, and those with greater impacts were eliminated. Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced to a less than significant level. Mitigation Measure BIO-3 requires a preconstruction survey to be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Great gray owl (*Strix nebulosi*) is listed on the USFS R5 Sensitive Species List for the Tahoe National Forest. The distribution of the great gray owl is circumpolar, with the Sierra Nevada encompassing the most southern extent of the species (Beck and Winter 2000). The core range of the great gray owl in California is centered on the greater Yosemite National Park area (Winter 1986, Greene 1995, Beck and Winter 2000, Sears 2006). There are records of great gray owls as far south as Tulare County, and to the north from the Modoc, Lassen, Plumas, Tahoe, and Eldorado National Forests, and from Del Norte, Humboldt, Shasta, and Siskiyou Counties (Beck and Winter 2000).

Current knowledge on great gray owl distribution and habitat requirements is somewhat limited, in part because research and surveys are difficult due to the wary and elusive behavior of the species (Sears 2006, Rognan 2007). In the Sierra Nevada, great gray owls have been found to require two particular habitat components; a meadow system with a sufficient prey base, and adjoining forest with adequate cover and nesting structures (Winter 1980, Winter 1986, Greene 1995, van Riper and van Wagtendonk 2006). Meadows appear to be the most important foraging habitat for great gray owls, where approximately 93% of their prey is taken (Winter 1981). In the Sierra Nevada, great gray owl breeding activity is generally found in mixed coniferous forest from 2,500 to 8,000 feet elevation

where such forests occur in combination with meadows or other vegetated openings (Greene 1995, Beck and Winter 2000). In their study in Yosemite National Park, van Riper and van Wagtendonk (2006) found that home ranges were located adjacent to meadows in red fir and Sierra mixed conifer most frequently, and home range boundaries followed meadow and drainage topography. They found that most females nested where red fir was the most common habitat type, and some nested in habitat dominated by lodgepole pine (van Riper and van Wagtendonk 2006). Habitat types used by breeding females included Sierra mixed conifer, montane riparian, and montane chaparral types (van Riper and van Wagtendonk 2006). Nesting usually occurs within 840 feet (averaging 500 feet) of the forest edge and adjacent open foraging habitat (Beck and Winter 2000). Greene (1995) found that nest sites had greater canopy closure (mean 84%) and were more likely located on northern aspects than expected by chance.

In the Tahoe National Forest, there have been few recorded great gray owl sightings, and nesting has only recently been confirmed in one location on or near private land. Possible sighting and/or detection locations include Perazzo Meadows (May 2004), along Pliocene Ridge Road (occasional sightings since 2003 with confirmed nesting in the area in 2009), three miles north of Nevada City (an adult located in January 1996 and January 1997), Donner Ranch Ski Area (pair observed in November 1994), near Spencer Lakes at the northern border of the Tahoe National Forest (detection in July 1990), south of Lincoln Creek Campground (an individual in July 1987), and near Sattley (pair in January 1985).

The project area does not support ideal habitat for this species. The seasonal wetland areas provide some prey opportunity, but the composition of vegetation and lack of water throughout the season is a limiting factor for prey. Nevertheless, the seasonal wetland areas are largely avoided by design and there will be preconstruction surveys for birds to ensure that there are no nesting birds that are disturbed. Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced. Preconstruction surveys will be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

Other Raptors and Migratory Birds: There are a variety of raptors and migratory birds that are known throughout the Sierra Nevada range including the Tahoe region. The USFWS IPAC lists an additional 20 migratory birds that were not documented in the CNDDB. These birds are protected by a variety of laws that prevent the harassment and willful take of these species. There are numerous other protected raptors and migratory birds that are not mapped, but may utilize the APE or vicinity at times. These species are highly mobile and may forage throughout the APE.

The proposed project would result in some loss to foraging habitat in the area that the trail alignment would be constructed. Construction activities would generally occur during the spring, summer, and/or fall months, which is generally when migratory birds would be present. Construction activities could disrupt nesting depending on the proximity of the activities to the nest. Implementation of the appropriate avoidance and minimization measures would ensure that any

potential to impact this species is reduced to a less than significant level. Mitigation Measure BIO-3 requires a preconstruction survey to be conducted prior to any construction and if active nests are identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged. With the implementation of Mitigation Measure BIO-3, the potential for an impact is reduced to a **less than significant** level.

MITIGATION MEASURE

> ***Mitigation Measure BIO-3:*** *Pre-construction surveys for yellow warbler, tree-nesting raptors and migratory birds shall be conducted within 30 days prior to any construction that will occur between March 15 and August 31 of any given year. If ground-disturbing activities are delayed or suspended for more than 30 days after the pre-construction survey, the site shall be resurveyed. Preconstruction surveys shall be conducted within 250 feet of the proposed project impact area by a qualified biologist. Should active nests be identified by these surveys, the nest sites shall be protected from all construction activities within 250 feet of the nest site until the young have fledged, unless consultation with the regulatory agency(s) has occurred.*

Impact 3: The proposed project has the potential to have direct or indirect effects on special-status fish species (Less than Significant with Mitigation)

Special-status fish species: There are three special status fish species that were evaluated for this project.

Hardhead (*Mylopharodon conocephalus*) is listed as Sensitive on the Region 5 Forester's Sensitive Species List (USDA Forest Service 1998). Hardhead are widely distributed in low to mid-elevation streams in the main Sacramento-San Joaquin drainage as well as the Russian River drainage. The project area does not support suitable habitat for hardhead. Therefore, this project will not affect this species or its habitat, and no further analysis is necessary.

Lahontan Lake tui chub (*Siphateles bicolor pectinifer*) is listed as Sensitive on the Region 5 Forester's Sensitive Species List (USDA Forest Service 1998). The Lahontan Lake tui chub are a cyprinid subspecies found in Lake Tahoe and Pyramid Lake (Nevada) which are connected to each other by the Truckee River and in nearby Walker Lake (Nevada). The Lake Tahoe population is the only confirmed population in the Sierra Nevada, with a probable population in Stampede, Boca and Prosser Reservoirs in the Tahoe National Forest. The project area does not support suitable habitat for Lahontan Lake tui chub. Therefore, this project will not affect this species or its habitat, and no further analysis is necessary.

Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*). Lahontan cutthroat trout (LCT), like other trout species, are found in a wide variety of cold-water habitats including large terminal alkaline lakes, alpine lakes, slow meandering rivers, mountain rivers, and small headwater tributary streams. Generally, they occur in cool flowing water with available cover of well-vegetated and stable stream banks, in areas where there are stream velocity breaks, and in relatively silt free, rocky

riffle-run areas. They are endemic to the Lahontan basin of northern Nevada, eastern California, and southern Oregon. Today, they occupy between 123 to 129 streams within the Lahontan basin and 32 to 34 streams outside the basin, totaling approximately 482 miles of occupied habitat. The species is also found in five lakes, including two small populations in Summit and Independence Lakes. Self-sustaining populations of the species occur in 10.7 percent of the historic stream habitats and 0.4 percent of the historic lake habitats.

LCT has been introduced into the Truckee River as an unofficial experimental population (JBR 2007). These fish are reported to spawn in smaller tributaries including the lower Martis Creek. The LCT fish involved in this plant were taken from Pyramid Lake and Pilot Peak stocks.

Implementation of the proposed project would involve limited indirect disturbances to the LCT habitat in the Truckee River. Direct impacts would be avoided by the construction of a bridge spanning over the majority of the Truckee River. No in-water activities are anticipated except for potential removal of existing footings in Donner Creek. Removal of the footings may be part of the restoration of the Donner Creek confluence area, or if necessary, mitigation for floodplain impacts under the Donner Creek Bridge Alternative. Under this scenario, the creek would be temporarily rerouted while removing the footings. This design is intended to avoid the aquatic habitat of the Truckee River to the maximum extent feasible.

All construction activity within the 100-year floodplain zone and/or jurisdictional wetlands are restricted to May 1st to October 15th in order to avoid water quality impacts and disturbance to riparian habitat adjacent with the Truckee River. Restricting work to this timeframe shall limit work to the driest period of the year, thereby avoiding excessive runoff and erosion. Proposed construction activities shall avoid contact with the ordinary high-water mark of the Truckee River and nearby wetland habitat to the extent feasible. The ordinary high-water mark shall be defined by the "…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [Federal regulations (33 CFR 328.3(e))], equivalent to a biological vegetation mark. Any encroachment into these areas must be authorized through a regulatory permit issued by the applicable regulatory bodies (e.g. the USACE, LRWQCB, and CDFW) prior to implementation. Additionally, the proposed project requires a Construction General Permit through the State Water Resources Control Board (SWRCB). The permit requires implementation of a Stormwater Pollution Prevention Plan that includes best management practices, including: site-specific erosion control and bank stability measures, containment or proper handling of construction materials, construction scheduling, and construction fencing. In addition, permanent stormwater treatment and containment for new improvements would be included in this permit. The intent of these measures is to avoid and minimize indirect impacts to the LCT by protecting the water quality. Direct impacts are not anticipated given the limited in-water activities, and the high mobility of this species. With implementation of the mitigation measures BIO-7, BIO-8, BIO-9, GEO-2, HDY-1, HYD-2, and HYD-3, provided herein, implementation of the proposed project would have a **less than significant** impact on special status fish species.

Impact 4: The proposed project has the potential to have direct or indirect effects on special-status insect species (Less than Significant)

Special-status insect species: There are two special status insect species that were evaluated for this project. The first is the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). This species is deemed to not be present on the project site given the lack of appropriate elderberry habitat. The other species evaluated is the Western bumble bee (*Bombus occidentalis*), which is potentially present. This is a USFS sensitive species that was once common & widespread, but has declined precipitously from CA, perhaps from disease. The proposed project would result in indirect effects to the western bumble bee within the analysis area from the loss of habitat. Construction of the project would impact between approximately 11.4 and 12.6 acres, depending on the exact alignment and bridge that is constructed. This would include between approximately 5.0 and 5.9 acres of permanent impact and between 6.6 and 6.7 acres of temporary disturbance. The temporary impact areas would be revegetated, such that it would remain habitat for this species.

The bumble bee would also be directly affected if present during project implementation. During implementation, workers, along with motorized equipment would be used to complete the proposed action. The human presence, noise disturbance, and ground disturbance could displace individual bees, resulting in direct effects to the species.

The habitat that would be lost is a small area in comparison with the entirety of bumble bee habitat. Displaced bumble bees would move out of the area into other adjacent suitable habitats. Additionally, portions of the trail that will be rehabilitated would likely in the future support re-growth of vegetative species that provide foraging opportunities within the project area. Because of the small scope of this project and the likely re-growth in rehabilitated areas, it is determined that the proposed project may affect the western bumble bee, but is not likely to lead to a trend toward federal listing or loss of viability within the planning area. Implementation of the proposed project would have a **less than significant** impact on special status insect species.

Impact 5: The proposed project has the potential to have direct or indirect effects on special-status mammal species (Less than Significant with mitigation)

Special-status mammal species: There are nine special-status mammal species that are documented within a ten mile radius of the APE including: Sierra Nevada mountain beaver (*Aplodontia rufa californica*), California wolverine (*Gulo gulo*), Sierra Nevada snowshoe hare (*Lepus americanus tahoensis*), western white-tailed jackrabbit (*Lepus townsendii townsendii*), Sierra marten (*Martes caurina sierrae*), long-legged myotis (*Myotis volans*), gray-headed pika (*Ochotona princeps schisticeps*), fisher - West Coast DPS (*Pekania pennanti*), and Sierra Nevada red fox (*Vulpes necator*). In addition to those documented, there are a variety of bat species with the potential to occur in the region. Each is discussed below.

Special Status Bats: Pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), Western red bat (*Lasiurus blossevillii*), Fringed myotis (*Myotis thysanodes*), and long-legged myotis (*Myotis volans*) are each listed as CDFW Species of Special Concern and/or listed as

USFS R5 Sensitive. These special status species occur in a variety of habitats throughout California. Within the regional vicinity of the planning area bats can be found roosting in caves, mines, under bark, in hollow trees, in rock or other crevices, in building and bridge crevices, and sometimes in junk pile crevices. These special status bat species are mobile and can occur throughout the region.

During field surveys, there was no evidence of these special status bat species; however, the APE provides potential roosting habitat for this species in numerous locations (under bark or in tree hollows), and these species could traverse through the APE at times foraging, and they could use rocks or trees for roosting. The proposed project will result in tree removal, and impacts to the rocky talus areas, which will result in removal of potential habitat for these special status bat species within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, is considering the bridge and trail alignments that are least likely to have adverse effects on biological resources, including these special status bat species.

Implementation of the appropriate avoidance and minimization measures would ensure that any potential to impact this species is reduced. Preconstruction surveys will be conducted prior to any construction and if bat roosts are identified by these surveys, the regulatory agencies will be notified to develop an appropriate measure to avoid the species. This may include exclusionary devises if appropriate, or may include avoidance if it is a maternity roost. Additionally, no construction shall take place after sunset or before sunrise. Implementation of the following mitigation measure (Mitigation Measure BIO-4) would ensure that any potential to impact this species is reduced to a ***less than significant*** level.

MITIGATION MEASURE

> ***Mitigation Measure BIO-4****: Any snags measuring at least 20 inches diameter at breast height, and any rocky crevices (i.e. talus slopes) shall be inspected by a qualified biologist for potential bat use not more than 15 days prior to removal. Should a bat roost be discovered in a snag or crevice, the regulatory agencies shall be notified to develop appropriate mitigation measures (such as exclusionary nets). No construction shall take place after sunset or before sunrise.*

Sierra Nevada mountain beaver (Aplodontia rufa californica) is a CDFW Species of Special Concern. The field survey revealed evidence of past beaver activity in the ice pond area within the APE. It is not known if this activity is associated with this species or another beaver species. There are documented occurrences of Sierra Nevada mountain beaver within approximately 2.4 miles of the APE. Field surveys did not reveal the presence of this species in the APE. The Truckee River is a potential movement corridor for this aquatic mammal; however, it is not anticipated that the Truckee River serves as permanent habitat for this species, as they typically inhabit smaller tributaries with slower moving water.

Implementation of the proposed project would involve limited disturbances to the Truckee River, and it would not disturb the ice pond area. Impacts would be limited to the construction of a bridge crossing over the Truckee River on the eastern end of the APE. While the design of the project is intended to avoid the aquatic habitat of the Truckee River, it will require a bridge crossing in one

location to ensure trail connectivity. Because construction activities will require some temporary disturbance to the Truckee River during the construction phase, it has the potential for short term temporary impacts to this species if it were moving through the area during construction. Given this species mobility, and ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. Implementation of the proposed project would have a **less than significant** impact.

California wolverine (*Gulo gulo*) is a CDFW listed Endangered species. They are found in the north coast mountains and Sierra Nevada in a wide variety of high elevation habitats. There are several CNDDB documented occurrences of California wolverine within the ten-mile radius map of the APE. Documented occurrences are in Sagehen Creek (7.5 mi north), Euer Valley (5 mi northwest), Independence Road (8.5 mi northwest), and along SR 89 near the entrance to Squaw Valley (8 mi south). The APE is not ideal habitat for this species given the human presence within the surrounding developments and there is no evidence of existing or past denning in the APE. Given this species' ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. The proposed project is anticipated to have no effect on this species given limited disturbance to its habitat and the lack of any evidence that this species is present. Implementation of the proposed project would have a **less than significant** impact.

Sierra Nevada snowshoe hare *(Lepus americanus tahoensis)* is a CDFW Species of Special Concern. There are documented occurrences of Sierra Nevada snowshoe hare within the APE. The riparian thickets along the Truckee River, as well as the coniferous and sage brush habitat in the APE provide potential habitat. The proposed project will provide limited disturbance within the APE. All construction will be limited to the trail and bridge alignment. There are several alternative trail segment and bridge alignments, all of which would have some disturbance to the riparian habitat. Given this species mobility, and ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. The proposed project may affect, but is not likely to trend toward a federal or state listing or loss of viability within the planning area. Implementation of the proposed project would have a **less than significant** impact on this species.

Western white-tailed jackrabbit (*Lepus townsendii townsendii*) is on the CDFW Species of Special Concern. The APE provides suitable habitat for this species in in the sagebrush areas of the APE. Additionally, this species could traverse through other portions of the APE at times. The proposed project will provide limited disturbance to the sagebrush habitat within the APE. As part of this analysis, the lead agency, in coordination with local, state, and federal agencies, is considered the bridge and trail alignments that are least likely to have adverse effects on biological resources, including this species. There were several alternative trail segment and bridge alignments, all of which would have some disturbance to the sagebrush habitat. Given this species mobility, and ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. The proposed project may affect, but is not likely to trend toward a federal or state listing or loss of viability within the planning area. However, out of an abundance of caution, the proposed project would implement the following avoidance,

minimization, and mitigation measure. Implementation of the following mitigation measure (Mitigation Measure BIO-5) would ensure that impacts to this animal species are reduced to a **less than significant** level.

MITIGATION MEASURE

> ***Mitigation Measure BIO-5:*** *If construction activities are proposed to occur during the jackrabbit breeding, gestation, or rearing season (February through August), a qualified biologist shall conduct a preconstruction survey for active white-tailed jackrabbit forms within the work area no more than 48 hours prior to construction. Should breeding or juvenile white-tailed jackrabbits be discovered, CDFW shall be notified to develop appropriate mitigation measures, which may include erecting temporary exclusionary fencing and/or the creation of a buffer zone to protect the form and individual white-tailed jackrabbits from construction activities.*

Sierra marten (*Martes caurina sierrae*) is on the CDFW Special Animal List. This species is a mobile species that can occur throughout the region. While the APE does not provide ideal habitat, this species could traverse through the site at times. Implementation of the proposed project would involve limited disturbances within the APE, and none of the disturbances are within areas that are high quality habitat for this species. This species has mobility, which provides an ability to avoid direct conflict. It is not anticipated that the construction activities would directly affect this species. Implementation of the proposed project would have a **less than significant** impact on this species.

Pacific fisher (*Martes pennanti*) (West Coast DPS) is a CDFW listed Threatened species. Observations are rare and detections are infrequent**.** Numerous large-scale survey efforts since 1990 between Mt Shasta and Yosemite Nat'l. Park have failed to detect fishers. There are documented occurrences of Pacific fisher within ten miles of the APE. This species is a mobile species that can occur throughout the region. Given this species ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. The APE does not provide ideal habitat. Implementation of the proposed project would involve limited disturbances within the APE, and none of the disturbances are within areas that are high quality habitat for this species. The proposed project would have no effect on this species given limited disturbance to its habitat and the lack of any evidence that this species is present. Implementation of the proposed project would have a **less than significant** impact on this species.

Gray-headed pika (*Ochotona princeps schisticeps*) is on the CDFW Special Animal List. The APE provides suitable habitat for this species in in the talus slopes of the southern portion of the APE. Additionally, this species could traverse through other portions of the APE at times. The proposed project includes trail alignments through the talus slope area within the APE. The reduction of habitat for the trail alignments within the talus slopes would be minimal and no direct impact to individuals would be anticipated given this species mobility, and ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. Implementation of the proposed project would have a **less than significant** impact.

MITIGATION MEASURE

> ***Mitigation Measure BIO-6:*** *If construction activities are proposed to occur during the pika breeding, gestation, or rearing season (April to July), a qualified biologist shall conduct a preconstruction survey for active pika within the work area no more than 48 hours prior to construction. Should breeding or juvenile pika be discovered, CDFW shall be notified to develop appropriate mitigation measures, which may include erecting temporary exclusionary fencing and/or the creation of a buffer zone to protect the adult and young from construction activities.*

Sierra Nevada red fox (*Vulpes necator*) is on the CDFW listed Threatened species. There are documented occurrences of Sierra Nevada red fox within five miles of the APE. The APE provides limited habitat for this species and there is no evidence of existing or past denning in the APE. Given this species mobility, and ability to avoid direct conflict, it is not anticipated that the construction activities would directly affect this species if it were to occur within the APE. The proposed project would have no effect on this species given limited disturbance to its habitat and the lack of any evidence that this species is present. The final determination would be made by the regulatory agency. Implementation of the proposed project would have a **less than significant** impact.

Impact 6: The proposed project has the potential to have direct or indirect effects on special-status invertebrate species (Less than Significant)

Special-status Invertebrate species: There are three mollusk species that were evaluated for this project: California floater (*Anodonta californiensis*), Black juga (*Juga nigrina*), and Great Basin Rams-horn (*Helisoma (Carinifex) newberryi*). These species are listed as Sensitive on the Region 5 Forester's Sensitive Species List (USDA Forest Service 1998). All are aquatic species and can be adversely affected by direct construction activities to their aquatic habitat, or indirectly through changes in water quality. The proposed project does not include any in water construction activities that would have the potential to directly impact these species. Additionally, the project includes a range of best management practices that are intended to control stormwater runoff, erosion, and other preventative measures that would ensure water quality in the Truckee River does not degrade. Implementation of the proposed project would have a **less than significant** impact.

Impact 7: The proposed project has the potential to have direct or indirect effects on special-status plant species (Less than Significant)

Special-status plant species: There are twenty-six special-status plant species that are documented within a ten mile radius of the APE including: Galena Creek rockcress (*Arabis rigidissima var. demote*), Threetip sagebrush (*Artemisia tripartita ssp. Tripartite*), Austin's astragalus (*Astragalus austiniae*), Upswept moonwort (*Botrychium ascendens*), Scalloped moonwort (*Botrychium crenulatum*), Common moonwort (*Botrychium lunaria*), Mingan moonwort (*Botrychium minganense*), Bolander's bruchia (*Bruchia bolanderi*), Davy's sedge (*Carex davyi*), woolly-fruited sedge (*Carex lasiocarpa*), Mud sedge (*Carex limosa*), English sundew (*Drosera anglica*), Starved daisy (*Erigeron miser*), Donner Pass buckwheat (*Eriogonum umbellatum var. torreyanum*), American manna grass (*Glyceria grandis*), Plumas ivesia (*Ivesia sericoleuca*), long-petaled lewisia (*Lewisia longipetala*), Santa Lucia dwarf rush (*Juncus*

luciensis), Three-ranked hump moss (*Meesia triquetra*), Broad-nerved hump moss (*Meesia uliginosa*), Hiroshi's flapwort (*Nardia hiroshii*), Robbins' pondweed (*Potamogeton robbinsii*), Alder buckthorn (*Rhamnus alnifolia*), Tahoe yellow cress (*Rorippa subumbellata*), marsh skullcap (*Scutellaria galericulata*), Munro's desert mallow (*Sphaeralcea munroana*).

Surveys have been performed on June 21 and 23, 2006 and July 6 and 13, 2006 by JBR Environmental. Additionally, surveys were performed by De Novo Planning Group on May 9, 2016, June 30, July 13, August 17, and September 14, 2016. The field surveys in 2006 and 2016 did not reveal the presence of special status plants within the APE. Implementation of the proposed project would have a **less than significant** impact on special status plants.

Impact 8: The proposed project has the potential to have direct or indirect effects on wetlands (Less than Significant with Mitigation)

The APE has approximately 16.99 acres of wetlands. The aquatic resources delineation would need to be verified and a final determination made by the USACE prior to any activities that would involve construction in the jurisdictional areas. Any encroachment and fill activities in the Truckee River or the wetland features would be an impact and would require authorization through a Section 404 permit. In addition, these features are subject to the Porter-Cologne Water Quality Act and the California Fish and Game Code Section 1601. As such, any encroachment and fill activities in these features would require authorization through a Section 401 permit from the RWQCB and a 1600 permit through the CDFW.

The trail segments were designed to minimize impacts to riparian and wetlands to the extent feasible by either avoiding through design or constructing a boardwalk or bridge that spans these areas. The boardwalk/bridge would still result in some loss of natural light on the underside of the boardwalk and vegetated areas would become largely barren. Also, the bridge will include limited piles to support the bridge, which will have very little impact to the wetland. As such the boardwalk/bridge areas are classified as permanent impact within this study.

The trail segments portion of the project (which excludes bridge and boardwalk segments) would include approximately 0.0073 acres of impacts to wetlands (0.0035 permanent impact and 0.0038 temporary impact). These impacts are irrespective of the bridge that is selected. The bridge and boardwalk portion of the project would include impacts that range from approximately 0.0425 to 0.0680 acres of impacts to wetlands, depending on the bridge that is selected. Therefore, the total wetland impact (to the trail segments and bridges) is anticipated to range between approximately 0.0498 to 0.0753 acres. Table 9, below, provides a summary of area of impact to wetlands (by wetland type) from the trail segments. Table 10 provides a summary of the area of impact to wetlands (by wetland type) from the bridge and boardwalk segments. The preferred alignment would have the smallest temporary and permanent impacts to wetlands, as shown in Table 10.

Table 11 provides a summary of all areas of the proposed project (inclusive of the alternative alignments) within the 100-year floodplain. The preferred alignment (West Bridge alignment) would have the least area within the floodplain, compared with the other alternatives, since the preferred alignment would have approximately 0.233 acres of permanent area and 0.269 acres of temporary

area within the 100-year floodplain. In comparison, the Middle Bridge alignment would have approximately 0.256 acres of permanent area and 0.330 acres of temporary area, and the Donner Bridge alignment would have approximately 0.361 acres of permanent area and 0.377 acres of temporary area within the floodplain.

Table 9: Summary of Trail Segment Wetland Impacts (Permanent and Temporary) (acres)

Facility	*Wetland Type*			*Grand Total*
	Riparian	*Waters of the U.S.*	*Seasonal Drainage*	
Trail Segments(A5/H1)				
A5				
Paved Trail Permanent	0	0	0.0020	0.0020
Paved Trail Temporary	0	0	0.0009	0.0009
H1				
Paved Trail Permanent	0	0	0.0015	0.0015
Paved Trail Temporary	0	0	0.0029	0.0029
Permanent Subtotal	***0***	***0.0000***	***0.0035***	***0.0035***
Temporary Subtotal	***0***	***0.0000***	***0.0038***	***0.0038***
Grand Total	**0**	**0.0000**	**0.0073**	**0.0073**

Source: Mark Thomas GIS, 2019.

Table 10: Summary of Bridge & Boardwalk Wetland Impacts (Permanent and Temporary) (acres)

Facility	*Wetland Type*			*Grand Total*
	Riparian	*Waters of the U.S.*	*Seasonal Drainage*	
Proposed Project – West Bridge Alternative				
West Bridge (A1)				
A1 Bridge Permanent	0.0139	0.0181	0	0.0320
Paved Trail Permanent	0	0	0.0002	0.0002
Paved Trail Temporary	0	0	0.0005	0.0005
Access Road - A1	0	0	0.0002	0.0002
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0139***	***0.0276***	***0.0005***	***0.0420***
Temporary Subtotal	***0.0000***	***0.0000***	***0.0005***	***0.0005***
Grand Total	**0.0139**	**0.0276**	**0.001**	**0.0425**
Middle Bridge Alternative				
Middle Bridge (B1/C1)				
B1 Bridge Permanent	0.0221	0.0238	0	0.0459
C1 Bridge Permanent	0	0	0.0006	0.0006
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0221***	***0.0333***	***0.0006***	***0.0560***
Grand Total	**0.0221**	**0.0333**	**0.0006**	**0.0560**
Donner Bridge Alternative				
Donner Bridge (F1/G1)				
F1 Bridge (Donner Creek) Permanent	0.0028	0.0099	0	0.0127
F1 Bridge (Truckee River) Permanent	0.0086	0.0369	0	0.0455
G1 Bridge Permanent	0	0	0.0003	0.0003
Boardwalk (K2)				
Boardwalk Permanent	0	0.0095	0	0.0095
Permanent Subtotal	***0.0114***	***0.0563***	***0.0003***	***0.0680***
Grand Total	**0.0114**	**0.0563**	**0.0003**	**0.0680**

Source: Mark Thomas GIS, 2019.

Table 11: Summary of Floodplain Impacts (Permanent and Temporary) (acres)

Facility	*Floodplain Impact*
Proposed Project – West Bridge Alternative	
Trail Segments	
Trail Segments Permanent	0.140
Trail Segments Temporary	0.269
West Bridge	
Bridge A1 Permanent	0.090
Parking Lot	
Parking Lot Permanent	0.003
Permanent Subtotal	***0.233***
Temporary Subtotal	***0.269***
Grand Total	**0.502**
Middle Bridge Alternative	
Trail Segments	
Trail Segments Permanent	0.170
Trail Segments Temporary	0.330
Middle Bridge	
Bridge Segment B1 Permanent	0.068
Bridge Segment C1 Permanent	0.061
Parking Lot	
Parking Lot Permanent	0.003
Access Roads	
Access Road - A1 (Permanent)	0.021
Access Road - Middle Bridge (Permanent)	0.001
Permanent Subtotal	***0.256***
Temporary Subtotal	***0.330***
Grand Total	**0.586**
Donner Bridge Alternative	
Trail Segments	
Trail Segments Permanent	0.174
Trail Segments Temporary	0.377
Donner Bridge	
Bridge Segment F1 Permanent	0.138
Bridge Segment G1 Permanent	0.047
Parking Lot	
Parking Lot Permanent	0.003
Permanent Subtotal	***0.361***
Temporary Subtotal	***0.377***
Grand Total	**0.738**

Source: Mark Thomas GIS, 2019.

Note: Numbers may not add up due to rounding.

All three bridge segments are designed to span over the Truckee River, with limited piles supporting the bridge. The bridges are designed to minimize/eliminate any direct physical impact to wetlands, and the installation of the abutments and piles will have very limited impact to the floodplain. Additionally, the boardwalks are designed to span the wetland areas. The wetland and riparian areas under the bridges/boardwalks, however, are classified as permanent impacts within this study because they will result in some loss of natural light on the underside of the bridge/boardwalk and

vegetated areas would become largely barren. Fill may require compensatory mitigation, which will be calculated by the regulatory agencies during the permitting process. Implementation of the following mitigation measures would ensure that the impacts to wetlands are reduced to a **less than significant** level.

MITIGATION MEASURES

Mitigation Measure BIO-7: *Prior to any activities that would result in removal, fill, or hydrologic interruption of the jurisdictional areas, the project proponent shall consult with the regulatory agencies (USACE, RWQCB, and CDFW) to secure an authorization for any fill activities associated with the alternative selected. This shall include obtaining a 404 permit, 401 certification, and 1600 Streambed Alteration Agreement, unless alternative permits are deemed necessary by the permitting agencies. The permits may require compensation for the fill, and implementation of all minimization and conservation measures recommended by the regulatory agencies.*

Mitigation Measure BIO-8: *Prior to construction, the project proponent shall install orange construction barrier fencing to identify environmentally sensitive areas around all delineated and verified wetland(s). This requirement shall only apply to delineated areas that are within 100 feet of the construction zone.*

Mitigation Measure BIO-9: *Based on the potential for impacts to riparian and wetland habitat, the Town shall prepare and implement an onsite revegetation and restoration plan for the riparian and wetland habitat temporarily impacted by construction activities. Restoration and revegetation shall take place onsite if possible and will directly restore those areas temporarily impacted. The plan shall be prepared in consultation with a qualified restoration ecologist. Restoration activities shall be monitored in accordance with the restoration plan or permit requirements. The revegetation/restoration of the temporarily impacted areas shall also include an additional acreage for onsite created/restored habitat to account for the permanent loss of riparian and wetland habitat based on the trail placement (anticipated at a rate of 1.5 to 1), in compliance with Town of Truckee Development Code Section 8.46.040 (C.2.), or in lieu fees for the loss of wetland in accordance with the permitting agency. The additional acreage will be located in the vicinity of the project and adjacent to existing or restored riparian and wetland habitat.*

Impact 9: The proposed project has the potential to interfere with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (Less than Significant)

The APE offers habitat for wildlife species such as mule deer (*Odocoileus hemionus*), mountain quail (*Oretyx pictus*), coyote (*Canis latrans*), and black bear (*Ursus americanus*), among numerous other species. However, there are no documented occurrences of a migratory corridor or nursery site in the APE. Field surveys did not reveal the presence of a migratory corridor or nursery sites on the APE.

Since the trail would be mostly constructed at grade, the proposed project would not fragment the APE (aside from the bridge crossings and boardwalk), and would not place permanent vertical structures in the APE. The proposed trail would provide some increased presence of humans and pet canine companions along the trails system. The Town has established the following etiquette for users of the trail system:

- Always carry a leash for your dog: all dogs must be leashed in Regional Park during the months of May through October.
- Keep dogs under voice and visual control, and use leash if needed
- Clean up after your dog: waste bags and trash receptacles are provided, please use both
- Please do not litter
- Please do not feed the wild animals
- Use existing river access trails only — do not bushwhack to the river

The above measures are tried and tested along existing segments of the trails system and the Town has deemed them largely successful in minimizing human/pet conflicts with the wildlife along existing segments of the trail system. Overall, the proposed project would not interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery site. Implementation of the proposed project would have a **less than significant** impact on this issue. No mitigation is necessary.

Impact 10: The proposed project has the potential to introduce or spread noxious weeds (Less than Significant with Mitigation)

Construction activities associated with the proposed project could introduce noxious weeds or result in their spread into currently uninfested areas, possibly resulting in the displacement of special-status plant species and degradation of habitat for special-status wildlife species. Plants or seeds may be dispersed via construction equipment if appropriate measures are not implemented. This impact is considered potentially significant because the introduction or spread of noxious weeds could result in a substantial reduction or elimination of species diversity or abundance. The following mitigation measure would require plans and specifications to include specific measures that reduce the likelihood of new noxious weed infestations after construction is completed. With implementation of the following mitigation measure, the proposed project would have a **less than significant** impact relative to this topic.

MITIGATION MEASURE

Mitigation Measure BIO-10: *Prior to the issuance of a grading permit, the project proponent shall incorporate the following measures into project plans and specifications:*

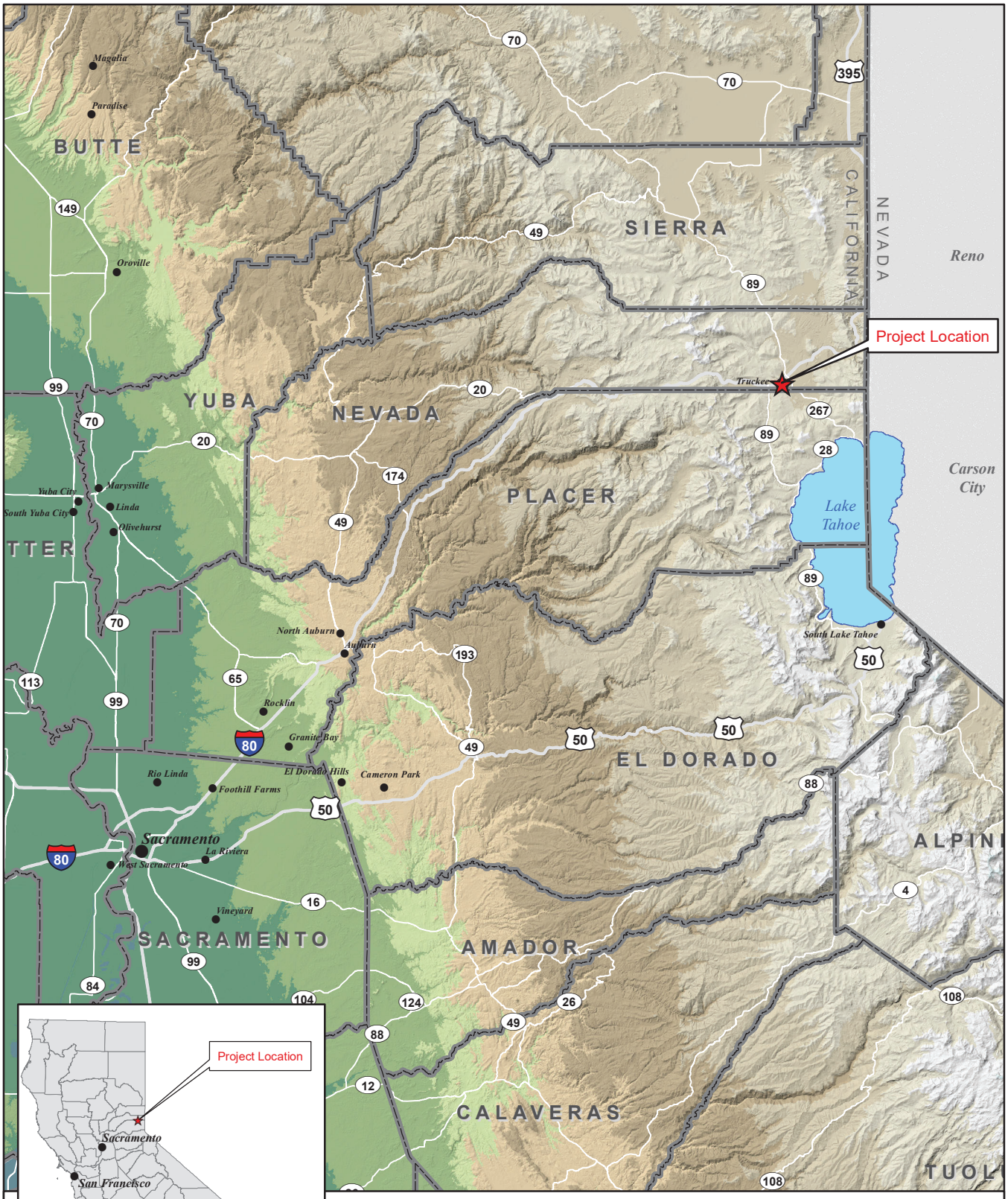
- *Construction supervisors and managers will be educated about noxious weed identification and the importance of controlling and preventing their spread.*
- *Any equipment that is brought on site should be washed. Cleaning shall include the undercarriage of any mobile equipment. Clean equipment inspection should be*

performed before the heavy equipment arrives on site and when equipment moves from heavily infested to lightly infested areas. Use C-clause for cleaning of heavy equipment as applicable.

- *Any materials used for erosion control or revegetation should be from a native source and come from adjacent areas. It is recommended that conifer needles and chipped branches be used for mulch and native seeds be raked in from the side to revegetate and cover disturbed ground. As a last resort, weed free materials could be brought from approved gravel pits or other weed-free certified sources.*
- *Re-compaction of trail is recommended to prevent weed establishment in these disturbed areas.*
- *Known musk thistle infestations occur nearby, so this site should be periodically checked after completion.*

Impact 11: The proposed project has the potential to conflict with an adopted habitat conservation plan, natural community conservation plan, recovery plan, or local policies or ordinances protecting biological resources (Less than Significant with Mitigation)

There are no Habitat Conservation Plans or Natural Community Conservation Plans in effect for the APE. The *Town of Truckee 2025 General Plan*, however, has various policies within the Conservation and Open Space Element that protect biological resources. The proposed project, with all mitigation measures incorporated, is consistent with the policies within the *Town of Truckee 2025 General Plan* that are related to biological resources. With implementation of mitigation measures, the proposed project would have a **less than significant** impact relative to this topic.



TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 1: Regional Location Map

Sources: CalAtlas. Map date: June 14, 2016.

De Novo Planning Group
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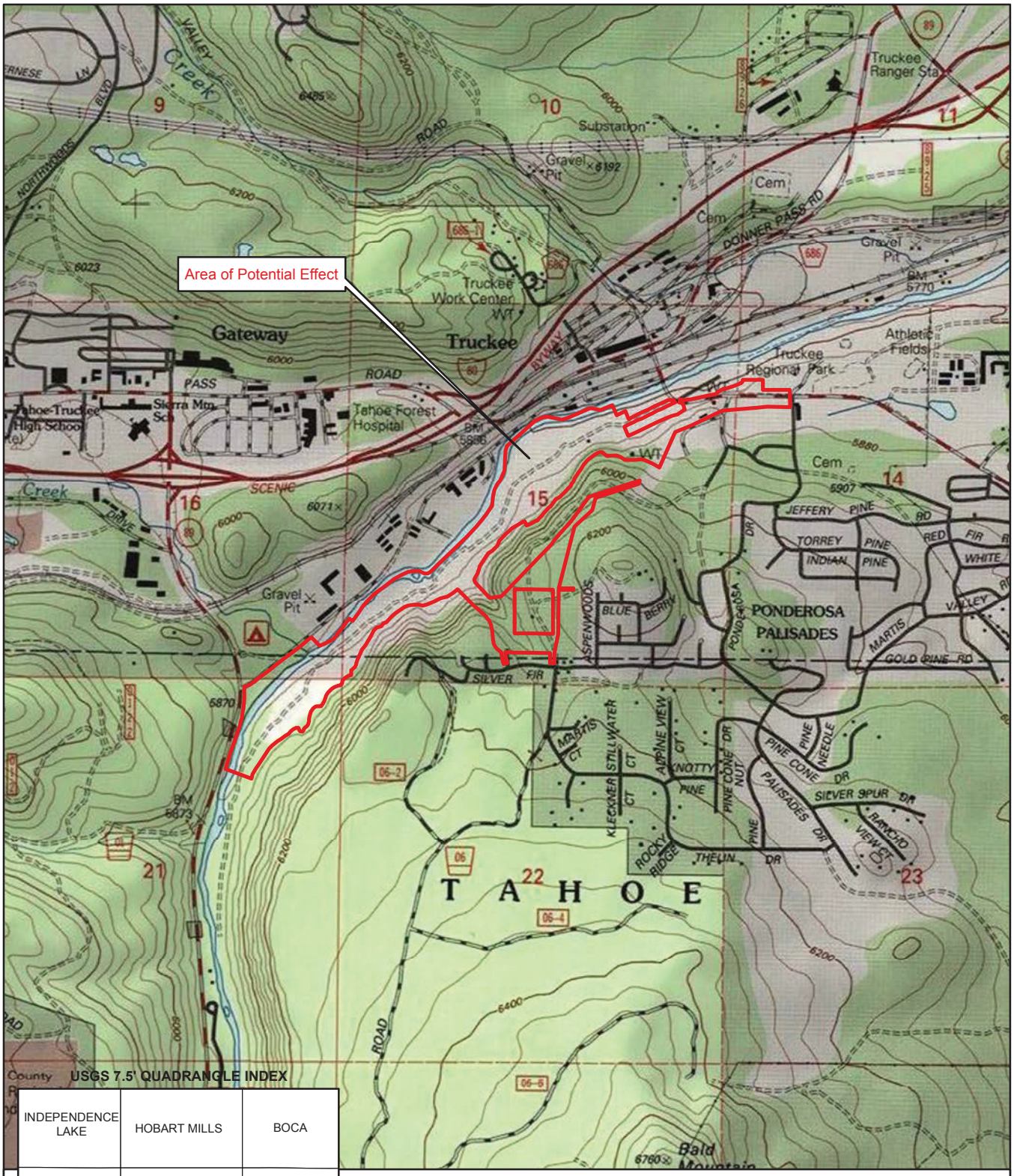

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 2: Project Vicinity

Truckee Quadrangle

Data sources: Mark Thomas and Company, "Cultural Resources Inventory of the Truckee Legacy Trail Phase 4 Project," August 2017; ArcGIS Online USGS Topographic Map Service. Map date:October 24, 2017.

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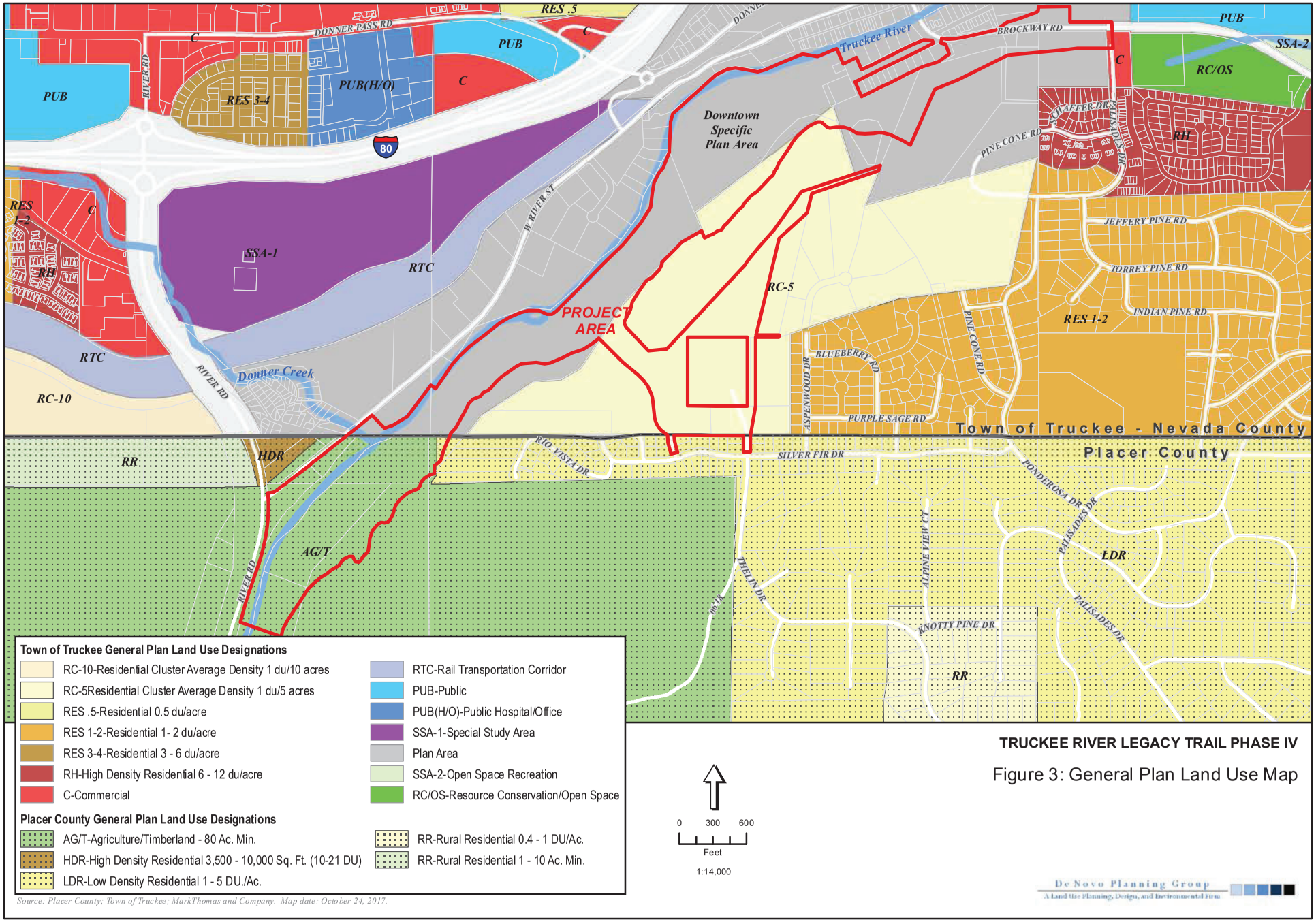

Source: Placer County; Town of Truckee; MarkThomas and Company. Map date: October 24, 2017.

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 3: General Plan Land Use Map

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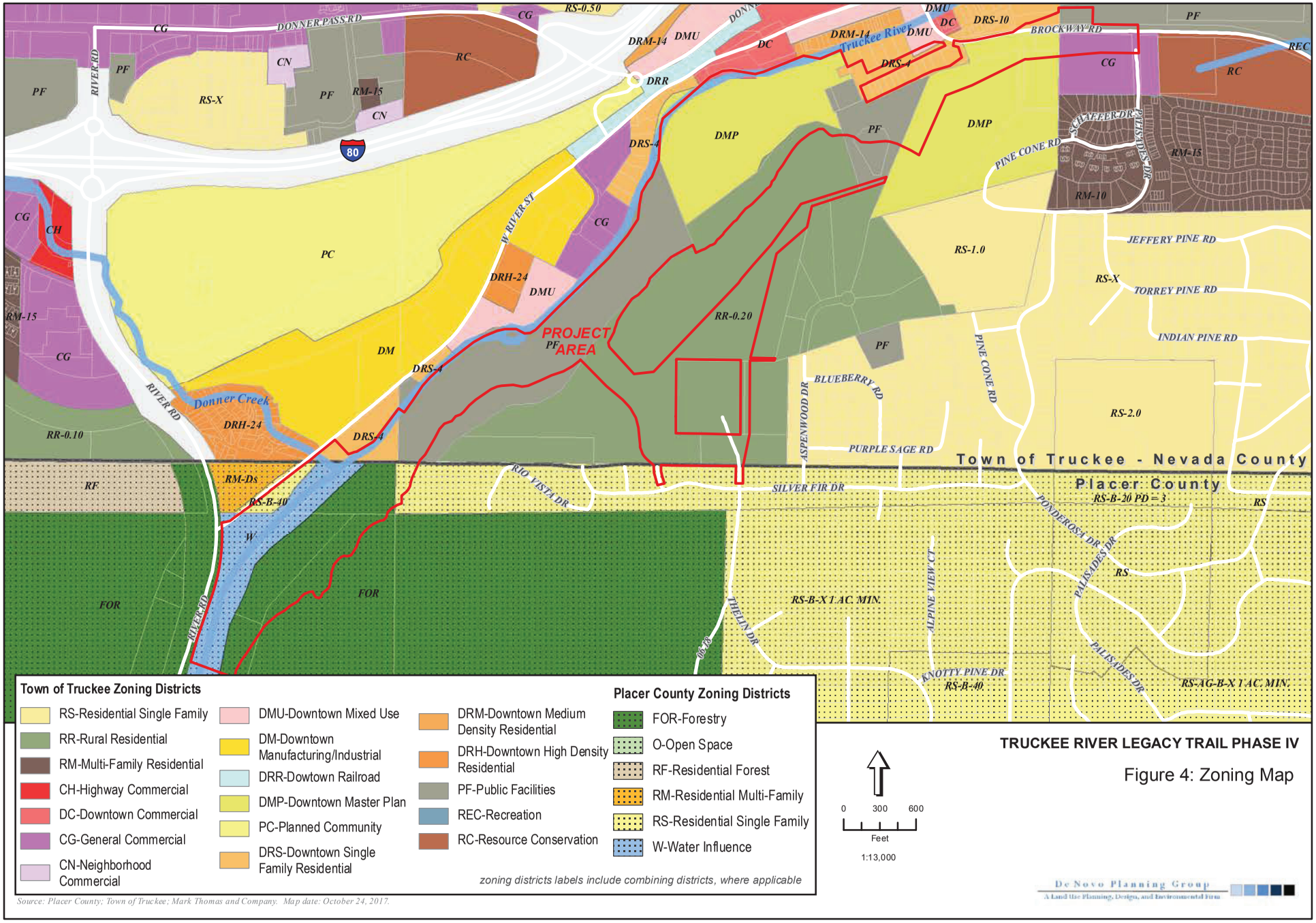

Town of Truckee Zoning Districts

- RS-Residential Single Family
- RR-Rural Residential
- RM-Multi-Family Residential
- CH-Highway Commercial
- DC-Downtown Commercial
- CG-General Commercial
- CN-Neighborhood Commercial
- DMU-Downtown Mixed Use
- DM-Downtown Manufacturing/Industrial
- DRR-Dowtown Railroad
- DMP-Downtown Master Plan
- PC-Planned Community
- DRS-Downtown Single Family Residential
- DRM-Downtown Medium Density Residential
- DRH-Downtown High Density Residential
- PF-Public Facilities
- REC-Recreation
- RC-Resource Conservation

Placer County Zoning Districts

- FOR-Forestry
- O-Open Space
- RF-Residential Forest
- RM-Residential Multi-Family
- RS-Residential Single Family
- W-Water Influence

zoning districts labels include combining districts, where applicable

0 300 600
Feet
1:13,000

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 4: Zoning Map

Source: Placer County; Town of Truckee; Mark Thomas and Company. Map date: October 24, 2017.

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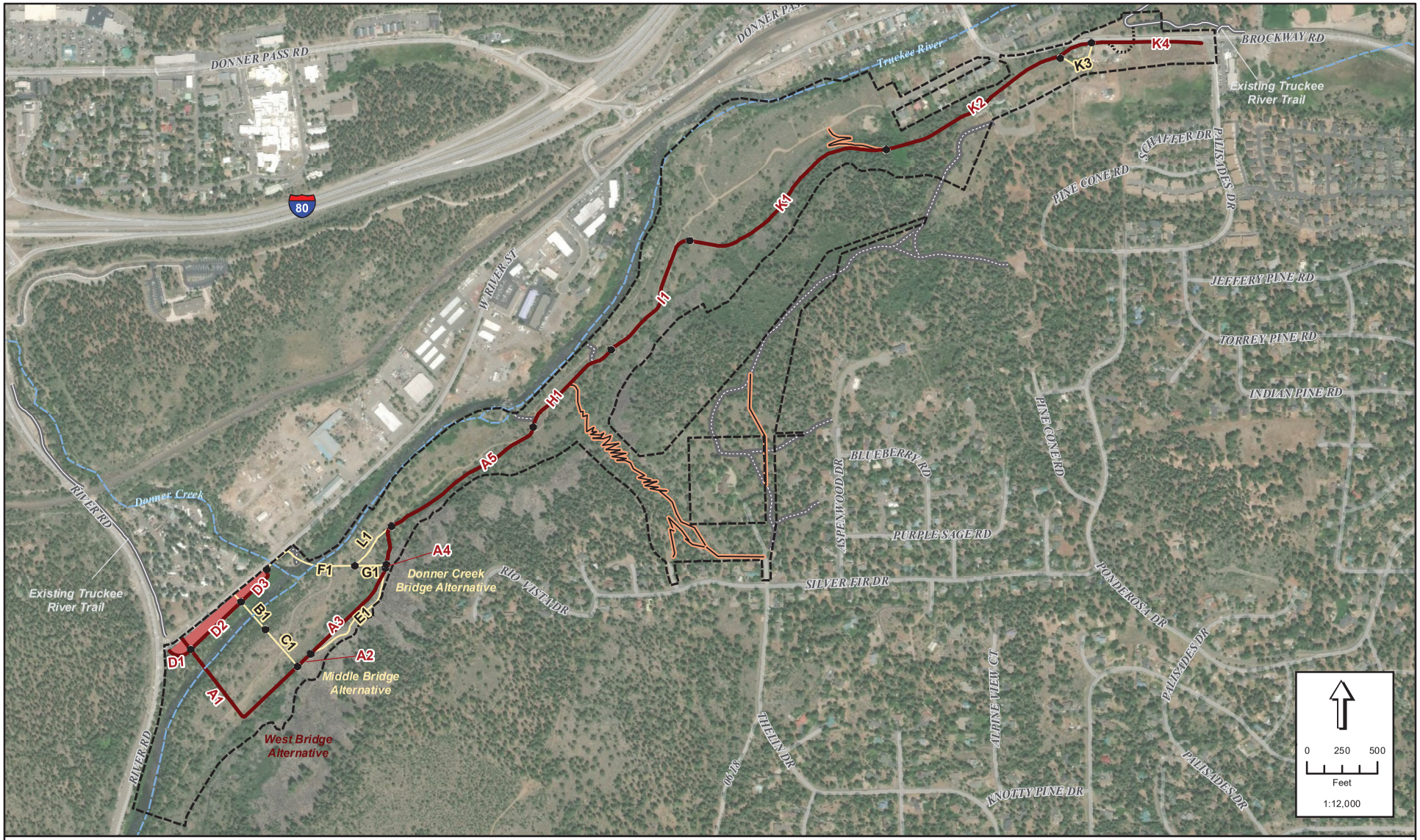

Legend

Proposed Trail

- Proposed Trail Alignment
- Alternate Alignment Scenarios
- Proposed Soft Surface Trail
- Trail Segment Start/End Stations
- Parking Lot - Paved

Future Phase

- Roundabout

Other Trails and Roads

- Existing Trail - Paved
- Existing Trail - Soft Surface

- Area of Potential Effects (APE)

TRUCKEE LEGACY TRAIL PHASE IV

Figure 5a: Proposed Trail Alignment

Data source: Mark Thomas and Company, TRL_Denovo_12-11-2018; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.

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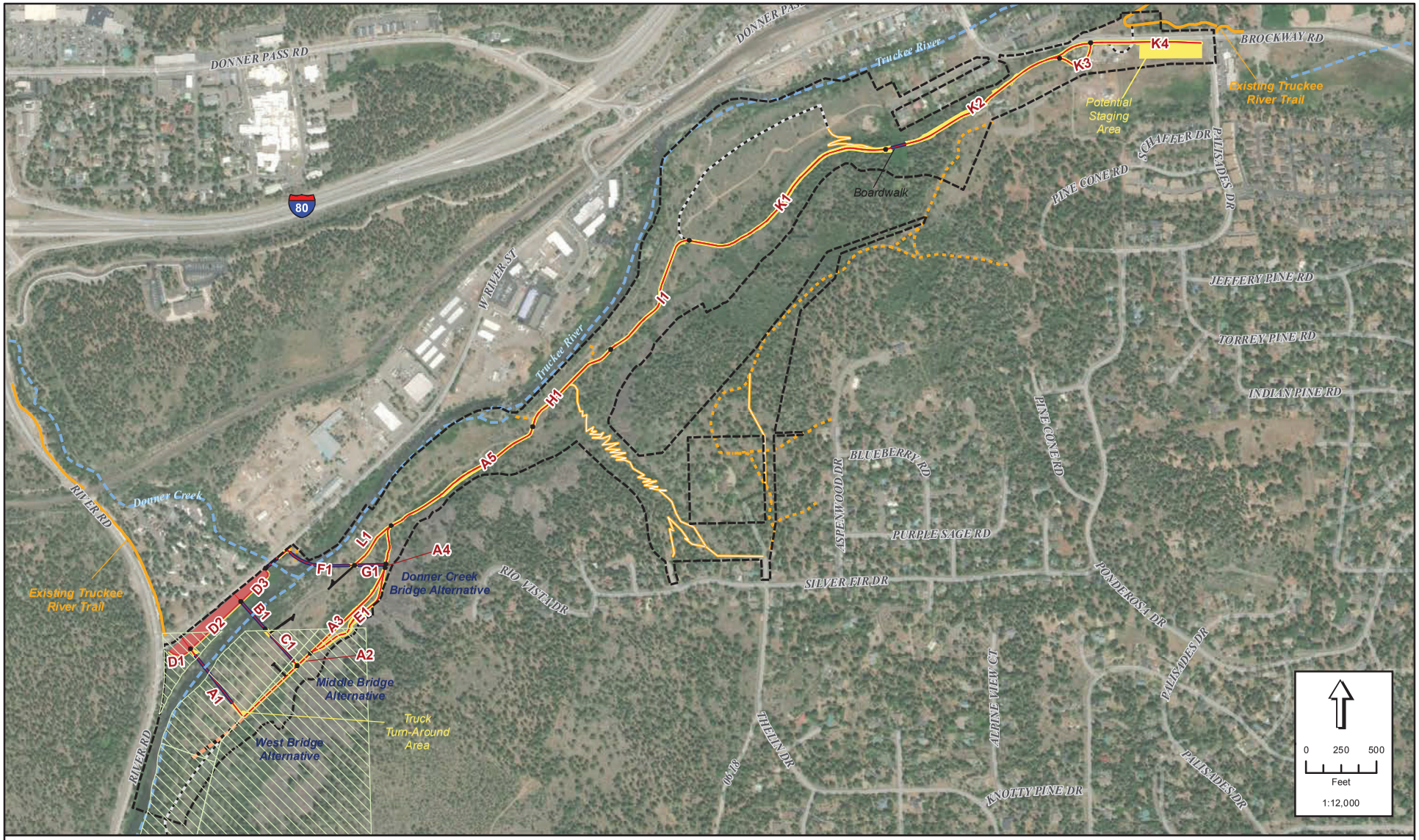

Existing Features

- Area of Potential Effects (APE)
- US Forest Service Parcels
- Truckee River and Donner Creek
- Existing Trail - Paved
- Existing Trail - Soft Surface
- TTSD Access Road

Project Features

- Trail Segment Start/End Stations
- Trail Alignment - Paved
- Boardwalk/Bridge
- Access Road
- Paved Parking Lot
- Paved Trail and Other Temporary Impacts

Future/Proposed Features

- Future Phases/Trails
- Proposed Soft Trail

TRUCKEE LEGACY TRAIL PHASE IV

Figure 5b: Conceptual Map

Data source: Mark Thomas and Company, TRL_Denovo_12-11-2018; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 28, 2019.

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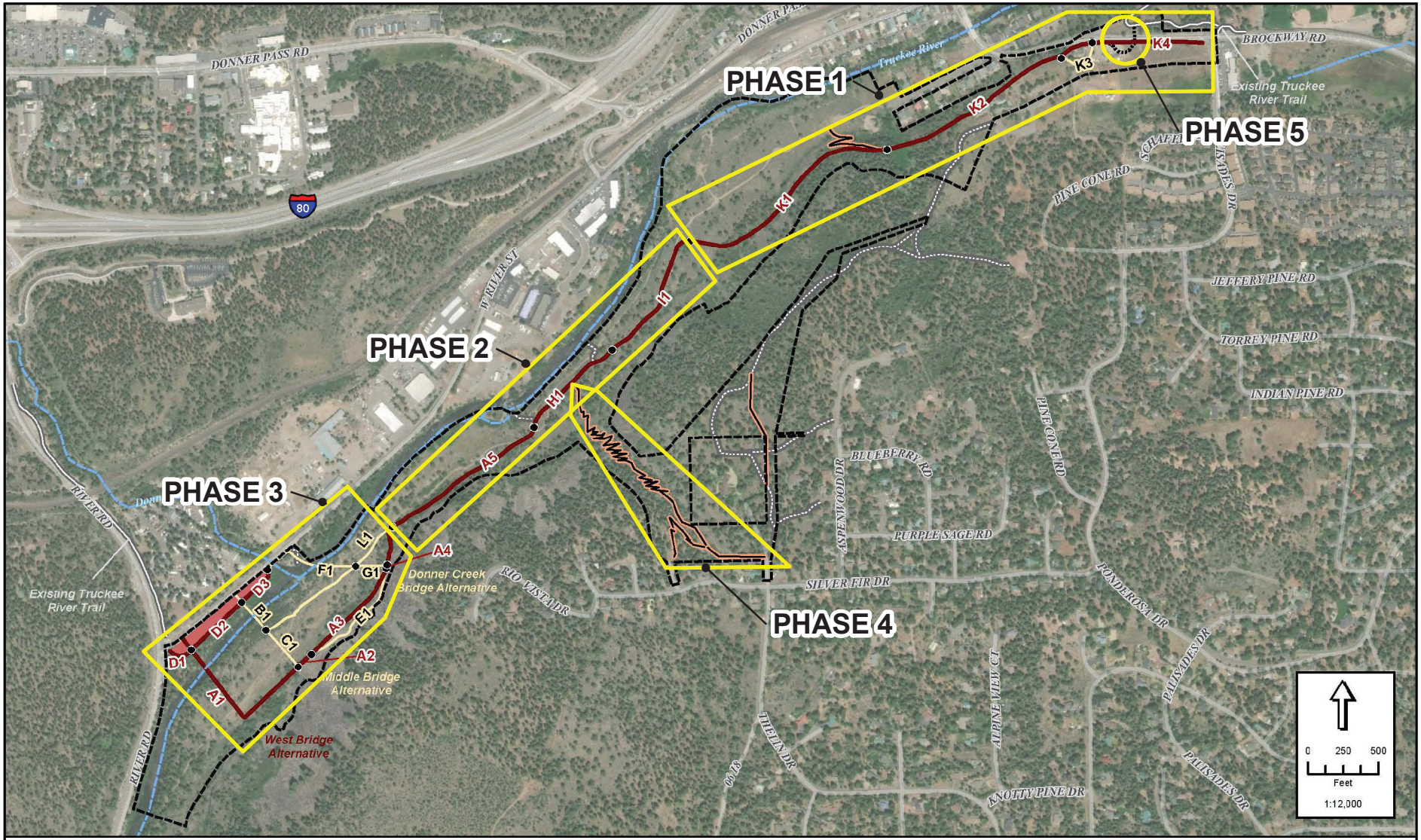
Potential Trail Phasing Plan



Legend

Proposed Trail
- Proposed Trail Alignment
- Alternate Alignment Scenarios
- Proposed Soft Surface Trail
- Trail Segment Start/End Stations
- Parking Lot - Paved

Future Phase
- Roundabout

Other Trails and Roads
- Existing Trail - Paved
- Existing Trail - Soft Surface

- Area of Potential Effects (APE)

TRUCKEE LEGACY TRAIL PHASE IV

FIGURE 5C: Potential Phasing Plan

Data source: Mark Thomas and Company, TRL_Denovo_12-11-2018; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 14, 2019.

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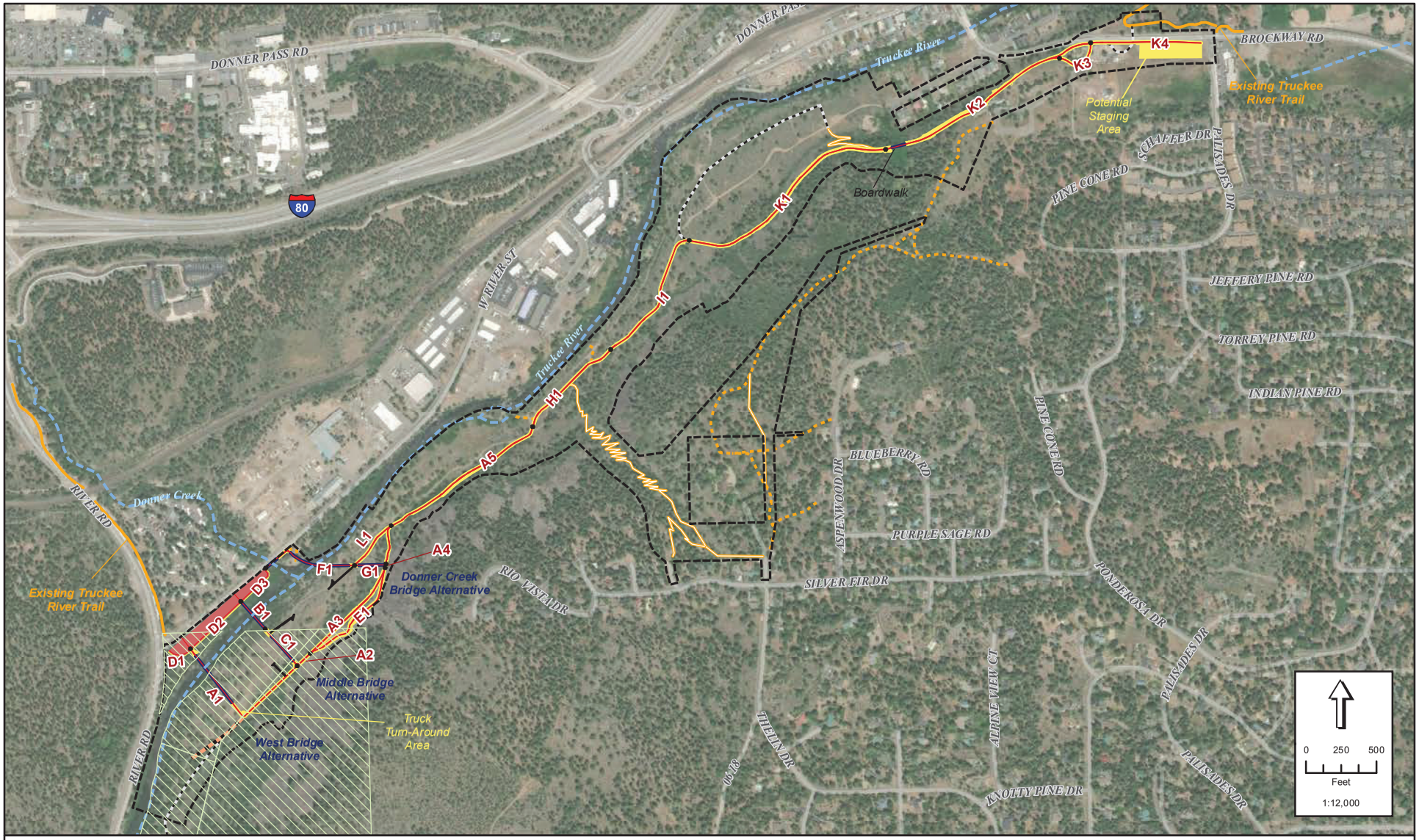

Existing Features

- Area of Potential Effects (APE)
- US Forest Service Parcels
- Truckee River and Donner Creek
- Existing Trail - Paved
- Existing Trail - Soft Surface
- TTSD Access Road

Project Features

- Trail Segment Start/End Stations
- Trail Alignment - Paved
- Boardwalk/Bridge
- Access Road
- Paved Parking Lot
- Paved Trail and Other Temporary Impacts

Future/Proposed Features

- Future Phases/Trails
- Proposed Soft Trail

TRUCKEE LEGACY TRAIL PHASE IV

Figure 5b: Conceptual Map

Data source: Mark Thomas and Company, TRL_Denovo_12-11-2018; Placer County; City of Truckee; ArcGIS Online Aerial Imagery Service. Map date: February 28, 2019.

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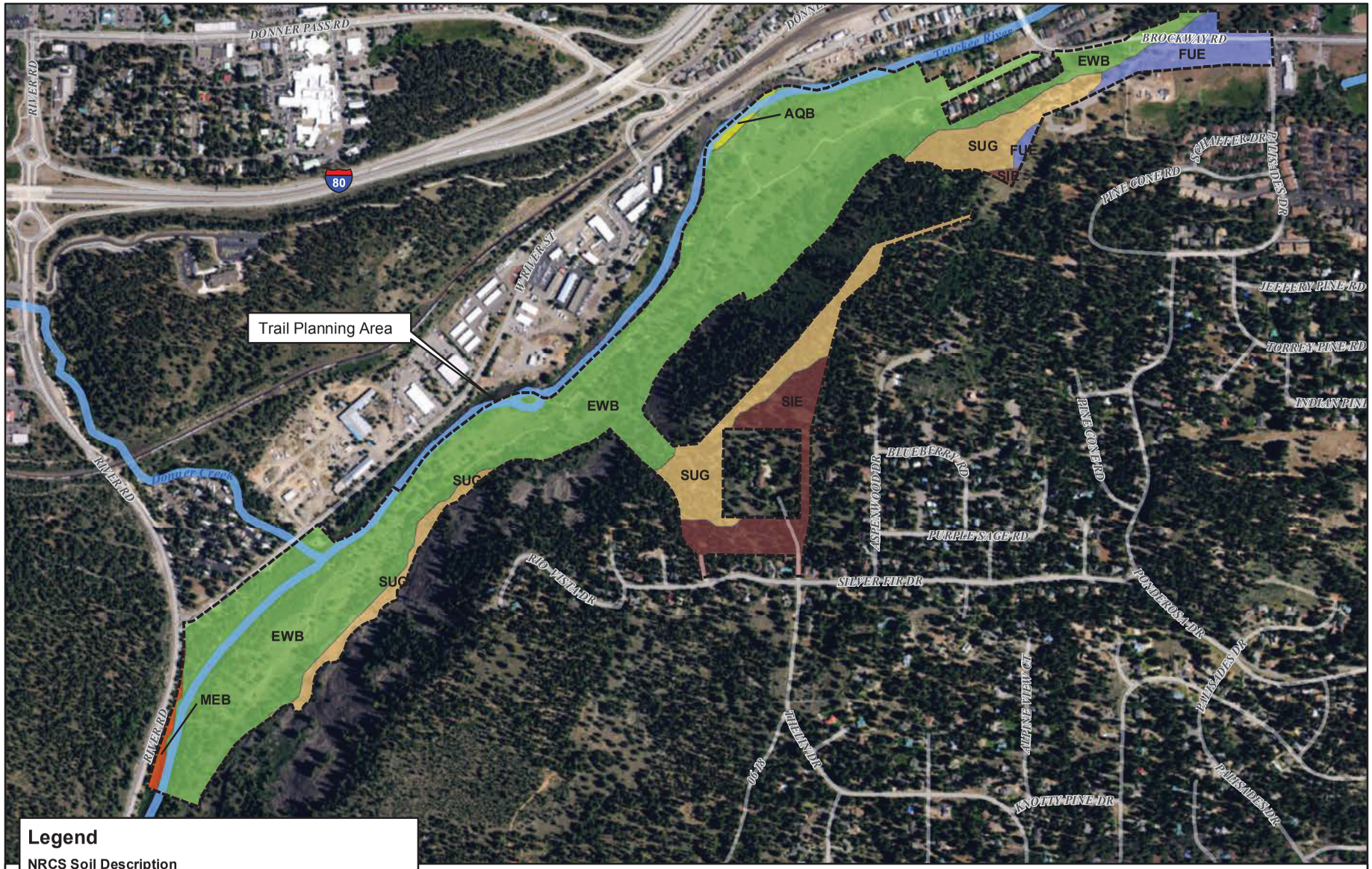

Legend

NRCS Soil Description

- AQB: Aquolls and Borolls, 0-5% slopes
- EWB: Inville-Riverwash-Aquolls complex, 2-5% slopes
- FUE: Kyburz-Trojan complex, 9-30% slopes
- SUG: Rubble land-Rock outcrop complex
- MEB: Martis-Euer variant complex, 2-30% slopes
- SIE: Sierraville-Trojan-Kyburz complex, 2-30% slopes

0 500 1,000
Feet
1:12,000

Data source: Placer County GIS; City of Truckee; NRCS Soil Survey, Tahoe National Forest Area CA719) accessed 10/24/2017; ArcGIS Online Aerial Imagery Service. Map date: October 24, 2017.

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 6: Soils Map

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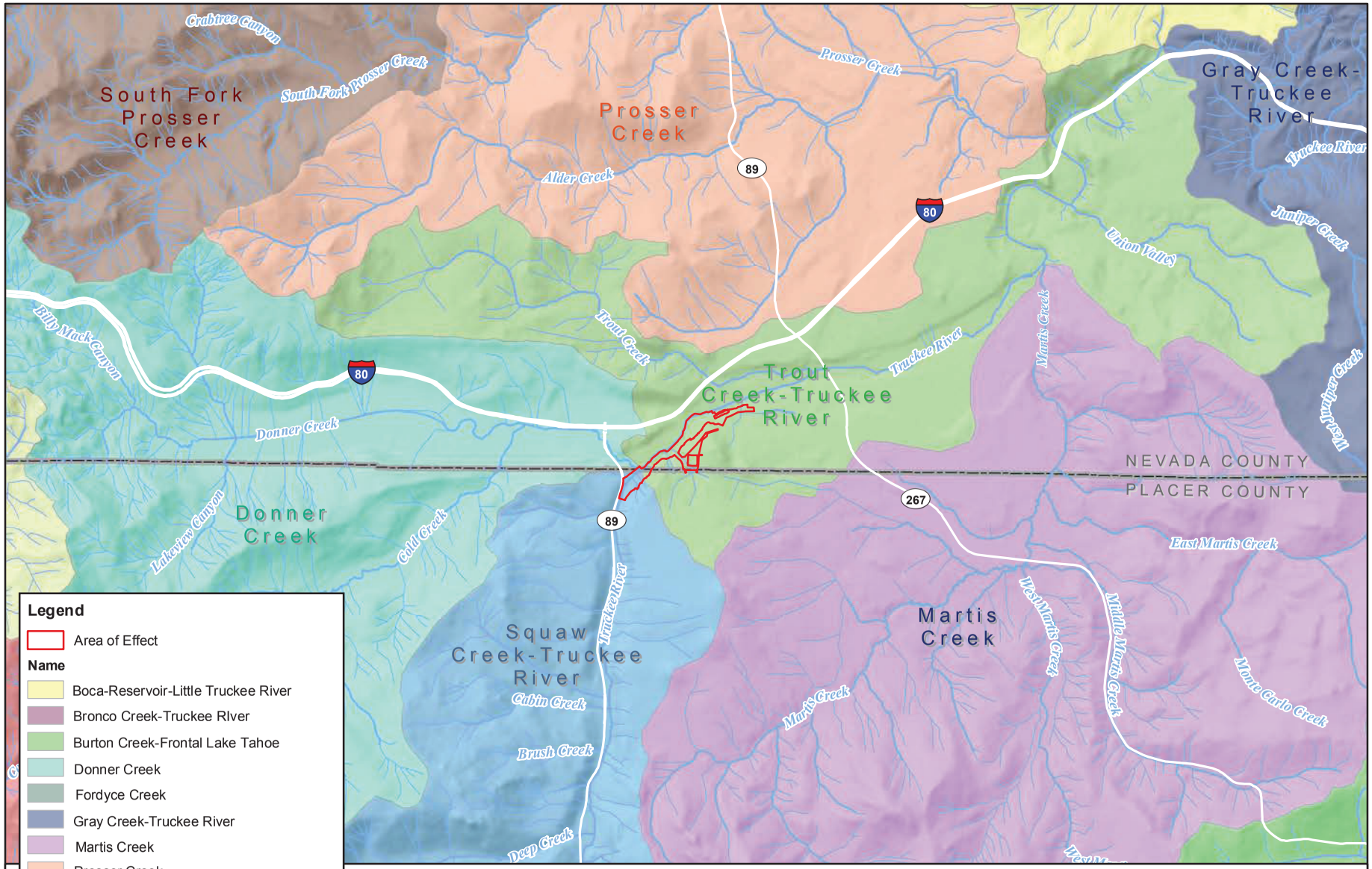

Data source: Placer County GIS; City of Truckee; USGS National Hydrography Dataset; USGS Watershed Boundary Dataset.
Map date: October 24, 2017.

TRUCKEE RIVER LEGACY TRAIL PHASE IV

Figure 7: Watersheds

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

APPENDIX A USFWS OFFICIAL SPECIES LIST

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Consultation Code: 08ESMF00-2017-SLI-1792
Event Code: 08ESMF00-2017-E-04539
Project Name: Truckee Legacy Trail Phase 4

April 17, 2017

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2017-SLI-1792

Event Code: 08ESMF00-2017-E-04539

Project Name: Truckee Legacy Trail Phase 4

Project Type: RECREATION CONSTRUCTION / MAINTENANCE

Project Description: The proposed project would develop Phase 4 of the Truckee River Legacy Trail. When completed, the proposed project would feature approximately 2.3 miles of Class 1 (paved) bikeway and recreation trail between the Truckee Regional Park (Brockway Road near the Cottonwood Restaurant intersection) and SR 89 (by W. River Street). This section of the Legacy Trail would also include a bridge across the Truckee River, near its western end. The proposed project would connect to Truckee River Legacy Trail Phase 3B in the east, and planned Phase 5 in the west.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/39.31905655001435N120.19448890806817W

Counties: Nevada, CA | Placer, CA

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Amphibians

NAME	STATUS
Sierra Nevada Yellow-legged Frog *(Rana sierrae)* There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9529	Endangered

Fishes

NAME	STATUS
Lahontan Cutthroat Trout *(Oncorhynchus clarkii henshawi)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964	Threatened

Critical habitats

There are no critical habitats within your project area.

APPENDIX B CNPS INVENTORY

CNPS California Native Plant Society

Plant List

Inventory of Rare and Endangered Plants

30 matches found. *Click on scientific name for details*

Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B], Found in Quads 3912043, 3912042, 3912041, 3912033, 3912032, 3912031, 3912023 3912022 and 3912021;

Modify Search Criteria | Export to Excel | Modify Columns | Modify Sort | Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Arabis rigidissima var. demota	Galena Creek rockcress	Brassicaceae	perennial herb	Jul-Aug	1B.2	S1	G3T3Q
Artemisia tripartita ssp. tripartita	threetip sagebrush	Asteraceae	perennial shrub	Aug	2B.3	S2	G5T4T5
Astragalus austiniae	Austin's astragalus	Fabaceae	perennial herb	(May)Jul-Sep	1B.3	S2S3	G2G3
Botrychium ascendens	upswept moonwort	Ophioglossaceae	perennial rhizomatous herb	Jul-Aug	2B.3	S2	G3G4
Botrychium crenulatum	scalloped moonwort	Ophioglossaceae	perennial rhizomatous herb	Jun-Sep	2B.2	S3	G4
Botrychium lunaria	common moonwort	Ophioglossaceae	perennial rhizomatous herb	Aug	2B.3	S2	G5
Botrychium minganense	Mingan moonwort	Ophioglossaceae	perennial rhizomatous herb	Jul-Sep	2B.2	S3	G4G5
Carex davyi	Davy's sedge	Cyperaceae	perennial herb	May-Aug	1B.3	S3	G3
Carex lasiocarpa	woolly-fruited sedge	Cyperaceae	perennial rhizomatous herb	Jun-Jul	2B.3	S2	G5
Carex limosa	mud sedge	Cyperaceae	perennial rhizomatous herb	Jun-Aug	2B.2	S3	G5
Claytonia megarhiza	fell-fields claytonia	Montiaceae	perennial herb	Jul-Sep	2B.3	S2	G5
Drosera anglica	English sundew	Droseraceae	perennial herb (carnivorous)	Jun-Sep	2B.3	S2	G5
Epilobium oreganum	Oregon fireweed	Onagraceae	perennial herb	Jun-Sep	1B.2	S2	G2
Erigeron eatonii var. nevadincola	Nevada daisy	Asteraceae	perennial herb	May-Jul	2B.3	S2S3	G5T2T3
Erigeron miser	starved daisy	Asteraceae	perennial herb	Jun-Oct	1B.3	S3?	G3?
Eriogonum umbellatum var. torreyanum	Donner Pass buckwheat	Polygonaceae	perennial herb	Jul-Sep	1B.2	S2	G5T2

Glyceria grandis	American manna grass	Poaceae	perennial rhizomatous herb	Jun-Aug	2B.3	S3	G5
Ivesia sericoleuca	Plumas ivesia	Rosaceae	perennial herb	May-Oct	1B.2	S2	G2
Juncus luciensis	Santa Lucia dwarf rush	Juncaceae	annual herb	Apr-Jul	1B.2	S3	G3
Lewisia longipetala	long-petaled lewisia	Montiaceae	perennial herb	Jul-Aug(Sep)	1B.3	S3	G3
Meesia uliginosa	broad-nerved hump moss	Meesiaceae	moss	Jul,Oct	2B.2	S3	G5
Mertensia oblongifolia var. oblongifolia	sagebrush bluebells	Boraginaceae	perennial herb	Apr-Jul	2B.2	S2	G5T4
Nardia hiroshii	Hiroshi's flapwort	Jungermanniaceae	liverwort		2B.3	S1	G5
Potamogeton epihydrus	Nuttall's ribbon-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	(Jun)Jul-Sep	2B.2	S2S3	G5
Potamogeton robbinsii	Robbins' pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	Jul-Aug	2B.3	S3	G5
Rhamnus alnifolia	alder buckthorn	Rhamnaceae	perennial deciduous shrub	May-Jul	2B.2	S3	G5
Rorippa subumbellata	Tahoe yellow cress	Brassicaceae	perennial rhizomatous herb	May-Sep	1B.1	S1	G1
Scutellaria galericulata	marsh skullcap	Lamiaceae	perennial rhizomatous herb	Jun-Sep	2B.2	S2	G5
Sphaeralcea munroana	Munro's desert mallow	Malvaceae	perennial herb	May-Jun	2B.2	S1	G4
Stuckenia filiformis ssp. alpina	slender-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	May-Jul	2B.2	S3	G5T5

Suggested Citation

California Native Plant Society, Rare Plant Program. 2017. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 17 April 2017].

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About the Rare Plant Program
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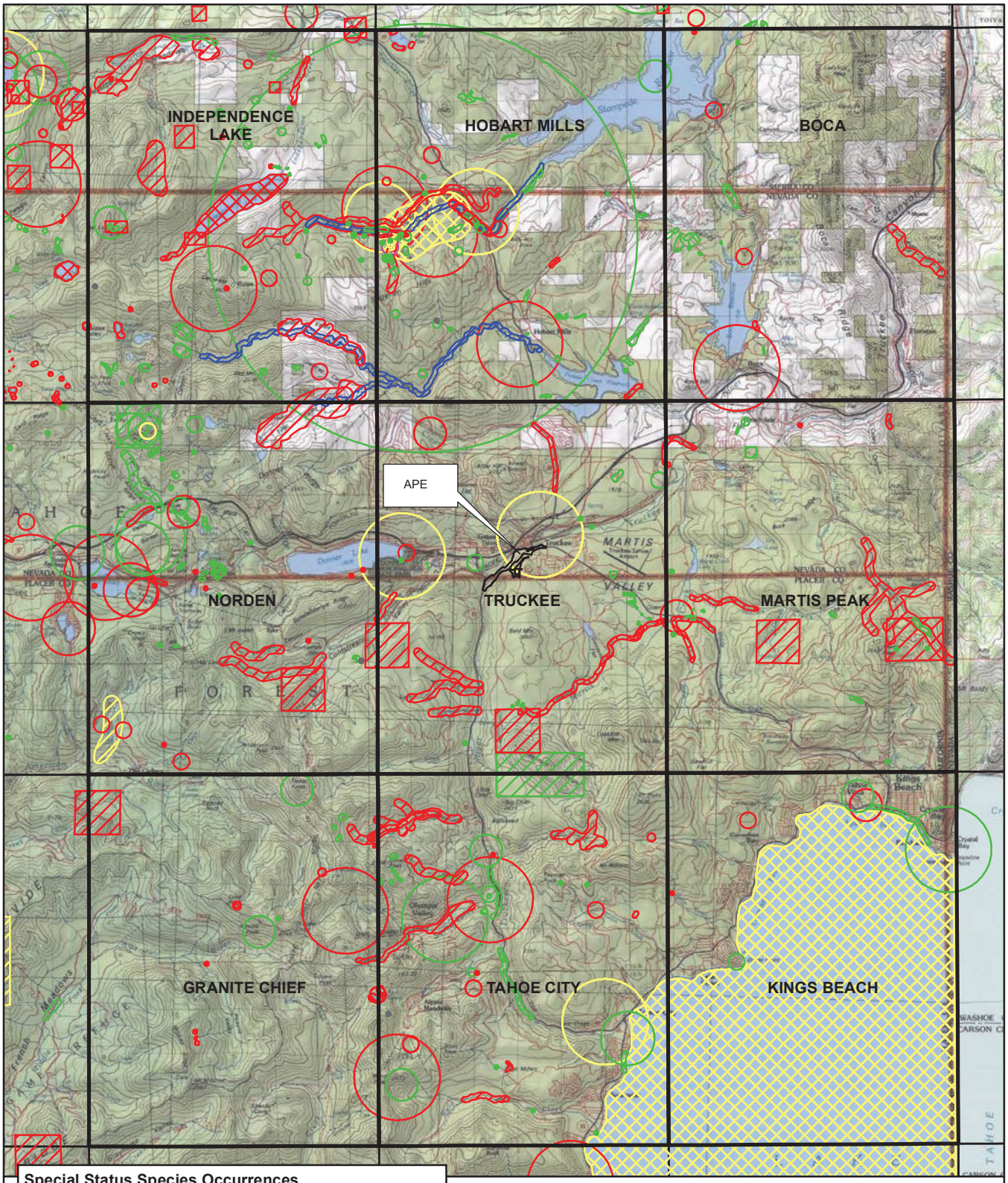
Contributors
The Calflora Database
The California Lichen Society

APPENDIX C CNDDB 10-MILE RADIUS SEARCH



TRUCKEE LEGACY TRAIL PHASE IV

Figure 7b: California Natural Diversity Database

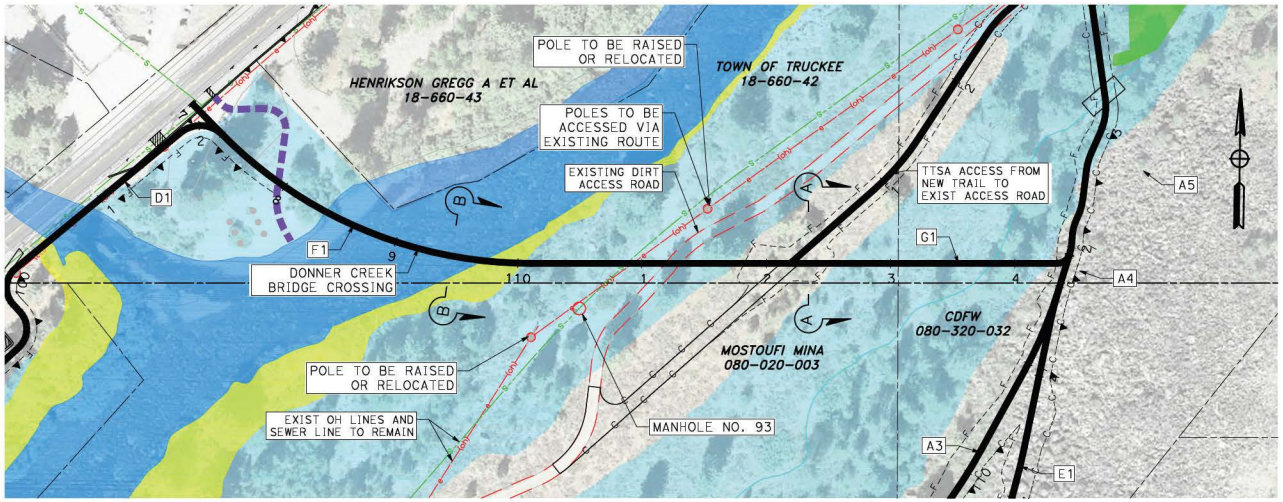
9-Quad Search

N 0 1 2 Miles 1:210,000

CNDDB version 08/2017. Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area. Basemap: ArcGIS Online Topographic Map Service. Map date: October 24, 2017.

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

APPENDIX D PLAN AND PROFILE



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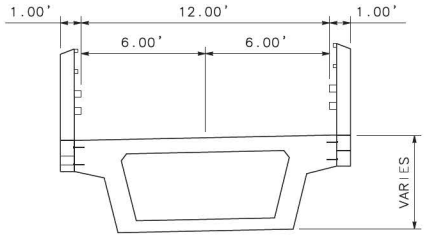

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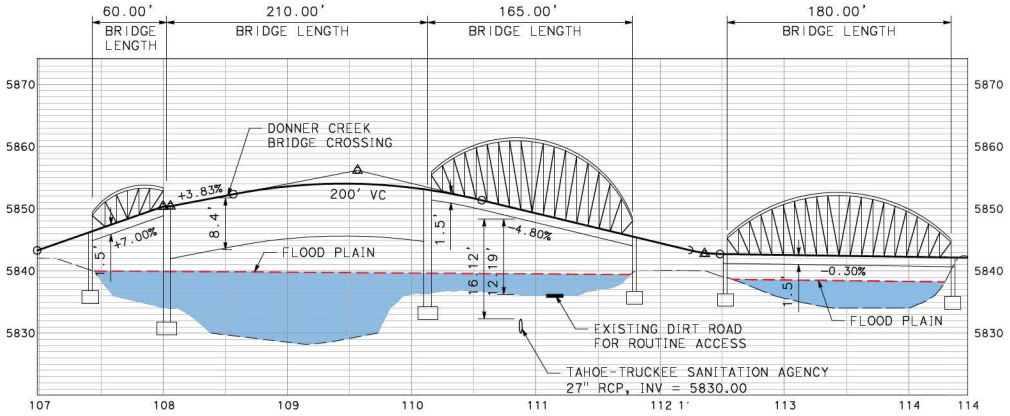
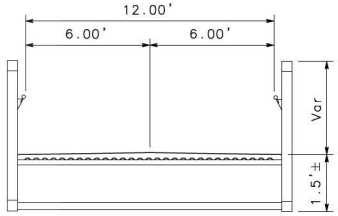


PROFILE - DONNER CREEK BRIDGE CROSSING ALTERNATIVE (F1, G1)
SCALE: Horiz 1" = 100'
Vert 1" = 20'



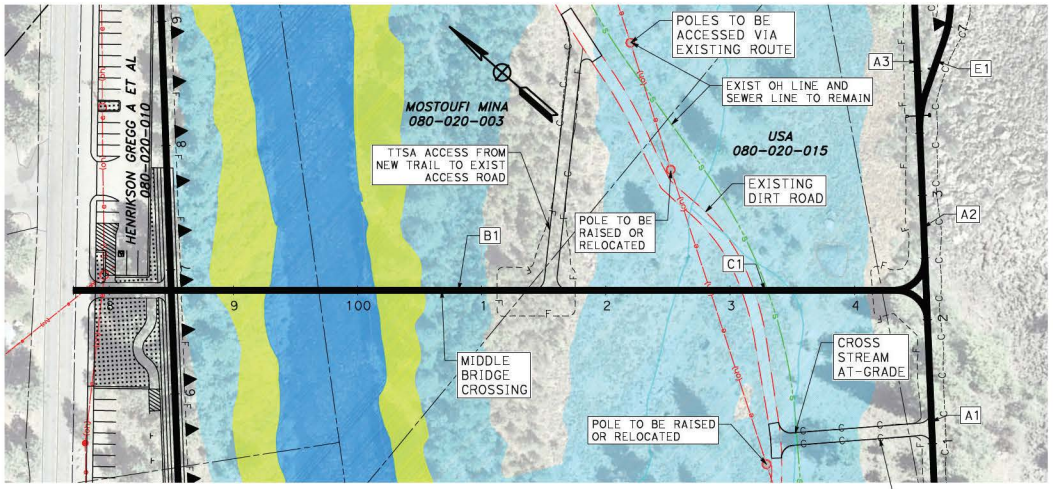
SECTION A-A
NO SCALE

LEGEND

OH ELECTRIC LINE AND POLE
SEWER LINE

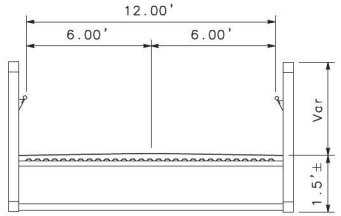
TRUCKEE LEGACY TRAIL
BRIDGE ALTERNATIVE

MARK THOMAS



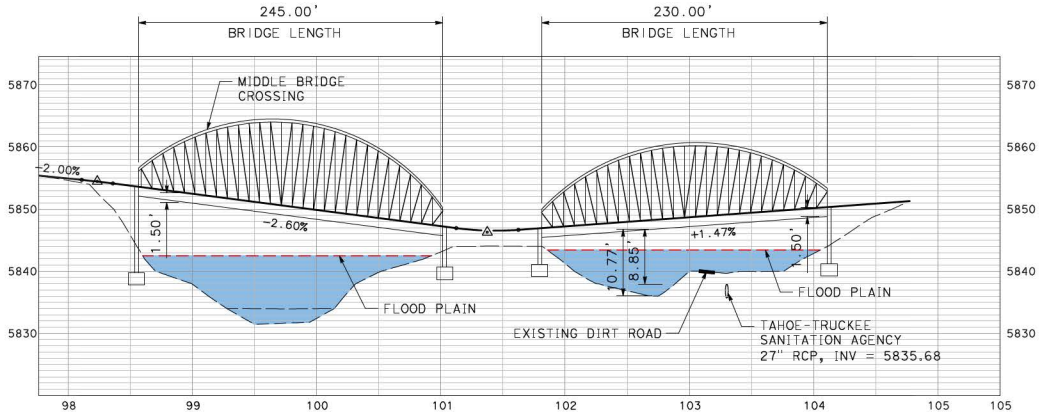
PLAN

SCALE: 1" = 100'



TYPICAL SECTION

SCALE: 1" = 6'



PROFILE - MIDDLE BRIDGE CROSSING ALTERNATIVE (B1, C1)

SCALE: Horiz 1" = 100'
Vert 1" = 20'

LEGEND

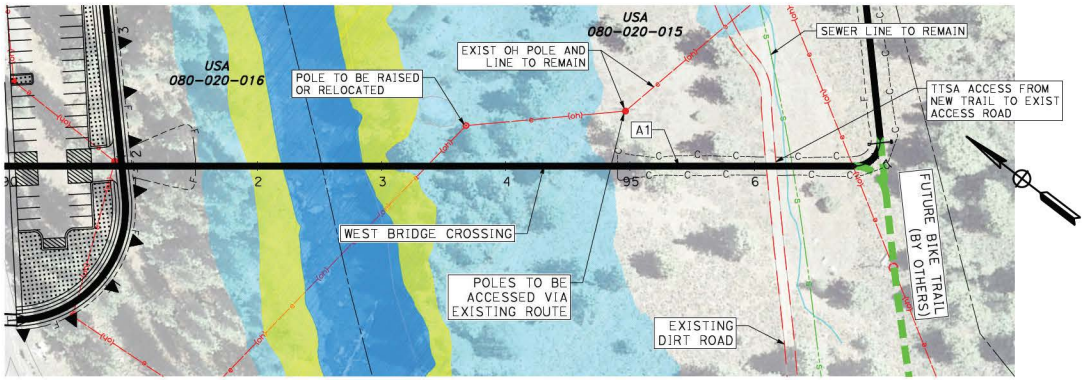
OH ELECTRIC LINE AND POLE
SEWER LINE

TRUCKEE RIVER LEGACY TRAIL

BRIDGE ALTERNATIVE

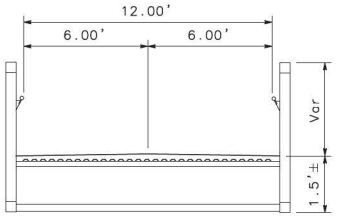
TOWN OF TRUCKEE

MARK THOMAS



PLAN

SCALE: 1" = 100'



TYPICAL SECTION

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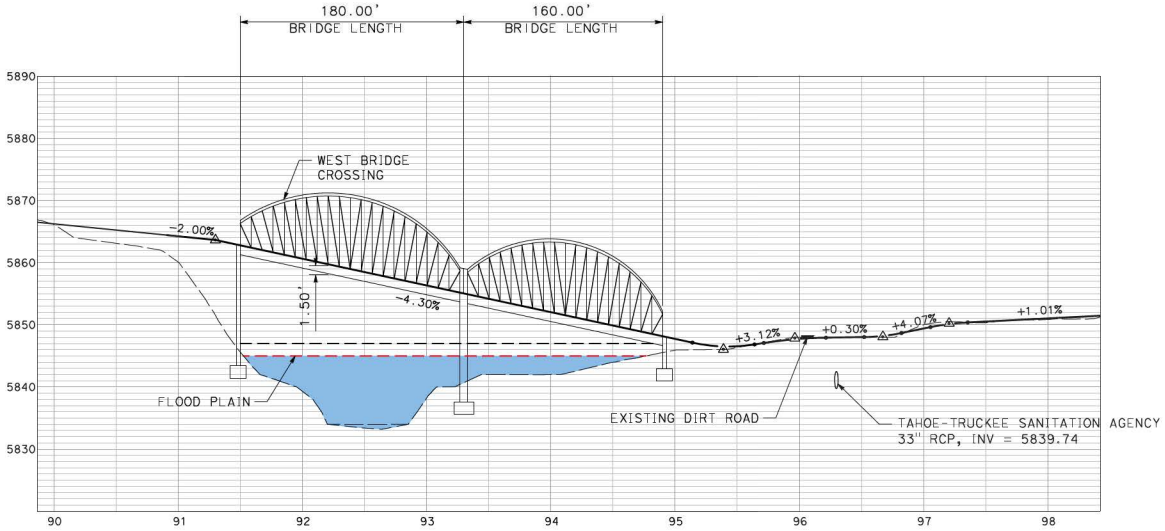


PROFILE - WEST BRIDGE CROSSING ALTERNATIVE (A1)

SCALE: Horiz 1" = 100'
Vert 1" = 20'

LEGEND

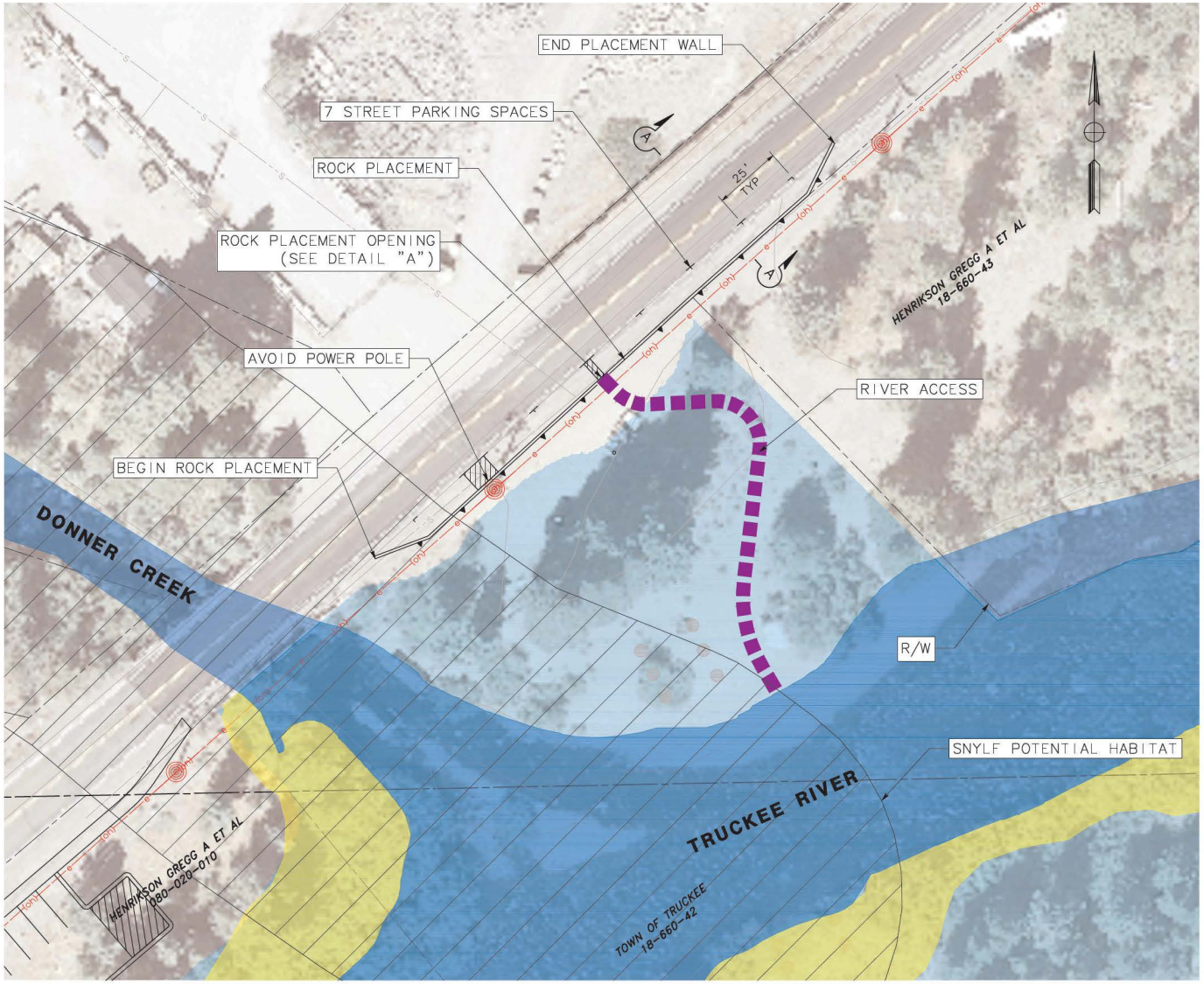
OH ELECTRIC LINE AND POLE

SEWER LINE

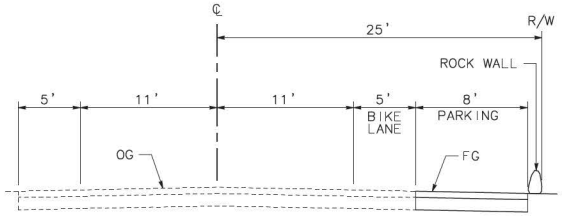
TRUCKEE RIVER LEGACY TRAIL

BRIDGE ALTERNATIVE

MARK THOMAS



PLAN
SCALE: 1" = 20'



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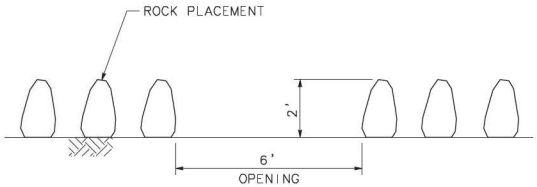
NO SCALE



DETAIL "A"
NO SCALE

LEGEND

SNYLF (SIERRA NEVADA YELLOW-LEGGED FROG) POTENTIAL HABITAT

EXISTING OVERHEAD POWER LINE

0 20 40 80
Graphic Scale

TRUCKEE RIVER LEGACY TRAIL
RIVER ACCESS EXHIBIT

MARK THOMAS

Appendix E: Geotechnical Report

PRELIMINARY GEOTECHNICAL ENGINEERING AND GEOLOGIC REVIEW
for
Truckee River Legacy Trail – Phase IV
Truckee, Nevada and Placer Counties, California

Prepared for:
Mark Thomas & Company
7300 Folsom Boulevard, Suite 203
Sacramento, California

Prepared by:
Holdrege & Kull
10775 Pioneer Trail, Suite 213
Truckee, California 96161

Project No. 42169-01
September 20, 2016

HOLDREGE & KULL
CONSULTING ENGINEERS • GEOLOGISTS

Project No. 42169-01
September 20, 2016

Mark Thomas & Company
7300 Folsom Boulevard, Suite 203
Sacramento, California 95826

Attention: Garry Horton

Reference: ***Truckee River Legacy Trail – Phase 4***
Truckee, Nevada and Placer Counties, California

Subject: ***Preliminary Geotechnical Engineering and Geologic Review***

This report presents the results of Holdrege & Kull's (H&K's) preliminary geotechnical engineering and geologic review for the proposed Truckee River Legacy Trail – Phase 4 project to be constructed in Truckee, Nevada and Placer Counties, California. The proposed project will include constructing approximately 2.3 miles of a Class I bikeway and recreation trail between the Truckee Regional Park and State Route (SR) 89. Appurtenant construction will include temporary and permanent erosion control features and a pedestrian bridge to span the Truckee River near the west trail terminus adjacent to West River Street.

This report is based on previous geotechnical investigations performed in the site area, review of geologic maps and literature covering the project area, and H&K's experience in the site area. A subsurface investigation must be performed prior to construction in order to confirm the assumed subsurface conditions used to prepare this report.

Steep slopes are located adjacent to the central and northeast portions of the trail. Based on our surface reconnaissance and previous studies completed by others at the Truckee Springs property, the steep slopes are likely subject to avalanche and rockfall hazards. An avalanche occurred on the steep slopes above the Truckee Springs property in 1982. Avalanche runout zones have been mapped on the Truckee Springs property. Large volcanic boulders were observed on the ground surface near the base of the steep slopes during our surface reconnaissance. We have provided possible mitigation measures in the following report to help reduce potential hazards associated with avalanches and rockfall.

We anticipate that bridge abutments will be founded on coarse granular glacial outwash or river alluvium that should provide adequate support for conventional spread foundations. These materials are not expected to be susceptible to potential liquefaction or excessive settlement.

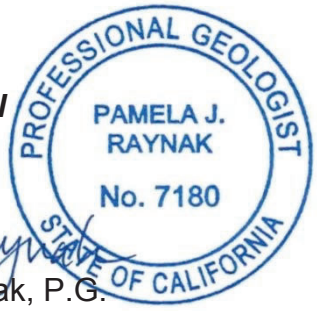
Based on the results of our site reconnaissance and a review of available subsurface information, H&K's professional opinion is that the site is suitable for the proposed trail and bridge crossing using conventional earthwork grading and foundation construction techniques. No highly compressible or potentially expansive soil conditions or potentially liquefiable deposits are expected at the site. Specific recommendations regarding the geotechnical aspects of project design and construction are presented in the following report.

We appreciate the opportunity of providing our services for this project. Please contact us if you have any questions regarding this report.

Sincerely,

Holdrege & Kull

Prepared By:



Pamela J. Raynak, P.G.
Senior Geologist

Reviewed By:

John K. Hudson, P.E., C.E.G.
Principal

copies: Electronic copies to Garry Horton, Mark Thomas & Company, ghorton@markthomas.com and Jessica Thompson, Town of Truckee, jthompson@townoftruckee.com

s:Project Data\42100-42199\42169-01 TRLT Phase 4/42169-01 TRLT Phase 4 Geotechnical and Geologic Review.docx

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FIGURES

APPENDICES

1. INTRODUCTION

This report presents the results of Holdrege & Kull's (H&K's) preliminary geotechnical engineering and geologic review for the proposed Truckee River Legacy Trail – Phase 4 project to be constructed in Truckee, Nevada and Placer Counties, California. H&K prepared this report in general accordance with our January 25, 2016 proposal for the project. A copy of the proposal is included as Appendix A of this report. For your review, Appendix B contains a document prepared by the Geoprofessional Business Association (GBA) entitled *Important Information About This Geotechnical-Engineering Report.* This document summarizes the general limitations, responsibilities, and use of geotechnical engineering reports.

1.1 Purpose

The purpose of this preliminary review is to provide general geotechnical and geologic information to be considered during the planning and design of the project. H&K's evaluation addresses the general soil and groundwater conditions at the project site, with emphasis on how the conditions are expected to affect the proposed construction. This report also considers potential geologic hazards including faulting and seismicity, slope instability, and other secondary seismic hazards. The preliminary recommendations contained in this report should not be extrapolated to other areas or used for other developments. A more detailed geotechnical investigation must be performed prior to design and construction.

1.2 Scope of Services

To prepare this report H&K performed the following scope of services:

- Review of previous geotechnical engineering and geologic reports prepared by H&K and other consultants near the project area.
- Review of available geologic and seismicity maps and literature covering the project area;
- Geologic surface reconnaissance of the project area;
- Engineering analyses to develop preliminary geotechnical engineering recommendations for project planning and design; and
- Preparation of this preliminary engineering report.

1.3 Site Description

The project area is located on the eastern side of the Sierra Nevada Mountain Range and south of downtown Truckee, California (see Figure1). Topography in the project area is characterized as moderately steep to steep mountainous terrain and gently sloping glacial outwash valleys and alluvial terraces. Vegetation in the project area consists of conifer trees, shrubs, and riparian brush and grasses.

According to the 1992 edition of the Truckee, California 7.5-minute quadrangle map published by the United States Geological Survey (USGS); the project area comprises a portion of Sections 14, 15, 16 and 21, Township 17 North, Range 16 East. In general, most of the proposed trail is situated on gentle slopes adjacent to the Truckee River. The northeast terminus adjacent to Brockway Road portion of the proposed trail will traverse gently sloping terrain associated glacial outwash deposits. The north portion of the trail will traverse moderately to steeply sloping terrain associated with volcanic flows. The central and southwest portions of the trail will traverse gently sloping terrain adjacent to the Truckee River. The northeast portion of the trail has been modified by existing development. The approximate location of the project is shown on Figure 1, Site Vicinity Map. A plan view of the proposed project is shown on Figure 2, Site Plan.

The proposed trail will be a continuation of Phase 3 of the Truckee River Legacy Trail that will begin at the Truckee Regional Park. The trail will continue southwest across Brockway Road at the intersection with Palisades Drive and travel westward along the south side of Brockway Road. The trail will veer south through the Hilltop Master Plan area near Cottonwood Restaurant and traverse lands owned by the Truckee Donner Public Utilities District, Truckee Springs LLC, United States Forest Service, and State of California. The trail will cross the Truckee River along a pedestrian bridge and may enter into Placer County, depending on the selected bridge location. The trail will terminate at West River Street, near the confluence of Donner Creek and the Truckee River.

1.4 Proposed Project

Information about the proposed project was obtained from H&K's site visits, conversations with Garry Horton of Mark Thomas & Associates, and review of preliminary plans prepared by Mark Thomas & Associates, dated August 2016. The proposed project will involve constructing an approximately 2.3 mile long Class 1 paved bikeway and recreation trail. The trail will be 10 feet wide with 2 foot wide unpaved shoulders. A pedestrian bridge will be needed where the trail crosses the Truckee River. Several alternatives are currently under consideration for the trail (see Figure 2). Appurtenant construction will include temporary and permanent erosion control features, surface drainage improvements, and Low Impact Development (LID) techniques. H&K anticipates the pedestrian bridge will be supported by conventional

shallow footings in areas outside existing flood plains. Bridge foundations may require deepened footings if footings will be located inside existing flood plains.

2. LITERATURE REVIEW

H&K reviewed available geologic and soil literature in order to evaluate geologic, seismic, and anticipated subsurface conditions at the project site. The following section of this report incorporates geologic features observed during H&K's site reconnaissance and literature review.

2.1 Site Soil

Soil information throughout the project area was researched by accessing the Natural Resources Conservation Service (NRCS) web soil survey (http://websoilsurvey.nrcs.usda.gov). Based on our review of the NRCS web site, several different soil types are mapped across the project including units from the Inville-Riverwash-Aquolls, Kyburz-Trojan, Martis-Euer, and Rubble Land-Rock Outcrop Series.

Soil throughout most of the project area is mapped as Inville-Riverwash-Aquolls (EWB), 2 to 5 percent slopes. This soil unit typically forms on glacial outwash and river terraces, is relatively thick (54 inches), well drained, and has a moderately high to high permeability rate.

The Kyburz-Trojan Series soil unit (FUE) is mapped near the northeast corner of the project area near the eastern trail terminus. This soil unit typically forms on mountain slopes, has an average thickness of 34 to 60 inches, is well drained, and has a moderately high permeability rate.

The Martis-Euer soil unit (MEB) is mapped in the southwest corner of the project near the western trail terminus. This soil typically forms on glacial outwash plains, has an average thickness of 67 inches, is well drained, and has a moderately high permeability rate.

The Rubble Land-Rock Outcrop soil unit (SUG) is mapped along sloping terrain near the northeast and southwest portions of the project area. This soil unit typically forms on tallus slopes and composed of 60 percent rubble land and 30 percent rock outcrop.

2.2 Site Geology

The geology of the eastern Sierra Nevada is composed primarily of Cretaceous age intrusive granitic rocks and Late Tertiary age (Pliocene) basaltic andesite and pyroclastic volcanic rocks. In the project area, late Pleistocene aged volcanic rocks primarily composed of Bald Mountain basalt, dominate the terrain. Following the Miocene and Pliocene volcanic activity era, glaciation dominated the geology of the area during the Quaternary epoch. Three generations of glaciation (Donner Lake,

Tahoe, and Tioga) are characterized by terrace deposits within the Truckee area, including the project site. Glacial deposits within the project area include Tioga and Donner aged outwash deposits. Alluvial deposits represent deposition from more recent fluvial processes and occur along the banks of the Truckee River.

To help evaluate geology in the project area, the following maps and literature were reviewed:

- *Geologic Map of Part of Eastern Placer County, Northern Sierra Nevada, California. Prepared by* David S. Harwood, G. Reid Fisher, and Richard E. Hanson, 2014, California Geological Survey, Map Sheet 61.

- *Geologic Map of the North Lake Tahoe-Donner Pass Region, Northern Sierra Nevada, California,* prepared by Arthur Gibbs Sylvester, William S. Wise, Jordan T. Hastings, and Lorre A. Moyer, 2012, California Geological Survey, Map Sheet 60.

- *Geologic Map of the Lake Tahoe Basin, California and Nevada*, by G.J. Saucedo, California Geological Survey, 2005.

- *Pleistocene History of the Truckee Area, North of Lake Tahoe, California*, by Peter W. Birkeland, Stanford University Ph.D. Thesis, 1962.

The geologic maps indicate that several different stratigraphic units underlie the project area, including alluvial deposits, glacial outwash, talus deposits, and volcanic rock. Holocene aged alluvial deposits are mapped on the southeast bank of the Truckee River near the southwest end of the project area. The alluvium typically consists of silt, sand, gravel and cobbles deposited by fluvial processes. Tioga aged glacial outwash deposits are mapped along the banks of the Truckee River throughout much of the project area and generally consist of dense silt, sand, gravel, cobbles, and boulders. Donner aged glacial outwash deposits are mapped in the relatively level area near the northeast trail terminus. Quaternary aged talus deposits are mapped along the slopes southeast of the Truckee River below and adjacent to volcanic rock outcrops. Talus deposits are mapped near the northeast, central, and southwest ends of the proposed trail. Pleistocene aged volcanic rock composed of olivine latite is mapped along a prominent ridgeline above and south of the proposed trail alignment. The ridgeline generally consists of an olivine latite flow derived from Bald Mountain, south of the project area.

H&K completed a surface reconnaissance at the site in August 2016. The ground surface near the northeast end of the trail has been modified by grading and likely contains existing fill. Unpaved access roads containing brush were observed below Cottonwood Restaurant and sloping sections of the proposed trail alignment. Alluvial

deposits consisting of loose to medium dense granular soil types are located adjacent to the Truckee River in the area of one proposed bridge crossing near the southwest trail terminus. Glacial outwash deposits are present along the banks of the Truckee River throughout most of the trail alignment and near the northeast trail terminus. The glacial till deposits consist of silt, sand, gravel, cobbles, and boulders. Talus deposits were observed along the flanks of the steep slopes above and south of the Truckee River. Scattered large volcanic boulders were observed on the ground surface near the base of the talus slopes. Volcanic rock is present near the top of the prominent ridgeline above and south of the project area. The volcanic rock consists of olivine latite, is weathered at the surface, and moderately to widely fractured. A geologic map presenting the results of our surface reconnaissance is presented as Figure 3, Geologic Map.

2.3 Slope Stability and Rockfall Hazards

Slope instability includes landslides, avalanches, debris flows, and rockfall. Much of the trail alignment is located adjacent to steep slopes that may be subject to landslides, avalanches, debris flows and rockfall. No landslides or debris flows are located along the planned trail alignment. Several small landslide deposits are mapped near the north end of the Truckee River Canyon, approximately 500 feet south of the west trail terminus. The potential for landslides is low due to the relatively competent nature of volcanic rock exposed above the trail alignment and competent nature of adjacent materials. Debris flows typically occur in steep gullies with weak rock or soil material at the source area and are triggered by large storm events. The proposed trail is not located in nor does it cross a steep gully with a source area of weak rock or soil material at the source area; therefore, we anticipate that debris flow hazards are low. Rockfall is the process where rock fragments detach and fall through bouncing, rolling, or sliding until they are deposited. The potential for damage due to rockfall is a relatively rare and unpredictable event. The planned trail alignment traverses across and is located near the base of talus slopes that may be prone to rockfall. Volcanic boulders were observed on the ground surface near the base of talus slopes. In the event of a forest fire, the risk of rock fall and debris flow may increase.

2.4 Avalanche Hazard

As previously stated above, the project area is located adjacent to steep slopes that are subject to avalanches. To help evaluate potential avalanche hazards in the project area, we reviewed an avalanche hazard study prepared by Dick Penniman, Avalanche Specialist, dated August 1998 and we observed the slopes in the trail area. The avalanche hazard study was prepared for the Truckee Springs Subdivision located near the northeast portion of the proposed project. The report contains maps that show the location and estimated runout zones of avalanche paths generated from the steep slopes located adjacent to the project. Based on the avalanche hazard study report, an avalanche occurred on the slopes above the Truckee Springs Subdivision in January

1982. The runout zone of the 1982 avalanche extended onto the Truckee Springs property. A portion of the proposed trail crosses low, moderate, and high potential avalanche runout zones, as shown on Figure 2.

To help evaluate avalanche hazards on steep slopes adjacent to the project area, H&K observed steep slopes near the project area and developed slope profiles along six slopes, including previously mapped avalanche areas. Several locations above the proposed south alignment have slope profiles that could potentially develop landslides and are similar to the 1982 slide path. Slopes up to approximately 35 degrees are present above the most southern alternative alignment between approximate Stations 103 and 168. Based on this preliminary evaluation, it appears that potential avalanche hazards are present on the slopes above the proposed trail between approximate Stations 103 to 168.

Snow avalanches in the site area are relatively infrequent events that would only occur during or within about 24 hours after unusually large snow storms. Mitigation of avalanche hazards for the trail could include avoidance of avalanche paths by re-aligning the trail location; active control, such as at alpine ski areas; anchoring or modification of the snow in the source area; construction of protective structures, such as snow sheds; and/or warnings, such as signs. Based on H&K's understanding of the project and the potential avalanche hazard, we recommend a warning system and public education program to alert pedestrians to the potential hazard during large snow storm events.

2.5 Previous Investigations

To help evaluate subsurface conditions in the project area, we reviewed the following investigative reports prepared by H&K and others at nearby properties:

- *Geotechnical Engineering Report for Proposed Truckee Retail Center, 10040 Palisades Drive, Truckee, California*, prepared by H&K, dated January 14, 2013 (H&K 2013).

- *Geotechnical Engineering Report for Hilltop Senior Living Cottages Project, Truckee, California,* prepared by H&K, dated December 8, 2009 (H&K 2009a).

- *Geotechnical Engineering Report for Hilltop Senior Living Lodge Project, Truckee, California*, prepared by H&K, dated December 8, 2009 (H&K 2009b).

- *Geotechnical Investigation, Truckee Springs Project, Truckee, California,* prepared by Black Eagle Consulting, Inc., dated October 11, 2012 (BECI 2012).

- *Geotechnical Engineering Report, Truckee River Pedestrian Bridge, Truckee, California,* prepared by H&K, dated November 29, 2007 (H&K 2007).

Truckee Retail Center

The proposed Truckee Retail Center is located at the intersection of Brockway Road and Palisades Drive, near the northeast corner of the project. An unnamed creek traverses the south portion of this property in a general west to east direction. An inventoried freshwater wetland has been established by the United States Fish and Wildlife Service (USFWS) along the south portion of the property. H&K excavated eight test pits across the site to depths up to 10 feet below the ground surface (bgs). The subsurface conditions encountered in the test pits consisted of existing fill, medium dense to dense native granular and soft to very stiff native fine-grained soil types. The existing fill consisted of about 8 inches of loose to medium dense granular soil containing some deleterious material (wood, concrete, asphalt, and metal). Fat clay soil was encountered near the southwest corner of the proposed building area. Groundwater was encountered at depths ranging from 3 to 9 feet bgs. H&K recommended removal of existing fill and fat clay soil in areas that would support foundations, retaining structures, and pavements. H&K also recommended drainage improvements to protect wetland hydrology and seasonal saturation of near-surface soil (H&K 2013). Based on the subsurface conditions encountered at this property, it is likely underlain by glacial outwash deposits.

Hilltop Senior Living Cottages and Lodge

The Hilltop Senior Living Cottages and Lodge project is located upslope and southwest of the Truckee Retail Center in the Hilltop Master Plan area. H&K previously completed a subsurface investigation at this property in 2004, the results of which were incorporated into the Senior Living Cottages and Lodge reports (H&K 2004). In 2009, H&K excavated 15 test pits across the Cottages and Lodge project areas to depths ranging from 4.5 to 20.5 feet bgs. Subsurface conditions encountered in the test pits consisted of existing fill, medium dense to dense granular soil, very stiff to hard fine-grained soil, cobbles and boulders, and volcanic rock. The existing fill generally consisted of loose to medium dense granular soil. Groundwater was not encountered. Based on the subsurface conditions encountered at this property, it is likely underlain by glacial outwash, Prosser Creek Alluvium, and volcanic rock.

Truckee Springs

In 2012, Black Eagle Consulting, Inc. (BECI) completed a subsurface investigation at the Truckee Springs property located near the northwest central area of the trail alignment. BECI excavated ten test pits to depths of 1.5 to 8 feet bgs. Subsurface conditions encountered in the test pits consisted of loose to very dense granular soil types with cobbles and boulders. Groundwater was not encountered. Based on the

subsurface conditions encountered in the BECI test pits, it is likely that this site is underlain by glacial outwash deposits.

Truckee River Pedestrian Bridge

The Truckee River Pedestrian Bridge project is located at the former Nevada County Corporation Yard off of West River Street, near the central portion of the site. The Town of Truckee Redevelopment Agency was considering a 190-foot pedestrian bridge crossing without supporting piers or columns. H&K excavated eight test pits to depths ranging from 3 to 14.5 feet bgs (H&K 2007). Approximately 15 to 25 feet of loose existing fill containing debris was encountered at the proposed north bridge abutment. Subsurface conditions encountered at the south bridge abutment consisted of loose to very dense granular soil containing cobbles and boulders. Groundwater was encountered at a depth of 6.5 feet bgs. Based on the subsurface conditions encountered, it is likely that this property is underlain by glacial outwash deposits.

3. SEISMICITY AND FAULTING

3.1 Regional Seismicity

Similar to nearly all of California, the project site is located in a potentially active seismic area. The site has experienced moderate ground shaking due to historic earthquakes. We reviewed California Geological Survey (CGS) Open File Report 96-08, *Probabilistic Seismic Hazard Assessment for the State of California*, and the on-line revisions and California Geological Survey updates to the report, 2002 California Fault Parameters. The document categorizes faults as Type A, B, or C. Type A faults are capable of producing large magnitude events, and have a high rate of slip. Type C faults are not capable of producing large magnitude earthquakes, and have a relatively low slip rate. Type B faults are all other type faults. The CGS report indicates only B and C type faults are within 100 kilometers of the subject site.

3.1.1 Western Nevada Zone

According to the California Geological Survey *Fault Parameters Map* (2002), the project site is located within the Western Nevada Seismic Zone. The Western Nevada Zone is composed of a poorly defined system of strike slip and dip slip faults within the eastern portion of the Sierra Nevada and the western portion of Nevada. The 2002 California Geological Survey earthquake catalog categorizes the Western Nevada Zone as an approximately 150-mile long shear zone with the hazard derived from an areal source, rather than from a single fault. The fault system is designated as Type C, with a low rate of slip and low rate of recurrence.

3.1.2 Other Seismic Sources

The California Geological Survey earthquake catalog (2002) identifies other potential seismic sources including the faults noted below.

- The Mohawk Valley Fault Zone, located north of the Western Nevada Zone about 15 miles northwest of the site, is designated as a Type C shear zone with the hazard distributed over the area of the zone. The fault zone includes the zone roughly between the Town of Truckee and Lake Almanor.

- The Genoa fault is a Type B east dipping, normal fault located approximately 23 miles southeast of the site. The Genoa fault has produced up to 50 feet of displacement within the last 2000 years.

- The Antelope Valley fault zone is a series of northwest trending, east dipping normal faults and fault splays located near Topaz Lake approximately 65 miles southeast of the site. The Antelope Valley fault is designated as a Type B fault zone.

- The Honey Lake fault zone is located approximately 43 miles northeast of the site, and is located in eastern California and northwestern Nevada. The Honey Lake Fault Zone is characterized as normal, east dipping faults with a strike slip component of displacement. The Honey Lake fault zone is designated as a Type B fault zone.

- The West Tahoe- Dollar Point fault (WTDPF) is located approximately 4 miles southeast of the site. Based on recent information (Brothers, et. al, 2009 and Seitz 2015), the fault has a mapped length of 45 kilometers, the fault slip rate is 0.4 to 0.8 mm/year, and the fault is capable of large earthquakes. The fault is a Type B fault and is included in the Western Nevada Zone. The slip rate and earthquake potential along the fault is comparable to the nearby Genoa Fault.

- The Polaris fault is located in Martis Valley near Truckee, approximately 2.5 miles east of the site. The United States Army Corps of Engineers (USACE) completed high-resolution bare-earth airborne Light Detection and Ranging (LiDAR) imagery in 2009 surrounding the Martis Creek Dam located near Truckee, California. The results of the study indicated that an active fault (now named the Polaris Fault) travels beneath the Martis Creek Dam. The fault is estimated to be capable of producing a Richter magnitude 6.4 to 6.9 earthquake. In addition, the study estimated a slip rate of 0.4±0.1 mm/yr for the Polaris Fault, making it a significant seismic hazard to the region and speculation that it may be an extension of the WTDPF.

- The Dog Valley fault is located approximately 4.5 miles northwest of the site and extends from Dog Valley to Donner Lake (less than 25 miles in length). The Dog Valley fault was the source of the 1966 magnitude 6.0 Truckee earthquake and is a northeast-trending, strike-slip fault. This fault is a Type B fault and considered part of the Western Nevada Zone.

3.1.3 Historic Seismicity

Several earthquakes have occurred since 1850 which have produced noticeable ground shaking in the site vicinity. We reviewed available online documents and reports in our files for information about local effects.

- An earthquake with magnitude 6.0 on the Dog Valley fault, located near Stampede Reservoir approximately 4.5 miles northeast of the site, produced noticeable shaking and ground rupture in 1966. The displacement was left lateral strike-slip with a secondary vertical component. Structural damage included damage to two concrete dams, highways, railroads, and flumes, and minor structural damage to buildings. Highway damage included cracks in bridge abutments, settlement of engineered fill, landslides, slumps, and rock fall.

- In 1959, a 5.8 magnitude earthquake was centered approximately 3 miles northeast of the town of Loyalton, approximately 25 miles north of the subject site.

- Several historic earthquakes have occurred near the California-Nevada border near Verdi, Nevada, approximately 17 miles northeast of the subject site. In 1948, a magnitude 6.0 earthquake occurred in Dog Valley just north of Verdi, approximately 25 miles northeast of the site. The event resulted in structural damage to nearly every building in Verdi and Floriston, damage to power and telephone lines, and incidences of rockfall along Highway 40. In 1914, a magnitude 6.0 event centered in the Verdi area resulted in damage to brick buildings.

- A series of earthquakes in 1868 and 1869 centered near the Virginia Range shook western Nevada and eastern California, and resulted in surface ruptures and structural damage to brick buildings.

- In 1860, an estimated magnitude 7.0 earthquake occurred on the Olinghouse fault near Pyramid Lake that was felt as far away as Yreka and San Francisco, and resulted in rock fall and surface ruptures.

- An estimated 6.2 earthquake shook the areas near the California/Nevada border in 1857, caused ground rupture and structural damage to brick buildings.

- In 1852, one of the first earthquakes on record was reported near Stillwater, east of Carson City approximately 90 miles east of the site. The estimated magnitude 7.3 event resulted in collapsed river banks and ground rupture.

- More recently (April 2008), the Mogul-Somersett sequence of earthquakes, which included about 5,000 earthquakes up to M4.7, occurred in the Verdi, Nevada area, about 17 miles (27 km) northeast of the site. Some of these earthquakes were felt in the Truckee-Tahoe area.

3.2 Regional Faulting

The project is located in a tectonically active area with faults trending near or through the site. To evaluate the location of mapped faults relative to the project site, we reviewed the following maps and reports:

- *Fault Evaluation Report FER 261, The West Tahoe Fault in the Emerald Bay and Echo Lake Quadrangles, El Dorado County, California,* prepared by Gordon Seitz, California Geological Survey, November 16, 2015.

- *Geologic Map of Part of Eastern Placer County, Northern Sierra Nevada, California. Prepared by* David S. Harwood, G. Reid Fisher, and Richard E. Hanson, 2014, California Geological Survey, Map Sheet 61.

- *Geologic Map of the North Lake Tahoe-Donner Pass Region, Northern Sierra Nevada, California,* prepared by Arthur Gibbs Sylvester, William S. Wise, Jordan T. Hastings, and Lorre A. Moyer, 2012, California Geological Survey, Map Sheet 60.

- *LiDAR-Assisted Identification of an Active Fault near Truckee, California,* by L.E. Hunter, J.F. Howle, R.S. Rose, and G.W. Bawden, Bulletin of Seismological Society of America, Volume 101, No. 3, pp 1162-1181, June 2011.

- *Fault Activity Map of California;* by Charles W. Jennings and William A. Bryant, California Geological Survey, 2010.

- *New Constraints on Deformation, Slip Rate, and Timing of the Most Recent Earthquake on the West Tahoe-Dollar Point Fault, Lake Tahoe Basin, California,* by Daniel S. Brothers, et. al., Bulletin of Seismological Society of America, Volume 99, No. 2A, pp 499-519, April 2009.

- *60 k.y. record of extension across the western boundary of the Basin and Range province: Estimate of slip rates from offset shoreline terraces and a catastrophic slide beneath Lake Tahoe,* by G.M. Kent, et. al., Geology, volume 34, no. 1, p 365-368, May 2005.

- *Geological Map of the Lake Tahoe Basin, California and Nevada,* compiled by George J. Saucedo, California Geological Survey, 2005;

- *Geologic Map of the Chico Quadrangle, California,* by G.J. Saucedo and D.L. Wagner, California Division of Mines and Geology, 1992.

- *Pleistocene History of the Truckee Area, North of Lake Tahoe, California,* by Peter W. Birkeland, Stanford University Ph.D. Thesis, 1962;

The potential risk of fault rupture is based on the concept of recency and recurrence. The more recently a particular fault has ruptured, the more likely it will rupture again. The California Geological Survey (2010) defines an “active fault” as one that has had surface displacement within the past 11,000 years (Holocene). Potentially active faults are defined as those that have ruptured between 11,000 and 1.6 million years before the present (Quaternary). Faults are generally considered inactive if there is no evidence of displacement during the Quaternary.

The referenced geologic maps show several active and potentially active faults located near the project site, including the Dog Valley Fault (active, approximately 4.5 miles northwest), a group of unnamed faults southeast of Truckee (potential active, crossing the northeast portion of the proposed trail; and approximately 1.2 miles southeast and 1.5 miles south), the Polaris Fault (active, approximately 2.5 miles east), the West Tahoe – Dollar Point Fault (WTDPF, active, approximately 4 miles southeast), and the North Tahoe Fault (active, approximately 13 miles southeast). The Genoa Fault trends in a north-south direction approximately 23 miles southeast of the site and is capable of very large earthquakes. Earthquakes associated with these faults may cause strong ground shaking at the project site.

The potential hazard associated with active earthquake faults involves surface rupture and strong ground motion. Saucedo (2005) shows an unnamed fault trending across the northeast portion of the project area. The unnamed fault trends in a general northwest to southeast direction, is relatively short (about 2.3 miles long) and is shown as concealed (dotted) beneath Prosser Creek alluvium and glacial outwash as it crosses the site. The geologic map prepared by Sylvester et al (2012) shows a near east-west trending unnamed fault crossing the northeast portion of the project area, near the base of the volcanic ridgeline. This fault is relatively short (approximately 4,000 feet long) and shown as dipping to the north. The hazard associated with strong ground motion is dependent on the magnitude of the source earthquake, which is related to the size of the fault (length and depth). The mapped unnamed faults are less than one mile to about two miles long and in a relative sense are not capable of producing large earthquakes. Earthquakes on larger regional faults in the area, such as the West Tahoe – Dollar Point fault, would likely result in higher ground motion at the site than earthquakes on the unnamed fault passing near the project site.

We reviewed the “Digital Images of Official Maps of Alquist Priolo Earthquake Fault Zones of California, Northern California Region”, which describes active faults and fault zones (activity within 11,000 years), as part of the Alquist-Priolo Earthquake Fault Zoning Act. The document and the on-line update indicate the site is not located within an Alquist-Priolo active fault zone.

The proposed project does not involve construction of habitable structures. Therefore, further investigation of potentially active faults is not warranted at this time.

3.3 Secondary Seismic Hazards

Secondary seismic hazards include liquefaction, lateral spreading, and seismically induced slope instability and rock fall. Liquefaction is a phenomenon where loose, saturated, granular soil deposits lose a significant portion of their shear strength due to excess pore water pressure buildup. Cyclic loading, such as an earthquake, typically causes the increase in pore water pressure and subsequent liquefaction. Based on the results of our preliminary site assessment, we anticipate that near-surface soil across

much of the trail alignment will consist of medium dense to dense granular soil types. The sloping portions of the site are likely underlain by little to no soil overlying near surface rock. These soil profiles will have a low potential for liquefaction.

Lateral spreading is the lateral movement of soil resulting from liquefaction of subadjacent materials. Since we anticipate that there is a low potential for liquefaction of soil at the site, the potential for lateral spreading to occur is also considered low.

4. ANTICIPATED SUBSURFACE CONDITIONS

The anticipated subsurface conditions are based on our literature review, a site visit by an engineer and geologist, and our experience in the project area. We have developed the following discussion and conclusions based on the geologic units that will likely underlie the proposed trail. Figure 3, Geologic Map, shows the approximate geologic contacts within the site area.

4.1 Existing Fill

Due to the previously developed nature near the northeast trail terminus, we suspect that existing fill is present in this area. Based on our previous subsurface exploration completed at the Truckee Retail Center near the northeast trail terminus, a relatively thin layer (approximately 8 inches) of fill was encountered. In addition, a large stockpile containing boulders is located near the center of the Truckee Retail property. We anticipate the fill will consist of loose to medium dense granular soil types with varying amounts of cobbles. The slopes west and south of Cottonwood Restaurant were formerly used as ski runs. Remnants of old ski lifts remain in this area. Scattered areas containing shards of glass, ceramic and metal were observed on the ground surface west of Cottonwood Restaurant. Due to the historic uses of the Cottonwood Restaurant property, areas of buried debris (shards of ceramic, glass, and metal) may be encountered during grading of the proposed trail.

4.1 Alluvial Deposits

An isolated area containing alluvium was observed during our surface reconnaissance in the location of one bridge crossing near the southwest trail terminus. Alluvial deposits generally consist of loose to medium dense coarse sand and gravel with varying amounts of cobbles and boulders. Prosser Creek Alluvium is located near the northeast portion of the trail. This geologic unit consists of dense silty sand with gravel (SM), cobbles and boulders. These materials should provide suitable support for the proposed trail subgrade and pavement sections. Excavations should be possible will conventional earthmoving equipment. An excavator with a thumb attachment will increase the ease of boulder removal. Reuse of near-surface material for engineered fill will be possible provided all over-sized material is removed. On-site processing (screening) may be required.

4.1 Glacial Outwash Deposits

Glacial outwash deposits generally consist of medium dense to dense coarse sand and gravel with varying amounts of cobbles and boulders. Outwash deposits are located near the northeast terminus and within much of the trail alignment adjacent to the Truckee River and southwest terminus. It is likely that bridge locations would be

founded on glacial outwash material. Near surface soil in these areas will likely consist of medium dense to dense silty sand (SM) and poorly sorted sand (SP) with varying amounts of gravel, cobbles, and boulders. The glacial outwash was deposited ina relatively high energy depositional environment, resulting in graded coarse material that should not be prone to liquefaction. These materials should provide suitable support for the trail subgrade and pavement sections. Excavations should be possible with conventional earthmoving equipment. An excavator with a thumb attachment will increase the ease of boulder removal. Reuse of near-surface material for engineered fill will be possible provided all over-sized material is removed. On-site processing (screening) may be required.

4.2 Talus and Volcanic Rock

Talus deposits and volcanic rock are located on the slopes near the northeast portion of the proposed trail and on the slopes above the central and southwest trail segments and terminus. Rock will likely be encountered during trail construction that traverses moderate to steep slopes in the northeast portion of the trail between Cottonwood Restaurant and the Truckee Springs property. The talus may be subject to instability and may require support through retaining walls or other engineering structures to help support trail. The volcanic rock is strong, moderately to widely fractured, and weathered at the surface. Excavation conditions in volcanic rock may be difficult and will likely require hydraulic hammers or spot blasting depending on the depth of excavation. Rockfall hazards should be considered for excavations that extend into talus deposits. Due to the over-size rock, near-surface material may not be suitable for reuse as engineered fill. Construction of pavement sections over coarse talus rock should include a sub-base of coarse gravel to fill the void spaces prior to placement of aggregate base.

4.3 Groundwater

Fluctuations in soil moisture content and groundwater levels should be anticipated depending on precipitation, runoff conditions and other factors. In trail sections adjacent to the Truckee River, (central and southwest portions), near-surface groundwater should be anticipated. During our surface reconnaissance, we observed ponded water at several locations adjacent to the Truckee River. In addition, a relatively wet area was observed at the southwest end of South River Street near the northeast corner of the project area. Based on our experience in the project area, seasonal saturation of near-surface soil should be anticipated, especially during and immediately after seasonal snowmelt.

In the remaining portions of the project, it is unlikely that groundwater will be encountered and should not affect the planned trail.

5. PRELIMINARY CONCLUSIONS

The following conclusions are based on our literature review, site visit, and experience in the project area. Subsurface exploration must be performed prior to construction to confirm site subsurface conditions used to provide conclusions and recommendations in this report.

1. Based on our findings, anticipated soil/rock conditions will consist of medium dense to dense granular soil types of low plasticity and near-surface rock that should provide suitable support for the proposed trail subgrade and pavement sections and bridge abutments. No severe soil, groundwater, or geologic constraints were observed that would preclude construction as generally planned.

2. Steep slopes with talus are located within and adjacent to portions of the trail that are subject to natural hazards such as rockfall and avalanches. Avalanche runout zones were identified by others on a portion of the Truckee Springs property located near the northeast portion of the trail. Avalanches and rockfall present hazards to human life and possible damage to the trail. Possible mitigation measures to reduce the risk of avalanches and rockfall include avoidance of high hazard areas, active control, retaining structures and fences, and signage. H&K understands that the trail may be plowed during the winter season for recreational access. H&K anticipates installing warning signs and developing a public education program to help mitigate potential avalanche hazards along the trail. Further evaluation of potential avalanche and rockfall hazards is recommended during a design level investigation to help develop appropriate mitigation measures.

3. Areas of near surface rock and a significant amount of boulders and over-sized material will likely be encountered during excavations for the trail and bridge foundations. Excavations that extend into rock will be difficult. A large track-mounted excavator equipped with a ripper tooth or hydraulic hammer, or spot blasting may be required. With the exception of organic surface soil, the site soil is generally suitable for reuse as structural fill; however, processing to remove oversized material will likely be necessary.

4. A potentially active fault is mapped crossing the northeast portion of the proposed trail (Saucedo, 2005). The proposed project does not involve construction of habitable structures. Therefore, further investigation of potentially active faults is not warranted at this time. The proposed pedestrian bridge should be designed in accordance with current codes and standards to help reduce potential hazards associated with surface rupture and ground motion.

5. Due to existing development and our previous experience in the project area, it is likely that existing fill is present near the northeast trail terminus and northeast portion of the trail. Due to the potential for excessive settlement and soft unstable soil, the existing fill may not be suitable for support of pavement sections and retaining structures. We have provided recommendations for removing, and if necessary, replacing the existing fill with compacted structural fill. The existing fill will likely be suitable for reuse as structural fill; however, processing to remove some oversize material may be necessary.

6. PRELIMINARY RECOMMENDATIONS

The following preliminary recommendations are based on our understanding of the project as currently proposed, our field observations, preliminary engineering analysis, and our experience in the project area. A subsurface investigation must be performed prior to or concurrent with construction in order to confirm the assumed subsurface conditions used to prepare this report.

6.1 Grading

The following sections present our preliminary recommendations for site clearing and grubbing, preparation for and placement of fill material, cut/fill slope grading, best management practices and erosion control, surface water drainage, water quality protection, plan review, and construction monitoring.

6.1.1 Clearing and Grubbing

Areas proposed for fill placement should be cleared and grubbed of vegetation and other deleterious materials. Existing vegetation, organic topsoil, and any debris should be stripped and stockpiled outside the construction limits. Based on our experience in the area, we expect that the average depth of stripping will vary across the site and will likely be greater in low lying areas than on steeper slopes. Organic surface soil may be stockpiled for future use in landscape areas, but is not suitable for use as structural fill. We anticipate that the actual depth of stripping will vary across the site and may be greater in wooded areas.

Man-made debris or any other onsite excavations should be overexcavated to underlying, competent material and replaced with compacted structural fill. Grubbing may be required where concentrations of organic soil or tree roots are encountered during site grading.

If encountered, all existing fill should be removed in areas that will support foundation elements, retaining structures, and pavement sections. The existing fill should either be replaced with compacted structural fill or improvements may be founded directly on properly prepared underlying native soil/rock. The existing fill material will likely be suitable for re-use as engineered fill material provided any rock exceeding 8 inches in maximum dimension and all organic or deleterious material are removed prior to placement. Preparation of the subgrade exposed by over-excavation and requirements for engineered fill should be in accordance with recommendations provided below.

All rocks greater than 8 inches in greatest dimension (oversized rock) may be used in landscape areas, rock faced slopes, or removed from the site. Oversized rock should not be placed in fill without prior approval by the project geotechnical engineer.

6.1.2 Preparation for Fill Placement

Prior to fill placement all man-made debris, areas of existing fill, or other deleterious material should be removed to expose non-expansive native soil as discussed in the previous section.

Where fill placement is planned, the near-surface soil should be scarified to a depth of about 12 inches below the existing ground surface or to competent material and then uniformly moisture conditioned to within 2 percent of the ASTM D1557 optimum moisture content. Areas to receive fill should be compacted with appropriate compaction equipment to at least 90 percent of the maximum dry density per ASTM D1557, and proof rolled with a loaded, tandem-axle truck under the observation of a representative of Holdrege & Kull. Any areas that exhibit pumping or rutting should be overexcavated and replaced with compacted fill placed according to the recommendations below.

6.1.3 Fill Placement

Material used for fill construction should consist of uncontaminated non-expansive native soil or approved import soil. Native engineered fill should be nearly free of organic debris, with a liquid limit less than 40, a plasticity index less than 15, 100 percent passing the 8-inch sieve, and less than 30 percent passing the No. 200 sieve. In general, near surface, on-site soil will likely be suitable for re-use in a fill provided all oversized material is removed prior to placement and compaction. Rock used in fill should be broken into fragments no larger than 8 inches in diameter. Rocks larger than 8 inches are considered oversized material and should be stockpiled for offhaul, later use in rock faced slopes, or placement in landscape areas.

Imported fill material should consist of predominately granular soil, non-expansive, and free of deleterious or organic material. Import material that is proposed for use onsite should be submitted to Holdrege & Kull for approval and laboratory analysis at least 72 hours prior to import.

If site grading is performed during periods of wet weather, near-surface site soil may be significantly above optimum moisture content. These conditions could hamper equipment maneuverability and efforts to compact fill materials to the recommended compaction criteria. Fill material may require drying to facilitate placement and compaction, particularly during or following the wet season or spring snowmelt. Suitable compaction results may be difficult to obtain without processing the soil (e.g., discing during favorable weather, covering stockpiles during periods of precipitation, etc.).

Fill should be uniformly moisture conditioned to within 2 percent of optimum moisture content and placed in maximum 8-inch thick, loose lifts (layers) prior to compacting. Fill should be compacted to at least of 90 percent of the maximum dry density per ASTM

D1557. The upper 8 inches of fill in paved areas should be compacted to at least 95 percent of the maximum dry density per ASTM D1557. Moisture content, dry density, and relative compaction of fill should be evaluated by our firm at regular intervals during fill placement. The earthwork contractor should assist our representative by preparing test pads with the onsite earth moving equipment.

Fill material with more than 30 percent rock larger than ¾-inch is not testable using conventional compaction testing equipment. We recommend that a procedural approach, or method specification, be used for quality assurance during rock fill placement rather than a specified relative compaction. The procedural requirements will depend on the equipment used, as well as the nature of the fill material, and will need to be determined by the geotechnical engineer on site. Based on our experience in the area, we anticipate that the procedural specification will require a minimum of six passes with a Cat 563 or similar, self-propelled vibratory compactor to compact a maximum 8-inch thick loose lift. Processing or screening of the fill may be required to remove rocks larger than 8-inches in maximum dimension. Continuous observation by a representative of Holdrege & Kull will be required during fill placement to confirm that procedural specifications have been met.

6.1.4 Cut/Fill Slope Grading

Permanent cut and fill slopes at the subject site should be stable at inclinations up to 2H:1V; however, we recommend re-vegetating or armoring all cut/fill slopes to reduce the potential for erosion. Steeper slopes may be possible at the site provided slopes are protected from excessive erosion using rock slope protection or similar slope reinforcement. Slopes steeper than 2H:1V should be evaluated on a case by case basis.

Fill should be placed in horizontal lifts to the lines and grades shown on the project plans. Slopes should be constructed by overbuilding the slope face and then cutting it back to the design slope gradient. Fill slopes should not be constructed or extended horizontally by placing soil on an existing slope face and/or compacted by track walking.

Equipment width keyways and benches should be provided where fill is placed on side-slopes with gradients steeper than 5H:1V. Benching must extend through loose surface soil into suitable material, and be performed at intervals such that no loose soil is left beneath the fill. Holdrege & Kull should observe keyways and benches prior to fill placement.

The upper two to three feet of cut slopes should be rounded into the existing terrain above the slope to remove loose material and produce a contoured transition from cut face to natural ground. Scaling to remove unstable cobbles and boulders may be necessary. Fill slopes should be compacted as recommended for the placement of engineered fill. The upper 4 to 8 inches may be scarified to help promote revegetation.

6.1.5 Best Management Practices and Erosion Control

Based on our site observations and experience in the area, site soil will be moderately to highly susceptible to erosion, particularly on steep, unprotected slopes. Best management practices (BMPs) should be incorporated into the design and construction of this project. A reference regarding appropriate BMPs is the "Erosion and Sediment Control Guidelines for Developing Areas of the Sierra Foothills and Mountains", prepared by the High Sierra Resource Conversation and Development Council, 1991. The California Regional Water Quality Control Board, Lahontan Region, Best Management Practices Plan is another source of BMPs.

Erosion and sediment control measures can be categorized as temporary or permanent. Temporary measures should be installed to provide short-term protection until the permanent measures are installed and effective. Covering all exposed soil with gravel or wood chip mulch is highly effective in preventing erosion. Temporary erosion control structures generally are designed to slow runoff velocity and intercept suspended sediment to prevent sediment discharge from the construction area while allowing runoff to continue down gradient. Typical temporary measures include properly installed silt fences, straw bales, wattle-sediment logs, water bars, detention basins, channel linings, and inlet protection. Following completion of construction and planting/seeding, temporary erosion control measures may be left in place, possibly for a complete growing season. Temporary erosion control measures require regular inspection and maintenance.

The selection and sizing of a sediment barrier is dependent on slope angle, slope length, and soil type. Sediment barriers should be installed down gradient and at the edges of all disturbed areas and around topsoil and spoil piles where necessary. Sediment barriers should be placed as needed on slope contours, within small drainages, and in gently sloping swales.

Berms, waterbars and ditches should be used to divert or channel storm water runoff away from sensitive, disturbed or construction areas. Waterbars are intended to slow water traveling down a disturbed slope and divert water off disturbed soil into adjacent stable often well-vegetated areas. Where possible, interceptor ditches and waterbars should take advantage of existing terrain and vegetation to divert runoff before it reaches slopes and disturbed areas. Waterbars should be constructed above and within disturbed areas. The spacing for temporary waterbars should be as needed to divert water off the disturbed areas. Waterbars should be located adjacent to non-erodible (vegetated or rocky) receiving areas. If stable receiving areas are not present, flow energy dissipaters or "J-hook" shaped silt fences should be positioned at the waterbar outlet. In highly erodible soils, waterbar ditches should be protected by temporary lining or by decreasing waterbar spacing and length of flow line slopes.

Permanent erosion and sediment control measures may include rock slope protection (RSP), rock lined ditches and inlet/outlet protection, rock energy dissipaters, infiltration/detention basins, and vegetation. All areas disturbed by construction should be revegetated, and existing vegetation should be protected and undisturbed where possible. Revegetation should consist of native brush and grass species. Slope faces should be temporarily protected against erosion resulting from direct rain impact and melting snow using the methods described above until permanent vegetation can be established. Surface water drainage should not be directed to flow over slope faces. Interceptor (brow) ditches should be considered at the tops of slopes in order to collect and divert runoff which otherwise would flow over the slope face. The intercepted water should be discharged into natural drainage courses or into other collection and disposal structures.

6.1.6 Surface Water Drainage

Based on our past experience with geotechnical investigations in the project vicinity, there is potential for seasonal saturation of near-surface soil. Due to the anticipated low permeability and shallow depth of near-surface rock, especially within the northeast portion of the proposed trail, site soil will likely have poor infiltration capabilities and groundwater may develop above on-site rock. We recommend the project civil engineer in conjunction with the project geotechnical engineer develop appropriate measures to capture, detain, and manage surface water runoff.

6.1.7 Water Quality Protection

To help protect water quality and habitat trail design and construction should use low impact development (LID) techniques. LID is a storm water management and land development strategy applied at the parcel scale that emphasizes conservation and use of on-site features integrated with engineered and small scale hydrologic controls to more closely mimic the natural hydrologic function.

In general, surface water along the proposed trail should not be collected and discharged at points. The trail should slope to one side or be crowned so that all runoff should be continuously infiltrated at the shoulder of the trail. Water should not be collected in ditches or curbs to be discharged at points. LID strategy mimics natural drainage as much as possible. Vegetation at the side of the trail should be protected to help infiltrate and filter surface water runoff, where possible. Infiltration gravel provides retention and infiltration of surface water runoff, which helps reduce runoff volume and peak flow rates, and disconnects the flow path that would otherwise concentrate drainage.

6.1.7 Plan Review and Construction Monitoring

Construction monitoring includes review of plans and specifications and observation of onsite activities during construction as described below. We should review final grading and foundation plans prior to construction to evaluate whether our recommendations have been implemented and to provide additional and/or modified recommendations, if necessary. We also recommend that our firm be retained to provide construction monitoring and testing services during site grading and foundation installation to observe subsurface conditions with respect to our engineering recommendations.

6.2 Preliminary Structural Improvement Design Criteria

The following sections provide preliminary design criteria for foundations and seismic design. Site specific subsurface exploration must be performed prior to preparation of design level drawings and specifications.

6.2.1 Preliminary Bridge Abutment Foundations

Depending on loads and bridge abutments located outside the flood plain of the Truckee River, we anticipate that conventional shallow foundations will be suitable for support of the proposed bridge abutments. If final design loads are high or foundations will be constructed within the flood plain of the Truckee River, deep foundations may be required to support bridge abutments. We have provided preliminary design criteria for conventional shallow foundations below. Deep foundation design criteria can be provided as project plans develop.

Foundations should be embedded a minimum of 24 inches below the lowest adjacent finish grade for frost protection and confinement. Reinforcing steel requirements for foundations should be provided by the project structural engineer.

Foundations founded in competent, undisturbed native soil may be designed using allowable bearing capacities between 3,000 and 5,000 pounds per square foot (psf) for dead plus live loads. Allowable bearing pressures may be increased by 33 percent for transient loading such as wind or seismic loads.

If water is present during concrete placement, concrete should be placed into the footing excavation using tremie methods. Concrete should displace water in the excavation and not mix with unintended water. Holdrege & Kull should observe footing excavations prior to reinforcing steel and concrete placement.

6.2.2 Pavement Design

Site soil should provide adequate support for the trail asphalt concrete (AC) pavement. Based on the anticipated traffic, soil, and environmental conditions at the site, we

recommend a minimum pavement section of 3 inches of asphalt concrete (AC) on 6 inches of Class II aggregate base (AB). A graded sub-base or non-woven filter fabric, such as Mirafi 160N or equivalent, should be placed between the AB and underlying angular rock or native soil. Due to the potential for excessive erosion, we do not recommend sand material or decomposed granite for shoulders backing on sloping trail segments. Frequent surface drainage and infiltration will help reduce excessive erosion. Specific recommendations can be provided in a design level report.

Based on our experience in the Tahoe-Truckee area, environmental factors, such as freeze-thaw cycles and thermal cracking will usually govern the life of asphalt concrete (AC) pavements. Thermal cracking of asphalt pavement allows more water to enter the pavement section, which promotes deterioration and increases maintenance costs. Due to the long and narrow nature of the proposed trail, it will be subject to transverse cracking. Thicker pavement sections are not as susceptible to cracking as thinner sections. Due to the low anticipated traffic loads, pavements should be designed with environmental considerations and regular maintenance should be performed.

The upper 6 inches of native soil should be compacted to at least of 95 percent of the maximum dry density per ASTM D1557 prior to placing aggregate baserock. Aggregate baserock should also be compacted to a minimum of 95 percent. Subgrade and AB dry density should be evaluated by Holdrege & Kull. In addition to field density tests, subgrade should be proof rolled under the observation of Holdrege & Kull prior to baserock placement.

To improve pavement performance and lifespan, we recommend promoting drainage of the pavement subgrade. Drainage can be accomplished through roadway layout and design. A representative of Holdrege & Kull should evaluate pavement subgrade at the time of construction and provide location-specific recommendations for pavement drainage. Pavement subgrade should be graded and prepared such that water drains from beneath pavement section and away from the trail.

7. LIMITATIONS

The recommendations in this report are preliminary in nature. Actual subsurface conditions may vary from those described above. A full geotechnical investigation must be performed prior to construction. This report is only valid if Holdrege & Kull performs a subsurface exploration prior to or at the time of construction.

Our professional services were performed consistent with the generally accepted geotechnical engineering principles and practices employed in the site area at the time the report was prepared. No warranty, express or implied, is intended.

Our scope of services did not include evaluating the project site for the presence of hazardous materials or petroleum products. Although we did not observe evidence of hazardous materials or petroleum products at the time of our site visit, project personnel should take necessary precautions should hazardous materials be encountered during construction.

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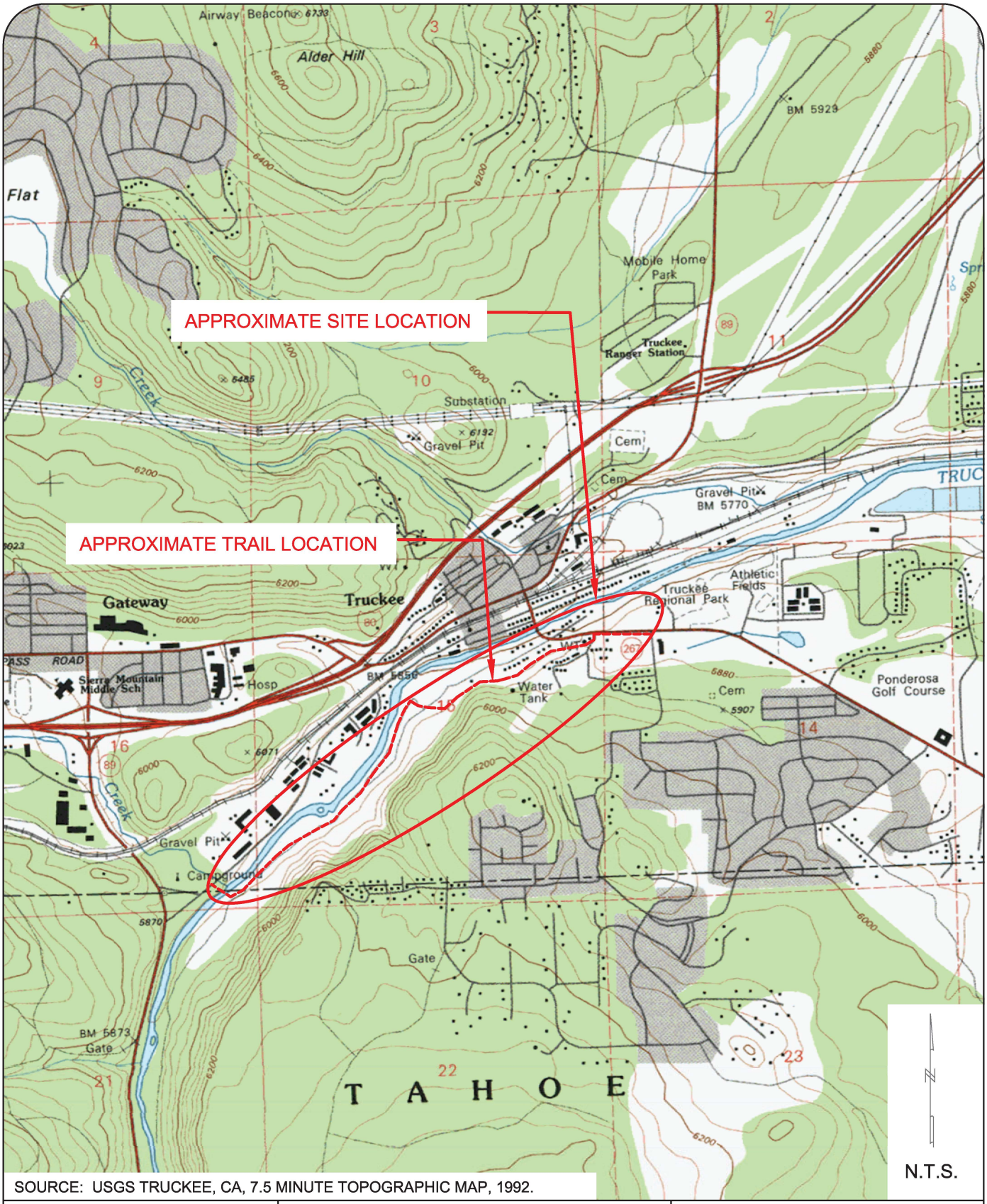
FIGURES



SOURCE: USGS TRUCKEE, CA, 7.5 MINUTE TOPOGRAPHIC MAP, 1992.

HOLDREGE & KULL
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SUITE 213
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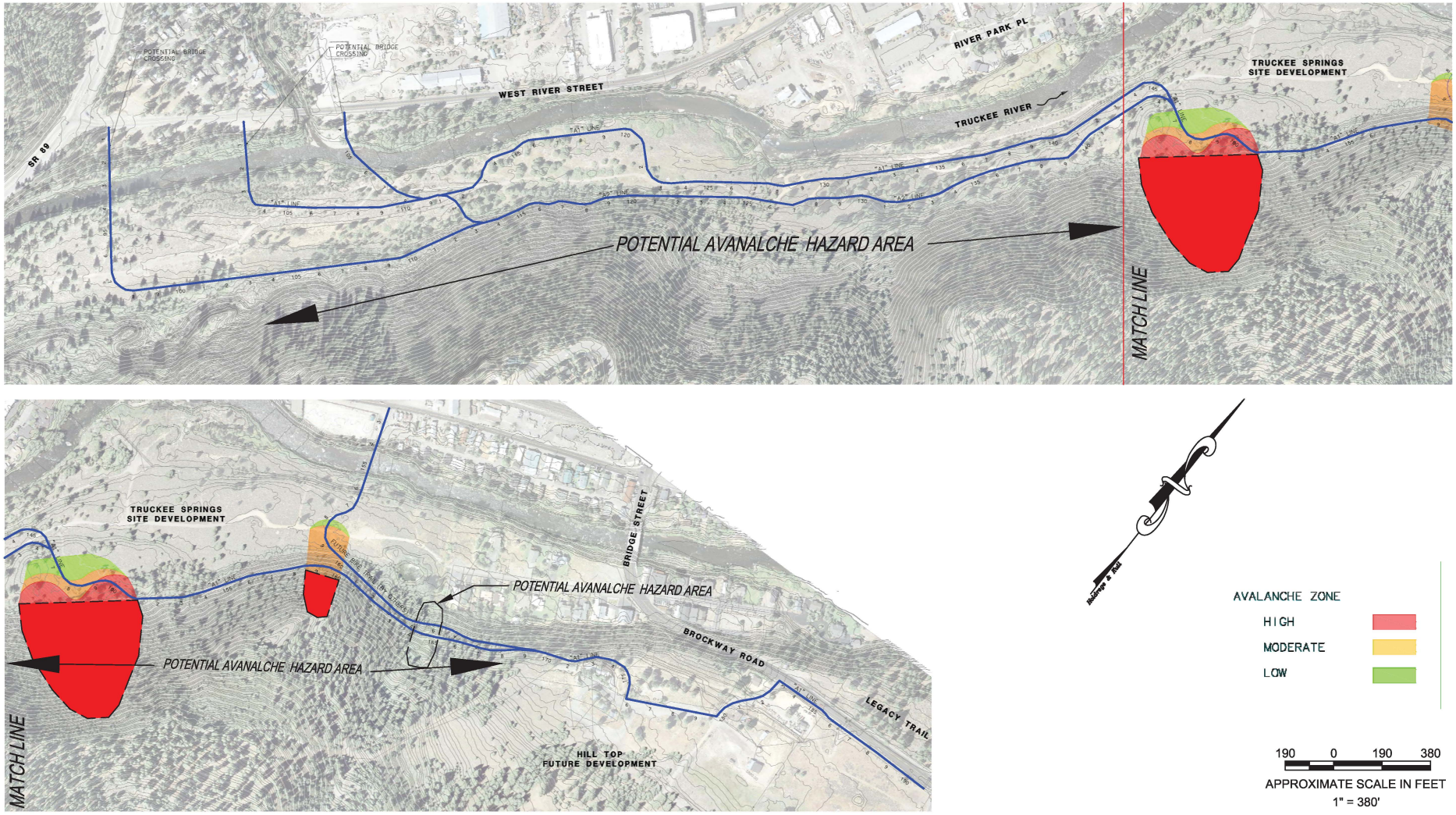
SITE VICINITY MAP
TRUCKEE RIVER LEGACY TRAIL
PHASE 4
TRUCKEE, CALIFORNIA

PROJECT NO.: 42169-01

DATE: SEPTEMBER, 2016

FIGURE NO.: 1



SOURCE: TRUCKEE RIVER LEGACY TRAIL ALTERNATIVE ANALYSIS, PREPARED BY MARK THOMAS & COMPANY, AUGUST 2016.

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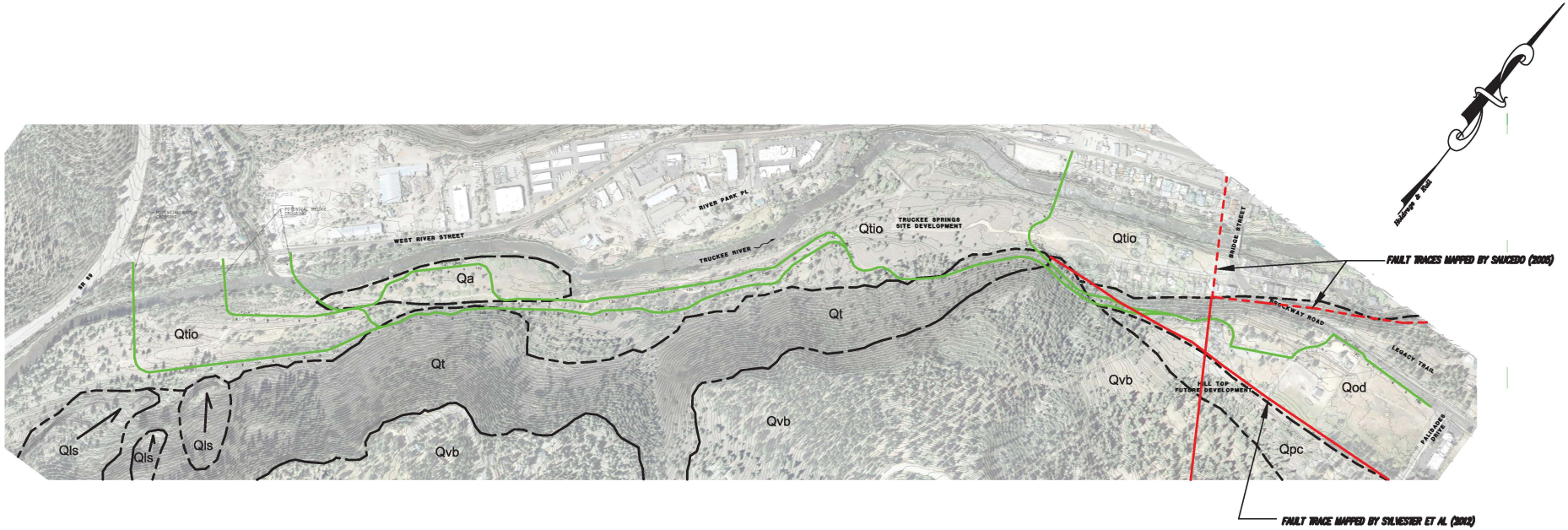
SITE PLAN
TRUCKEE RIVER LEGACY TRAIL – PHASE 4
TRUCKEE, CALIFORNIA

DRAWN BY: PJR	CHECKED BY: JKH
PROJECT NO.: 42169-01	
DATE: SEPTEMBER 2016	
FIGURE NO.: 2	



LEGEND

Qa	Alluvium (Holocene)
Qls	Landslide Deposit (Holocene)
Qt	Talus (Holocene)
Qtio	Tioga Glacial Outwash (Pleistocene)
Qdo	Donner Glacial Outwash (Pleistocene)
Qpc	Prosser Creek Alluvium (Pleistocene)
Qvb	Bald Mountain Basalt (Pleistocene)

MAP SYMBOLS

GEOLOGIC CONTACT (DASHED WHERE APPROXIMATE)

FAULT CONTACT (SOLID WHERE WELL LOCATED, DASHED WHERE APPROXIMATELY LOCATED, DOTTED WHERE CONCEALED)

PROPOSED TRAIL ALIGNMENTS AND BRIDGE LOCATIONS

340 0 340 680

APPROXIMATE SCALE IN FEET

1" = 680'

SOURCE: TRUCKEE RIVER LEGACY TRAIL ALTERNATIVE ANALYSIS, PREPARED BY MARK THOMAS & COMPANY, AUGUST 2016.

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GEOLOGIC MAP
TRUCKEE RIVER LEGACY TRAIL – PHASE 4
TRUCKEE, CALIFORNIA

DRAWN BY: PJR	CHECKED BY: JKH
PROJECT NO.: 42169-01	
DATE: SEPTEMBER 2016	
FIGURE NO.: 3	

APPENDIX A PROPOSAL

HOLDREGE & KULL
CONSULTING ENGINEERS • GEOLOGISTS

Proposal No. PT15268-05
January 25, 2016

Mark Thomas & Company
7300 Folsom Boulevard, Suite 203
Sacramento, California 95826

Attention: Jennifer Spradlin

Reference: ***Truckee River Legacy Trail – Phase IV***
Truckee, Nevada and Placer Counties, California

Subject: ***Proposal for Preliminary Geotechnical Engineering and Geologic Review Report and Geotechnical Engineering Services***

This letter presents our proposal to prepare a preliminary geotechnical engineering and geologic review report and provide geotechnical engineering services for the proposed Truckee River Legacy Trail – Phase IV project to be constructed in Truckee, Nevada and Placer Counties, California. Holdrege & Kull completed several investigations and are very familiar with subsurface conditions in the project area. We have worked on numerous projects with the Town of Truckee and have a reputation for responsive, innovative, yet practical approaches to geotechnical problems.

The purpose of our services will be to evaluate geotechnical engineering and geologic information pertaining to the proposed trail alignment and immediately adjacent areas, prepare a report to help evaluate geotechnical and geologic issues that may impact the proposed improvements, complete site-specific subsurface investigation along the preferred trail alignment and area of the proposed bridge, and prepare a supplemental geotechnical report for the trail-specific investigation. Included in this proposal is a brief summary of our proposed scope of services and an estimate of our fees.

PROJECT DESCRIPTION

This proposal is based on conversations with you, review of the Request for Proposals: Truckee River Legacy Trail – Phase IV, prepared by the Town of Truckee (Town), dated December 18, 2015, attendance of a pre-proposal meeting held at the Town on January 12, 2016, and our previous experience in the project area.

The proposed project will include constructing approximately 2.3 miles of a Class I bikeway and recreation trail between the Truckee Regional Park and State Route (SR) 89. The new trail will connect with the west end of Phase 3 at the Regional Park, extend west near the Cottonwood Restaurant off of Brockway Road, and continue along undeveloped properties south of the Truckee River. The trail will terminate adjacent to SR 89, south of West River Street. A pedestrian bridge is planned to span approximately 200 feet over the Truckee River near the trail terminus adjacent to SR 89.

The proposed trail will traverse privately owned, municipal, State, and federally owned properties. We understand that a current trail alignment has been proposed, but may be subject to change pending the results of baseline studies.

ANTICIPATED CONDITIONS

In preparation of this proposal, we reviewed geologic maps and reports in our files regarding subsurface conditions in the project vicinity. Based on this information and our experience in the site area, we anticipate that subsurface soil conditions over much of the project area will consist of silt, sand, gravel, cobbles, and boulders associated with glacial till deposits. Volcanic rock may be present in the sloping areas near the northeast end of the trail.

We anticipate that groundwater may be seasonally present at relatively shallow depths and that the site can be accessed by rubber tire or track-mounted equipment.

SCOPE OF SERVICES

Review of Available Literature

Prior to our surface reconnaissance and geologic mapping, we will review regional geologic maps covering the project area and available geotechnical and geologic reports from our files. The information collected from our literature review will be used to develop a geologic map for use in our surface reconnaissance that will be included in our preliminary report. We request that any information pertaining to the proposed project be made available for our review.

Surface Reconnaissance/Geologic Mapping

We will complete a surface reconnaissance/geologic mapping along the currently proposed trail alignment and immediately adjacent areas. Due to current snow coverage and limited site access, portions of the project area may not be accessible or readily observable until early or late spring. We anticipate that you will have a topographic base map that will be made available for our use for the surface reconnaissance.

Preliminary Geotechnical and Geologic Review Report

Following completion of our literature review and geologic mapping, we will prepare a preliminary geotechnical and geologic review report that will include the following:

- General anticipated soil and groundwater conditions along trail segments, with emphasis on how the conditions are expected to affect the proposed improvements;
- Discussion of anticipated potential special geotechnical engineering constraints such as existing fill, highly expansive or compressible soil, near-surface groundwater, and/or near-surface rock;
- Preliminary recommendations for earthwork construction, including site preparation, a discussion of reuse of existing near surface soil as structural fill, and a discussion of remedial earthwork, if warranted;
- Discussion of temporary and permanent erosion control measures;
- Preliminary surface and subsurface drainage and water quality protection recommendations;
- Preliminary recommendations for permanent cut and fill slopes including rock slope protection;
- Preliminary design recommendations for bridge foundations including anticipated foundation type, soil bearing values, and California Building Code Soil Profile Type;
- Preliminary lateral earth pressures and drainage recommendations for short retaining structures;
- Preliminary asphalt concrete pavement recommendations; and,
- Recommendations for further subsurface investigation, as needed.

Our preliminary report will include a geologic map of the project area presenting the results of our literature review and surface reconnaissance. Because of the limited nature of our field investigation, the conclusions and recommendations presented in the report must be considered preliminary until confirmed by future subsurface investigation and laboratory testing.

Geotechnical Engineering Investigation

We propose to explore the subsurface conditions along the selected trail alignment in the spring of 2016 after the snow melts and site access is more favorable. We propose to excavate 10 to 12 test pits along or near the proposed trail alignment to depths of approximately 10 feet below the existing ground surface, or refusal. The test pits will be excavated using a track-mounted mini-excavator or rubber tire backhoe. The test pits will be visually logged by a field representative who will obtain bulk soil samples for classification and laboratory testing. Upon completion, the test pits will be backfilled with excavated soil.

Laboratory Testing

The purpose of laboratory testing is to evaluate the physical and engineering properties of the soil samples collected in the field. We anticipate the laboratory testing program will consist of tests for soil classification (gradations and plasticity).

Design Level Geotechnical Engineering Analysis and Report

Based on the results of our subsurface investigation and laboratory testing, we will provide our opinions and recommendations in a letter report confirming the findings presented in our preliminary report and addressing any modifications, as needed. Our design level letter report will include a test pit location plan, test pit logs, and laboratory test results.

SCHEDULE AND FEES

We anticipate that the surface reconnaissance/geologic mapping can be completed sometime in the early spring 2016, following snow melt. The preliminary geotechnical engineering report can be completed within two to three weeks following completion of our surface reconnaissance. We anticipate submitting our design level geotechnical engineering letter report within two to three weeks after completion of our subsurface exploration in the early to late spring of 2016. If weather, access, or site conditions restrict our field operations, we may need to revise our work scope and fee estimate. If requested, we can provide preliminary verbal information with respect to our anticipated conclusions and recommendations prior to completion of our final report.

We will provide the preliminary geotechnical engineering report, geotechnical investigation, laboratory testing, and final letter report described above for a lump sum fee of $19,700 ($7,400 for the preliminary report and $12,300 for the subsurface exploration, laboratory testing, and final report preparation). This cost includes the excavation equipment and operator proposed after site access conditions become more favorable. Billing will be monthly on a percent complete basis. This cost does not include attendance of project meetings. This and additional services beyond the scope of this proposal performed at the client's request will be billed on a time and materials basis using the fee schedule applicable at the time the services are provided.

Prior to initiating our subsurface exploration, all site utilities and utility easements must be accurately located in the field, on a scaled map, or both. This information must be made available to Holdrege & Kull by the client before beginning our subsurface exploration. Our fee is not adequate to compensate for both the performance of the services and the assumption of risk of damage to such structures. Holdrege & Kull will not accept responsibility for damage to

existing utilities not accurately located in the manner described above. Services rendered by Holdrege & Kull to repair them will be billed at cost.

CLOSING

Holdrege & Kull will perform its services in a manner consistent with the standard of care and skill ordinarily exercised by members of the profession practicing under similar conditions in the geographic vicinity at the time the services are performed. No warranty or guarantee, express or implied, is part of the services offered by this proposal.

Enclosed with this proposal is our firm's Agreement for Geotechnical Engineering Services. Please sign and return one copy of the attached Agreement for Geotechnical Engineering Services to this office as our authorization to proceed. This proposal is deemed to be incorporated into and made part of the Agreement for Geotechnical Engineering Services.

We appreciate the opportunity to submit this proposal and look forward to working with you on this project. If you have any questions or need additional information, please contact the undersigned.

Sincerely,

Holdrege & Kull

Pamela J. Raynak, P.G.
Senior Geologist

John K. Hudson, P.E., C.E.G.
Principal

Attachment: Agreement for Geotechnical Engineering Services

APPENDIX B IMPORTANT INFORMATION ABOUT YOUR GEOTECHNICAL ENGINEERING REPORT

(Included with permission of GBA, Copyright 2016)

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, clients can benefit from a lowered exposure to the subsurface problems that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed below, contact your GBA-member geotechnical engineer. Active involvement in the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Geotechnical-Engineering Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. *Those who rely on a geotechnical-engineering report prepared for a different client can be seriously misled*. No one except authorized client representatives should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one – not even you – should apply this report for any purpose or project except the one originally contemplated.*

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read it *in its entirety*. Do not rely on an executive summary. Do not read selected elements only. *Read this report in full.*

You Need to Inform Your Geotechnical Engineer about Change

Your geotechnical engineer considered unique, project-specific factors when designing the study behind this report and developing the confirmation-dependent recommendations the report conveys. A few typical factors include:

- the client's goals, objectives, budget, schedule, and risk-management preferences;
- the general nature of the structure involved, its size, configuration, and performance criteria;
- the structure's location and orientation on the site; and
- other planned or existing site improvements, such as retaining walls, access roads, parking lots, and underground utilities.

Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.*

This Report May Not Be Reliable

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, that it could be unwise to rely on a geotechnical-engineering report whose reliability may have been affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If your geotechnical engineer has not indicated an "apply-by" date on the report, ask what it should be*, and, in general, *if you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying it. A minor amount of additional testing or analysis – if any is required at all – could prevent major problems.

Most of the "Findings" Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site's subsurface through various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing were performed*. The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgment to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team from project start to project finish, so the individual can provide informed guidance quickly, whenever needed.

This Report's Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, *they are not final*, because the geotechnical engineer who developed them relied heavily on judgment and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* revealed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals' misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a full-time member of the design team, to:

- confer with other design-team members,
- help develop specifications,
- review pertinent elements of other design professionals' plans and specifications, and
- be on hand quickly whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction observation.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note conspicuously that you've included the material for informational purposes only*. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report, but they may rely on the factual data relative to the specific times, locations, and depths/elevations referenced. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely*. Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures*. If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. As a general rule, *do not rely on an environmental report prepared for a different client, site, or project, or that is more than six months old.*

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, none of the engineer's services were designed, conducted, or intended to prevent uncontrolled migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, ***proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration.*** Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. ***Geotechnical engineers are not building-envelope or mold specialists.***

GEOPROFESSIONAL BUSINESS ASSOCIATION

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HOLDREGE & KULL
CONSULTING ENGINEERS • GEOLOGISTS

Project No. 42169-01
November 13, 2017

Mark Thomas & Company
7300 Folsom Boulevard, Suite 203
Sacramento, California 95826

Attention: Garry Horton

Reference: ***Truckee River Legacy Trail – Phase 4***
Truckee, Nevada and Placer Counties, California

Subject: ***Supplement No. 1 Preliminary Geotechnical Engineering and Geologic Review***

This letter presents geologic and geotechnical engineering conclusions and preliminary recommendations for soft trails associated with the Truckee River Legacy Trail – Phase 4. Our Preliminary Geotechnical Engineering and Geologic Review Report for the Truckee River Legacy Trail – Phase 4 was dated September 20, 2016. The purpose of this supplement letter is to include a soft trail portion to the overall project that was not included in our previous report. The proposed soft trails will connect the Ponderosa Palisades residential community to the new Class I Legacy Trail and connect with existing soft trails in the central portion of the project area. A small area of soft trails is also planned near the northeast corner of the project.

The scope of our services included surface reconnaissance within the soft trail area not observed during our previous investigation, engineering analysis, and preparation of this supplement letter.

Project Description

The Truckee River Legacy Trail – Phase 4 project will include construction of approximately 2.3 miles of Class I paved multi-use trail. The Class I trail will continue southwest from the Legacy Trail at the Regional Park, across Brockway Road at the intersection with Palisades Drive and travel westward along the south side of Brockway Road. The trail will veer south through the Hilltop Master Plan area near Cottonwood Restaurant and traverse lands owned by the Truckee Donner Public Utilities District, Truckee Springs LLC, United States Forest Service, and State of California. The trail will cross the Truckee River on a pedestrian bridge and may enter into Placer County, depending on the selected bridge location. The trail will connect to the existing Mousehole Class I trail at West River Street.

We understand that a portion of the overall trail project will include construction of soft trails. The location of the proposed soft trails will be near the central portion of the project, climbing up a steep slope to the Ponderosa Palisades subdivision, and northeast corner of the project area near the west end of Southwest River Street. Figure Supplement No. 1 – 3 presents a Geologic Map of the project area. We anticipate the soft trails will be approximately 2 feet in width and will be constructed using hand tools and small equipment.

Slope inclinations range up to about 45 degrees along or near the planned trail to Ponderosa Palisades. This area has been previously identified to have snow avalanche potential. However, the planned soft trail will climb the slope on the west side of a ravine or canyon where slope inclinations are less than 45 degrees. The planned soft trail in this area of the site do not cross under avalanche paths. However, the soft trail planned near the northeast corner of the site crosses under a previously identified avalanche path.

Anticipated Subsurface Conditions

The anticipated subsurface conditions are based on our literature review, a site visit by an engineer and geologist, and our experience in the project area. We have developed the following discussion and conclusions based on the geologic units that underlie the proposed soft trail area. Figure Supplement No. 1 - 3, Geologic Map, shows the geologic units within the site area.

Glacial Outwash Deposits

Glacial outwash deposits consist of medium dense to dense coarse sand and gravel with varying amounts of cobbles and boulders. Outwash deposits are located along the Truckee River near the north terminus of the soft trail where it will intersect with the new Class I trail in the central portion of the project area. Outwash deposits are also located at the north end of the soft trail planned near the west end of Southwest River Street. Near surface soil in these areas will likely consist of medium dense to dense silty sand (SM) with varying amounts of gravel, cobbles, and boulders. The glacial outwash was deposited in a relatively high energy depositional environment, resulting in graded coarse material. These materials should provide suitable support for the proposed soft trails. Excavations should be possible with hand equipment. However, areas of the trail may encounter large cobbles and boulders that may be difficult to excavate with hand equipment.

Talus and Volcanic Rock

The majority of the proposed soft trails will cross areas underlain by talus and volcanic rock of the Bald Mountain Basalt. Rock will likely be encountered along the planned soft trail construction to the Ponderosa Palisades subdivision. Talus will also likely be encountered along soft trails that climb the moderate to steep slopes between the Ponderosa Palisades subdivision and the Truckee River. The talus may be subject to instability and may require support through retaining walls or other engineering structures to help support trails. The volcanic rock is strong, moderately to widely fractured, and slightly weathered at the surface. The talus rock is strong durable material that should be suitable for low rockery walls and rock slope protection. Excavation conditions in talus and volcanic rock may be difficult. Rockfall hazards should be considered for excavations that extend into talus deposits. Construction of soft trails over coarse talus rock should include a sub-base of coarse gravel to fill the void spaces within the talus.

4.3 Groundwater

We did not observe wet low lying areas or water seepage from steep slopes during our reconnaissance. However, fluctuations in soil moisture content and groundwater levels should be anticipated depending on precipitation, runoff conditions and other factors. In the proposed trail section adjacent to the Truckee River, (northern terminus of proposed soft trail in the central portion of the site), near-surface groundwater should be anticipated in low lying areas, especially during and immediately after seasonal snowmelt.

The area of the proposed Truckee Springs development, west of the existing Southwest River Street, is wet. This area of the site contains a perennial spring and a small pond that retains water year-round. The planned soft trail in this area will likely cross wet areas. Wet areas should be avoided where possible. Trail design for water and/or wet area crossing should involve hard scape surfaces such as rock cobble stone pavement and/or small bridges.

Preliminary Conclusions and Recommendations

The following conclusions and preliminary recommendations are based on our literature review, site visit, and experience in the project area.

1. Anticipated soil/rock conditions will consist of medium dense to dense granular soil types of low plasticity and near-surface rock that should provide suitable support for the proposed soft trails. No severe soil, such as highly plastic clay,

groundwater, or geologic constraints were observed that would preclude construction as generally planned.

2. Steep slopes with talus are located within and adjacent to portions of the soft trails that are subject to natural hazards such as rockfall and avalanches. Avalanches and rockfall present hazards to human life and possible damage to the trail. However, based on our site reconnaissance, the planned soft trail in the center of the project do not cross under or through avalanche paths. The soft trail near the northeast corner of the site will likely cross a previously identified avalanche path. We identified potential avalanche zones that could run out onto the main trail in our previous preliminary report.

3. We anticipate that much of the soft trail alignments will be located in areas with surface talus and volcanic rock. Excavations that extend into rock will be difficult. We anticipate that soft trails in area of near-surface or at surface rock and talus will be constructed by around the rocks. Hand placing large rocks along the outside edge of the trail sections and filling voids with imported soil may be necessary for trail construction in this area of the proposed project.

4. The northern terminus of soft trail planned near the center or the site and near the northeast corner of the site will likely encounter glacial outwash deposits. Excavations into glacial outwash deposits will likely encounter cobbles and boulders.

5. Temporary and permanent Best Management Practices (BMPs) should be employed during and after soft trail construction to prevent erosion and sediment discharge. Trail design should include frequent grade reversals, out sloping, and rolling dips to helpr educe erosion along the trail and provide for sustainable trails.

Limitations

Our professional services were performed consistent with the generally accepted geotechnical engineering principles and practices employed in the site area at the time the report was prepared. No warranty, express or implied, is intended.

The limitations presented in our preliminary report dated September 20, 2016, are applicable to this supplement letter.

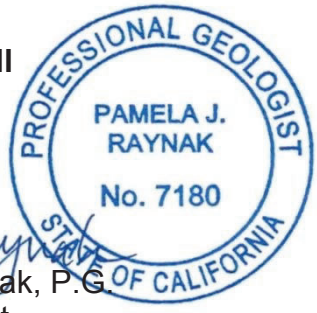
Closing

We appreciate the opportunity to provide continuing assistance on this project. If you have any questions regarding this letter, please contact the undersigned.

Sincerely,

Holdrege & Kull

Prepared By:



Pamela J. Raynak, P.G.
Senior Geologist

11/13/2017

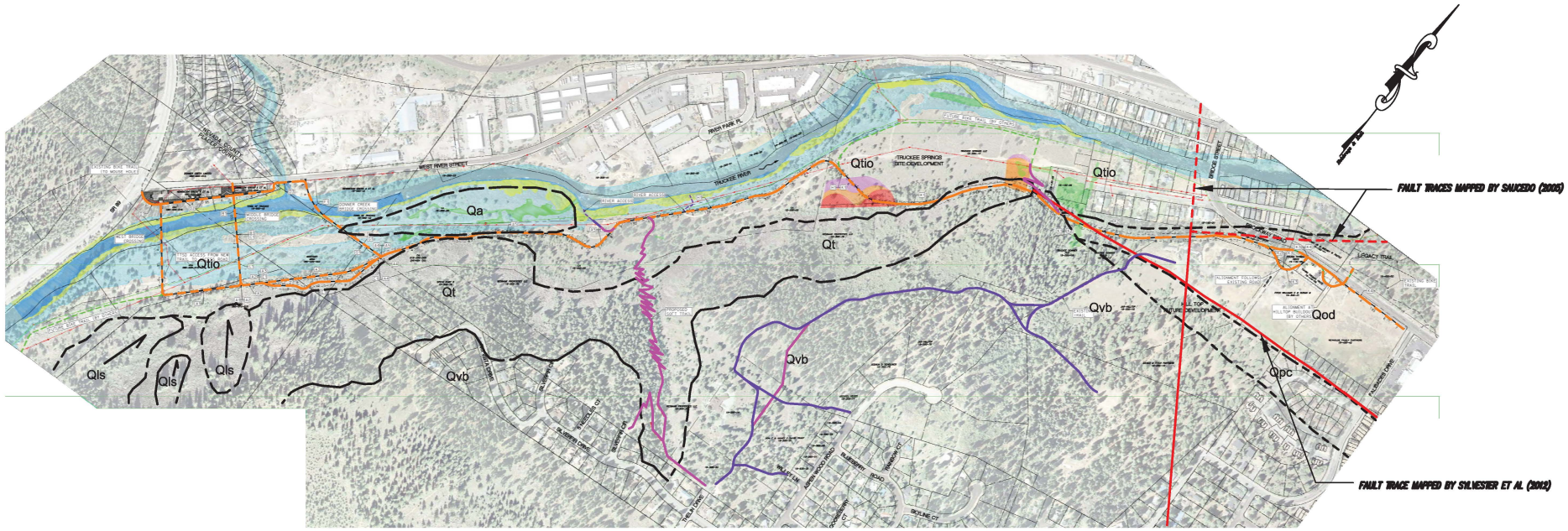
Reviewed By:

John K. Hudson, P.E., C.E.G.
Principal

11/13/2017

Attachments: Figure Supplement No. 1 - 3, Geologic Map

Electronic copies: Garry Horton, Mark Thomas & Company, ghorton@markthomas.com
Jessica Thompson, Town of Truckee, jthompson@townoftruckee.com



LEGEND

Qa	Alluvium (Holocene)
Qls	Landslide Deposit (Holocene)
Qt	Talus (Holocene)
Qtio	Tioga Glacial Outwash (Pleistocene)
Qdo	Donner Glacial Outwash (Pleistocene)
Qpc	Prosser Creek Alluvium (Pleistocene)
Qvb	Bald Mountain Basalt (Pleistocene)

MAP SYMBOLS

- GEOLOGIC CONTACT (DASHED WHERE APPROXIMATE)
- FAULT CONTACT (SOLID WHERE WELL LOCATED, DASHED WHERE APPROXIMATELY LOCATED, DOTTED WHERE CONCEALED)
- PROPOSED CLASS 1 TRAIL ALIGNMENTS AND BRIDGE LOCATIONS
- PROPOSED SOFT TRAIL ALIGNMENTS
- EXISTING SOFT TRAIL ALIGNMENTS

340 0 340 680

APPROXIMATE SCALE IN FEET

1" = 680'

SOURCE: TRUCKEE RIVER LEGACY TRAIL ALTERNATIVE ANALYSIS, PREPARED BY MARK THOMAS & COMPANY, NOVEMBER 2017.

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GEOLOGIC MAP
TRUCKEE RIVER LEGACY TRAIL – PHASE 4
TRUCKEE, CALIFORNIA

DRAWN BY: PJR	CHECKED BY: JKH
PROJECT NO.: 42169-01	
DATE: NOVEMBER 2017	
FIGURE NO.: SUPPLEMENT NO. 1 – 3	