

RECLAMATION


Managing Water in the West

Finding of No Significant Impact

Carpenter Valley Recreational Improvements Project

LO-2018-1017

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U.S. Department of the Interior
Bureau of Reclamation
Lahontan Basin Area Office
705 N. Plaza St., Suite 320
Carson City, NV 89701

August 2019

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitment to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Authority

In May 2002, Public Law (PL) 107-171 set aside funding “to provide water to at-risk natural desert terminal lakes.” Additional legislation in February 2003, PL 108-7, specified that funding was to be used “only for the Pyramid, Summit, and Walker Lakes in the State of Nevada.”

Additional legislation in 2014, PL 113-79, Agricultural Act of 2014, section 2507 (d)(1)(C) amended the Farm Security and Rural Investment Act of 2002 to (1)... provide financial assistance to carry out this subsection to provide water and assistance to a terminal lake.....(C) to carry out research, support, and conservation activities for associated fish, wildlife, plant, and habitat resources.

Background

In accordance with the National Environmental Policy Act of 1969, as amended, the Bureau of Reclamation prepared an Environmental Assessment (EA) for the Carpenter Valley Recreational Improvements project. The EA was prepared to examine the potential direct, indirect, and cumulative effects associated with providing funding from a Department of the Interior (DOI) Desert Terminal Lakes (DTL) program sub-grant to the National Fish and Wildlife Foundation (NFWF) to support implementation of the project to the Truckee Donner Land Trust (TDLT), a nonprofit conservation organization, to fund the Carpenter Valley Recreational Improvements project. The DTL program provides funding to support water acquisition and conservation activities for specific terminal lakes in Nevada, including Pyramid Lake, the terminus of the Truckee River.

Public Comments

The EA was posted for public review and comment from July 22 to July 29, 2019 on Reclamation’s National Environmental Policy Act (NEPA) document website at [Carpenter Valley Recreational Improvements Project](https://www.usbr.gov/mp/nepa/nepa_project_details.php?Project_ID=39161) (https://www.usbr.gov/mp/nepa/nepa_project_details.php?Project_ID=39161).

Two agency comments of an informational nature were received during the comment period. A comment concerning the California Environmental Quality Act (CEQA) from the California (CA) State Clearinghouse was forwarded to Nevada County, CA. A comment from the U.S. Fish and Wildlife Service was followed up with a conference call and a commitment to highlight the requirement for a Sierra Nevada Yellow-legged Frog pre-construction survey, this is included in the proposed action below.

Alternatives Including Proposed Action

No Action Alternative

No Action: Reclamation will not allow NFWF subgrant funding to the TDLT to construct recreation access facilities in lower Carpenter Valley. The TDLT will have to find another source of funding for the project or not do the project.

Proposed Action Alternative

Proposed Action: Reclamation will allow NFWF subgrant funding to the TDLT to fund recreational access improvements in lower Carpenter Valley including a system of trails and puncheons, a pedestrian bridge across North Fork Prosser Creek, a rustic trailhead access road and parking area, a toilet, picnic tables, gate, fencing, and informational signs. The project will provide designated areas for the public to access TDLT's property for activities such as hiking and wildlife viewing, while protecting sensitive areas in lower Carpenter Valley such as fens, riparian areas, and meadows.

All required permits will be obtained prior to implementation of the proposed action. Dependent on approval of the final revision to the 100-year flood inundation line by the Federal Emergency Management Agency (FEMA), additional permits from US Army Corp of Engineers (USACE) and Lahontan regional water quality board may also be secured. Work on Proposed Action items not affected by these potential permits or management plan approval by Nevada County may proceed following approval and posting of this Finding of No Significant Effect (FONSI).

Requirements and Best Management Practices in the management plan approved by Nevada County will be followed including preconstruction surveys for breeding migratory birds and for Sierra Nevada Yellow-legged frogs (SNYLF). All ground disturbing construction work in or near wet areas will be preceded by a SNYLF survey. All work during the migratory bird breeding season will be preceded by a survey to confirm that birds have fledged and would not be affected by construction activities.

Findings

Based on the attached EA, Reclamation finds that the Proposed Action is not a major Federal action that will significantly affect the quality of the human environment, and preparation of an Environmental Impact Statement is not required. The EA describes the existing environmental resources at the location of the Proposed Action and evaluates the effects of the No Action and Proposed Action alternatives. The attached EA was prepared in accordance with National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR 1500-1508), and Department of the Interior Regulations (43 CFR Part 46) and is hereby incorporated by reference. Following are the reasons why the impacts of the Proposed Action are not significant:

The Proposed Action will not significantly affect public health or safety (40 CFR 1508.27(b)(3)).

The Proposed Action will not significantly impact natural resources and unique geographical characteristics such as historic or cultural resources; parks, recreation, and refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order (EO) 11990); flood plains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas (40 CFR 1508.27(b)(3)).

The Proposed Action will not have possible effects on the human environment that are highly uncertain or involve unique or unknown risks (40 CFR 1508.27(b)(5)).

The Proposed Action will neither establish a precedent for future actions with significant effects nor represent a decision in principle about a future consideration (40 CFR 1508.27(b)(6)).

There is no potential for the effects to be considered highly controversial (40 CFR 1508.27(b)(4)).

The Proposed Action will not have significant cumulative impacts (40 CFR 1508.27(b)(7)).

The Proposed Action will not adversely affect any districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places (40 CFR 1508.27(b)(8)). Pursuant to 54 USC§ 306108, commonly known as Section 106 of the National Historic Preservation Act, and its implementing regulations at 36 CFR Part 800, Reclamation determined the undertaking will not affect historic properties.

The Proposed Action will not negatively affect listed or proposed threatened or endangered species (40 CFR 1508.27(b)(9)).

The Proposed Action will not violate Federal, State, local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)).

The Proposed Action will not affect any Indian Trust Assets (512 OM 2, Policy Memorandum dated December 15, 1993).

Implementing the Proposed Action will not disproportionately affect minorities or low- income populations and communities (EO 12898).

The Proposed Action will not limit access to, and ceremonial use of, Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007 and 512 OM 3).

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Environmental Assessment

Carpenter Valley Recreational Improvements Project

LO-2018-1017



U.S. Department of the Interior
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List of Acronyms and Abbreviations

AEC	Auerbach Engineering Corporation
APE	Area of Potential Effect
BA	Biological Assessment
BGEPA	Bald and Golden Eagle Protection Act
BMP	Best Management Practices
CDFW	California Department of Fish and Wildlife
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNPS	California Native Plant Society
CWA	Clean Water Act
DOI	Department of the Interior
DTL	Desert Terminal Lakes
EA	Environmental Assessment
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
ITA	Indian Trust Assets
GBCG	Great Basin Consulting Group
LCT	Lahontan Cutthroat Trout
LOMR	Letter of Map Revision
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NFWF	National Fish and Wildlife Foundation
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
Reclamation	Bureau of Reclamation
Salix	Salix Consulting Inc.
SHPO	State Office of Historic Preservation
SNYLF	Sierra Nevada Yellow-Legged Frog
SR	State Route
TDA	Tahoe Donner Association
TDLT	Truckee Donner Land Trust
TNF	Tahoe National Forest
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service

1 Introduction

1.1 Authority

In conformance with the National Environmental Policy Act of 1969 (NEPA), as amended, the Bureau of Reclamation (Reclamation) has prepared this Environmental Assessment (EA) to evaluate and disclose any potential environmental impacts associated with implementation of the Truckee Donner Land Trust's (TDLT) Carpenter Valley Recreational Improvements Project. Reclamation proposes to allow funding from a Department of the Interior (DOI) Desert Terminal Lakes (DTL) program sub-grant to the National Fish and Wildlife Foundation (NFWF) to support implementation of the Proposed Action.

Reclamation is required to analyze environmental effects and approve the proposed project. Nevada County has required an approved Management Plan prior to the proposed project being implemented and will prepare a California Environmental Quality Act (CEQA) document for the project.

In May 2002, Public Law (PL) 107-171 set aside funding "to provide water to at-risk natural desert terminal lakes." Additional legislation in February 2003, PL 108-7, specified that funding was to be used "only for the Pyramid, Summit, and Walker Lakes in the State of Nevada."

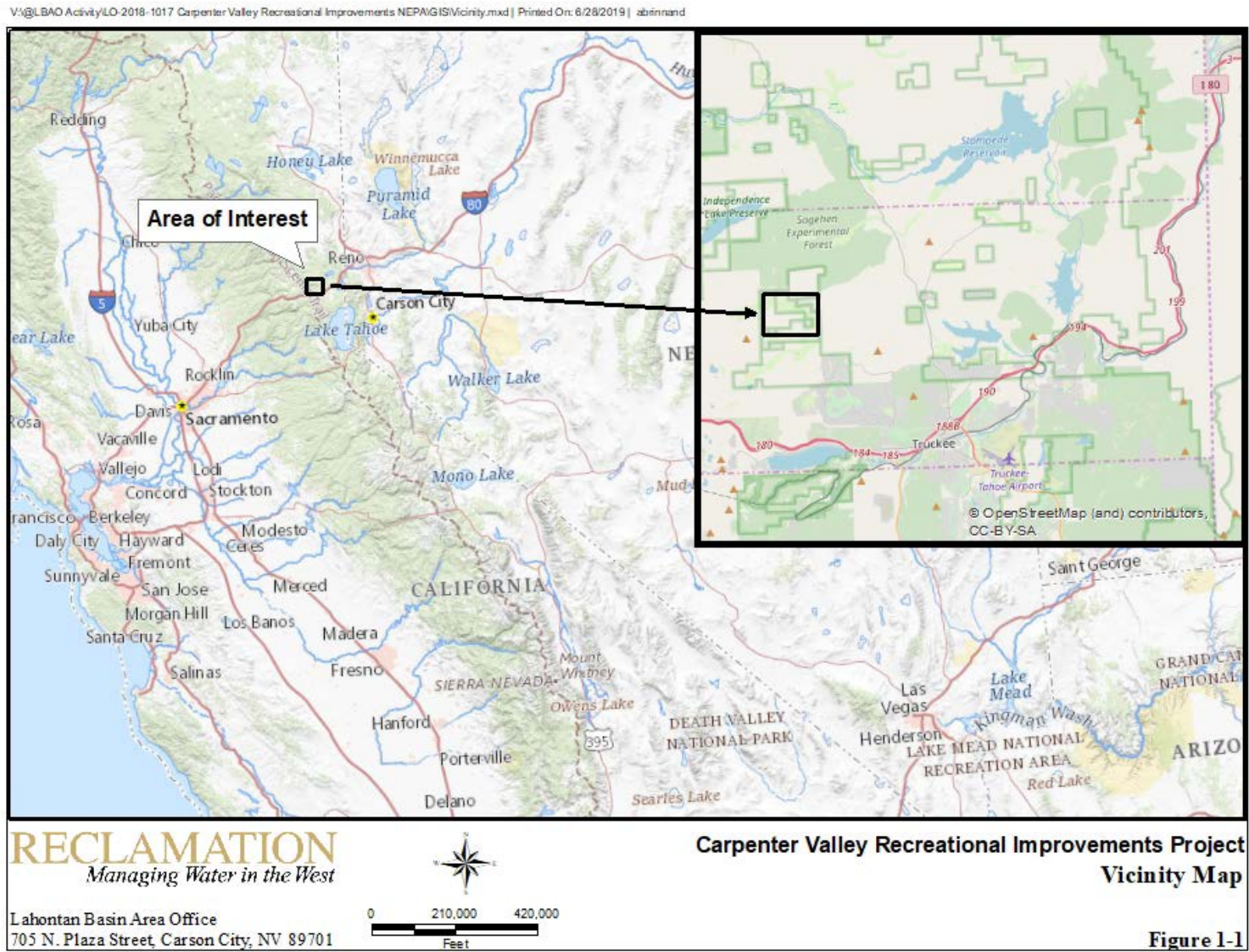
Additional legislation in 2014, PL 113-79, Agricultural Act of 2014, section 2507 (d)(1)(C) amended the Farm Security and Rural Investment Act of 2002 to (1)... provide financial assistance to carry out this subsection to provide water and assistance to a terminal lake.....(C) to carry out research, support, and conservation activities for associated fish, wildlife, plant, and habitat resources.

1.2 Background and Environmental Setting

The TDLT is a non-profit organization based in Truckee, California. The TDLT's mission is to preserve and protect lands with high natural resource values in the greater Truckee-Donner region, and to manage those lands in a sustainable manner, including low impact public access. The TDLT works with government agencies, landowners, the public, and partner conservancy organizations to achieve their goals.

In April 2013, the TDLT was awarded a grant from NFWF for the acquisition and post-acquisition stewardship of lower Carpenter Valley. The 604-acre property has exceptional natural resource values including an intact complex of high elevation streams, springs, ponds, seeps, fens, and wet meadows. Lower Carpenter Valley is a portion of the headwater meadow system of North Fork Prosser Creek, a major tributary to the Truckee River and Pyramid Lake, a desert terminal lake. Carpenter Valley provides important habitat for a large assemblage of rare plants and animals. Unmanaged dispersed recreation access would result in resource damage to these values. The proposed action consists of allowing the use of NFWF sub-grant funds for a TDLT project providing public recreational access improvements in the lower Carpenter Valley area. The proposed project would concentrate recreational use into designated areas, thereby reducing impacts to sensitive resources. Figure 1.1 is a vicinity map of the project area.

Figure 1-1: Vicinity map



The proposed action is in the northern Sierra Nevada Mountains five miles northwest of Truckee in Nevada County, California. The proposed project area is west of state route (SR) 89 and Prosser Creek Reservoir in the Little Truckee River watershed.

The proposed project area is within the lower Carpenter Valley property which is comprised of the following seven (7) Assessor's Parcels in Nevada County: AP numbers 016-040-14; 016-040-15; 016-040-17; 016-040-18; 016-040-19; 016-040-20; and 016-060-018 which are located in Township 18 North, Range 15 East, and include portions of Sections 14, 23, 24 and 25 of the Independence Lake USGS 7.5' Topographic Quadrangle. All parcels except APN 016-060-018 are owned by TDLT. Parcel 016-060-018 is owned by the Tahoe Donner Association (TDA) under a conservation easement with TDLT.

The proposed project area is near or adjacent to U.S. Forest Service (USFS), Tahoe National Forest (TNF) lands, two private in-holdings, and industrial timberlands owned by Sierra Pacific Industries. The northernmost developed area of the TDA is approximately 1 mile south of the project area. The newly acquired TDLT lands are beginning to receive a high level of recreation access pressure because of their proximity to the Tahoe Donner subdivision, the town of Truckee, and the SR 89 corridor.

Carpenter Valley Road provides access to lower Carpenter Valley and the proposed project area. From SR 89 north of Truckee, visitors can turn west onto Alder Creek Road, then north (right) onto Carpenter Valley Road, a dirt road. The southeast corner of the project is approximately 2.4 miles from the intersection with the Alder Creek Road. Two gates currently restrict vehicle access.

This EA describes the existing environmental resources in the proposed action area, evaluates the effects of the No Action and Proposed Action alternatives on the resources, and proposes measures to avoid, minimize, or mitigate any adverse effects. This EA was prepared in accordance with NEPA, Council on Environmental Quality (CEQ) regulations (40 code of federal regulations (CFR) 1500-1508), and DOI Regulations (43 CFR Part 46).

1.3 Need for the Proposal

A DTL program sub-grant through the NFWF funded studies necessary for the acquisition of TDLT's 604-acre lower Carpenter Valley property in 2017. The property is recognized for its outstanding natural resource values, including pristine headwater streams tributary to the Truckee River, and riparian habitat for populations of several special status plant and wildlife species. Critical habitat for the Sierra Nevada yellow-legged frog (SNYLF) traverses the TDLT property. The USFWS listed this species as Endangered.

The authority for the DTL Program provides for conservation activities for "associated fish, wildlife, plant, and habitat resources." Recreational use in the area is substantial, with resource damage, including vegetation trampling, user-created travel routes, erosion, water pollution, and disturbance to sensitive fish and wildlife. Concentrating public use onto a sustainably designed trail and puncheon system, a designated trailhead parking area, a pedestrian bridge, toilets, viewpoints, and picnic locations would enhance recreational opportunities and mitigate existing

impacts to soil and water resources and to wildlife habitat. The need for the project is to reduce ongoing impacts to sensitive resources from unauthorized dispersed recreation use.

The purpose of the project is to provide visitors with a system of trails and amenities designed to concentrate use in designated areas that provide visitors with direct access to lower Carpenter Valley and North Fork Prosser Creek. The proposed project would also provide interpretive signage to educate visitors on the natural resource values in lower Carpenter Valley and the sensitivity to those resources to human impacts.

2 Alternatives Including Proposed Action

2.1 No Action Alternative

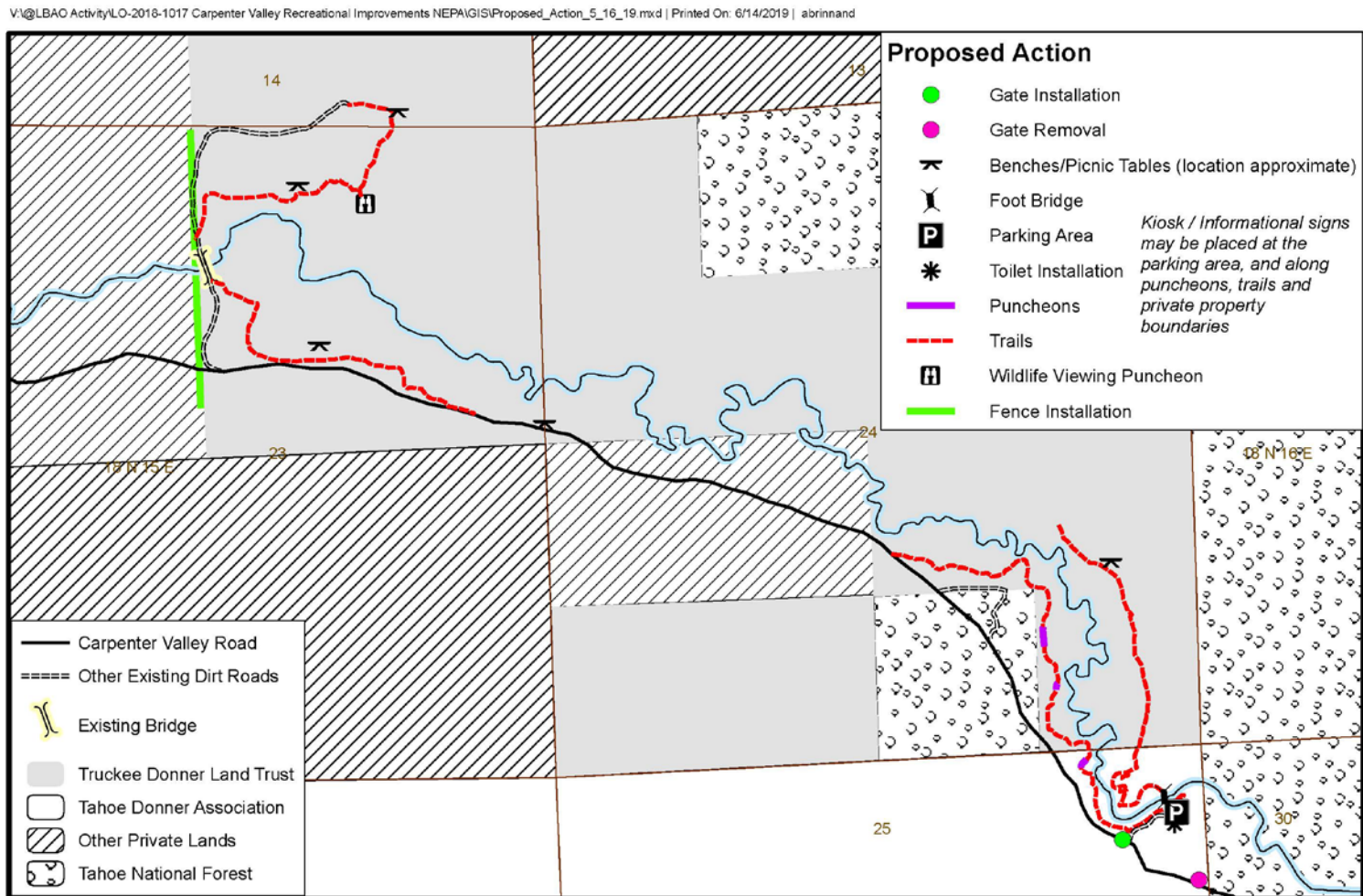
The No Action Alternative would consist of Reclamation not allowing NFWF sub-grant funding to the TDLT to construct recreation access facilities in lower Carpenter Valley. Currently the TDLT is unable to provide alternative funding to implement this Proposed Action. The TDLT would have to find another source of funding for the project or not do the project. Therefore, under the No Action Alternative resource damage from unmanaged dispersed recreation could continue indefinitely.

Several rare and sensitive species have habitat or potential habitat in Carpenter Valley. The USFWS designated critical habitat for the Endangered SNYLF in the TDLT's lower Carpenter Valley property. Frog habitat can be damaged or destroyed by trampling, sedimentation, and erosion. Several fens with rare plants exist on the Carpenter Valley property. Trampling and erosion can destroy plants and affect the hydrology on which the fen depends. Birds, including the willow flycatcher, yellow warbler, and greater sandhill crane, have important riparian habitat in lower Carpenter Valley. Under the No Action Alternative, unmanaged recreation access would increase over time as interest in Carpenter Valley increases.

2.2 Proposed Action Alternative

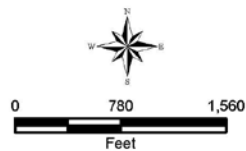
The Proposed Action has been developed to meet the project's purpose and need. The proposed action consists of allowing NFWF sub-grant funding to provide recreational improvements on TDLT's property in lower Carpenter Valley. All locations would be selected to avoid any known threatened or endangered plant and animal species or known historic properties. Figure 2.1 is a map of the Proposed Action.

Figure 2-1: Proposed action



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Carpenter Valley Recreational Enhancements

Proposed Action

Figure 2-1

Proposed project components using sub-grant funding are:

- Manually construct approximately 4.7 miles (13,000 linear feet) of 4-foot wide native-surface trail in upland areas for seasonal (summer) use by visitors. The signed trail network would also include segments on Carpenter Valley Road and over the existing bridge at the north end of TDLT’s property.
- Manually construct approximately 950 linear feet of puncheons (plank footpaths) at five locations in seasonally wet areas adjacent to meadows using salvaged on-site materials where possible with minimal site disturbance. According to the Lower Carpenter Valley Access Plan (TDLT 2019), “Puncheons are a time-tested tool for trail builders where the ground to be traversed is soft or wet. The concept is to provide a tread surface that is elevated above the ground with wood timbers, with a minimal footprint on the land surface. The foundation timbers (or sills) can be oriented longitudinally to the direction of travel, or perpendicular, depending on the anticipated presence of water and how that water might flow past the puncheon. In many of the resources available on this topic, the sills are constructed with pressure-treated wood to help slow the decomposition of the sills. The proposed puncheon sills in Carpenter Valley will not be chemically treated, to avoid introducing those chemicals into the environment. This will require more frequent maintenance and replacement depending on the type of wood used and the conditions present. The proposed puncheon trails in Carpenter Valley are consistent with sustainable and environmentally sensitive design practices as developed by the National Park Service and the US Forest Service, both of which own, operate and maintain many hundreds of thousands of square miles of park property on which they maintain trail systems. Puncheons are a typical feature everywhere in the National Park or National Forest systems”, Figure 2-2 is an example of a puncheon. Puncheons would be in place permanently but used seasonally (summer). Signage would instruct visitors to stay on the puncheons and trails to avoid impacts to sensitive areas.

Figure 2-2: Puncheon example



- Construct a native surface trailhead access road (approximately 430 linear feet in length, 20 feet wide) and a 13-vehicle trailhead parking area (approximately 7,400 square feet) using minimal grading for natural drainage, on-site log barriers, and on-site wood chips

for stabilization. These features would be located on TDA land at the southern end of the proposed project area.

- Install a prefabricated vault toilet similar to a CXT Cascade vault toilet (the standard USFS vault toilet). The toilet will be located adjacent to the proposed trailhead parking area. A single unit toilet would be appropriate for the anticipated visitor use associated with a 13-space parking area.
- Install a pedestrian footbridge bridge across North Fork Prosser Creek below the trailhead parking area. "...at a location where the channel is relatively narrow and can accommodate the span. The proposed span is dictated by the 100-year flood level of North Fork of Prosser Creek. The design ensures that the bridge will have approximately five feet of freeboard above the 100-year flood level. This requires the bridge to be approximately 75 feet in length between abutments, with both concrete abutments located outside the floodway and no center supports." (TDLT 2019). Materials and equipment needed on the south side of Prosser Creek would be carried on existing dirt roads by trucks to the trailhead parking area. Materials and equipment needed on the north side of Prosser Creek would be brought in manually, by highwire, or by helicopter. Small trees and shrubs would be removed as needed to clear for bridge footings.
- Install a new access gate on the Carpenter Valley Road at the trailhead access road or relocate an existing gate to that location.
- Install a wildlife viewing puncheon on the westerly trail, which will provide a wide view of Carpenter Valley. The viewing structure would be a 10' by 20' platform constructed by laying five 20-foot linear puncheons side by side. It would be placed on the ground without excavation, similar to the trail puncheons.
- Install up to four picnic tables.
- Install approximately 2,250 feet of 3-strand smooth wire fence along the TDLT/Elrod property boundary to prevent TDLT visitors from wandering into a neighboring property.
- Install informational and interpretive signs at the trailhead and locations on the trail.

All proposed project features are designed to have minimal impact on the natural environment by using Best Management Practices (BMPs) and avoidance/mitigation measures. For example, the trailhead access road and parking area are located on an upland site well above the floodplain. The trails and trail bridge are located to avoid wetlands and the floodplain while allowing visitors opportunities for birding and scenic vistas.

The estimated actual disturbed area of the activities would be approximately 3.5 acres, and approximately 11 cubic yards of on-site material (soil) would be relocated a short distance for grading purposes. Excavated soil from the bridge foundation would be used for building the adjacent bridge access section of trail. Bridge abutments would be excavated by hand or with a small backhoe as necessary and would be located outside the 100-year flood plain. The bridge would be approximately five feet above the 100-year flood elevation.

The 250-foot bridge access segment of trail traverses a steep slope, including a 100-foot section on a 40 percent slope. On-site rock and salvaged logs would be used for stabilization above and

below the trail's tread surface. Silt fences would be used during construction to prevent erosion. A native seed mix, revegetation with local native plants, and on-site woody material would be used for post-construction erosion control. Winterization measures would be in effect from October 15 to May 1. All disturbed areas would receive erosion control treatment.

The vault toilet unit would require excavation of a 20 square foot area, ten feet deep. Excess excavated soil would be used for grading material in the adjacent parking area or bridge access trail.

Construction traffic would be confined to permanent roads and trails. Potential hazardous spill mitigation measures would be in effect during construction, as would dust control measures.

Construction is expected to take eight to ten weeks in total. Work would begin in summer 2019 and would be completed by late fall 2019, unless delays required work to be extended into summer, 2020. Avoidance and/or minimization measures developed for the biological resources within the proposed action area would be implemented by the TDLT including confirmation that willow flycatcher breeding and fledging was concluded before construction near occupied habitat began. If a federally listed species or an unrecorded cultural resource is encountered during construction, activities shall cease until appropriate measures or studies have been completed.

3 Affected Environment & Environmental Consequences

This section identifies the potentially affected environmental resources and the environmental consequences that could result from the Proposed Action and the No Action Alternative.

3.1 Required Resource Discussions

Department of the Interior Regulations, Executive Orders, and Reclamation guidelines require a discussion of the following items when preparing environmental documentation:

3.1.1 Indian Trust Assets

An ITA review was completed in June 2019 (Reclamation 2019). There are no Indian reservations, rancherias or allotments in the project area. The nearest ITA to the project area is a small parcel with no tribal designation and is over 22 miles to the northeast. Due to the distance from any ITA's, it is reasonable to assume the proposed action will not have the potential to affect ITAs. During consultation, Reclamation invited the Washoe Tribe of Nevada and California and two individuals to assist in identifying issues relevant to the proposed project. No responses were received.

3.1.2 Indian Sacred Sites

Sacred sites are defined in Executive Order 13007 (May 24, 1996) as "any specific, discrete, narrowly delineated location on federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site". The Proposed Action would not be located on nor impact any federal land and therefore would not limit access to or use of Indian sacred sites.

3.1.3 Environmental Justice

No negative changes in access or public recreation in lower Carpenter Valley would occur from the Proposed Action. The proposed changes would provide better public access and amenities than currently exist. An insignificant local increase in employment would result from construction work in late 2019, with workers mostly from the Truckee area, possibly employing more low-income and minority workers than are employed in the general workforce. In summary, the Proposed Action would not have any significant or disproportionately negative impact on low-income, minority or tribal populations.

3.2 Water Resources, Hydrology, and Soils

Affected Environment

The proposed project is within the North Fork Prosser Creek drainage, a tributary of the Truckee River. Headwaters of North Fork Prosser Creek are located about four miles west of the proposed project area at Castle Peak (7,870') and the outlet of Warren Lake at 7,210 feet in elevation (Dittes and Guardino Consulting 2017). The perennial flows are from a combination of snowmelt and groundwater springs. Annual average snowfall is 203 inches; most of which

occurs December through March. The average annual snow depth is 13 feet with snow depths averages 30 feet or greater for January, February and March (Dittes and Guardino Consulting 2017).

The confluence of the North Fork and South Fork Prosser Creek is approximately one air-mile southeast of the proposed project. From the confluence, Prosser Creek flows approximately four miles easterly to the inlet of Prosser Creek Reservoir. Prosser Creek Reservoir is owned and operated by Reclamation. Part of Reclamation's Washoe Project, the reservoir provides up to 29,800 acre-feet of irrigation water storage and flood control. The project was started in 1959 and completed in 1962. Fish passage is blocked at Prosser Creek Dam. Prosser Creek joins the main stem Truckee River 1.5 miles below the dam. The terminus of the Truckee River is Pyramid Lake, a desert terminal lake in western Nevada. Operation of Prosser Creek Dam and the water rights are detailed in the Truckee River Operating Agreement (U.S. Bureau of Reclamation 2008).

Carpenter Valley is a major contributor to the North Fork Prosser Creek hydrologic basin. Carpenter Valley is bounded by Carpenter Ridge and the Sagehen Hills to the north, and the northeast flank of Red Mountain to the south. Lower Carpenter Valley averages 7,355 feet in elevation, with about 33.5 inches of precipitation annually. In addition to North Fork Prosser Creek, the primary hydrological features of lower Carpenter Valley seasonal side channels and oxbow ponds, numerous groundwater springs, several fens, wet and dry meadows, and several seasonal and ephemeral streams. About three miles of North Fork Prosser Creek traverse the TDLT property (the creek crosses onto the property at four places between the western and eastern-most boundaries: Dittes and Guardino Consulting 2017).

Large rocks and small boulders are present in a few reaches of the channel; some may have been artificially placed, possibly for channel stabilization, or habitat enhancement for fish. The channel is actively meandering with eroding, slumping banks and depositional gravel-sandbars present. The channel gradient averages 0.16% with a channel width of 16' to 80' (Dittes and Guardino Consulting 2017).

Groundwater springs and fens in lower Carpenter Valley are mostly located on the south facing slope on the north side of the meadow basin. Groundwater springs and fens were mapped in the 2017 Dittes and Guardino Consulting survey and the 2016 California Native Plant Society fen study.

Throughout the planning of the proposed project, efforts were made to avoid disturbance in the 100-year floodplain, as well as in wetlands. Wetlands were mapped in detail by Salix Consulting Inc. (Salix) (Salix 2019a, TDLT 2019). The location of the proposed trail and pedestrian bridge was adjusted to avoid incursion into the wetlands. The puncheon system traverses some seasonally wet areas. No cut and fill would occur as puncheons are placed on top of the ground surface. The Federal Emergency Management Agency (FEMA) established an approximate Zone A Special Flood Hazard Area for the North Fork of Prosser Creek in Carpenter Valley. A Special Flood Hazard Area is defined by FEMA as "an area subject to flooding by the 1% annual chance flood." New high-resolution topographic data shows the Zone A area to be inaccurate when overlaid on LiDAR derived aerial topography with 2' contour intervals. Elevations of the Zone A boundary vary as much as 55 vertical feet within the same general stream reach on

opposing sides of Prosser Creek. In response, Auerbach Engineering Corporation (AEC) conducted a hydrologic analysis of the drainage area to determine 100-year flood flows. Field surveys of the proposed site were conducted in November 2018 to establish topography with greater accuracy and determine field surveyed stream cross sections. A hydraulic analysis of North Fork Prosser Creek was conducted to determine the 100-year flood inundation line and a request for letter of map revision (LOMR) was submitted to FEMA in February 2019 (AEC 2019b). In response to a request for additional data from FEMA dated March 26, 2019, more information was added to the topographic maps. The maps were resubmitted on May 2, 2019. The USFS and TDA were formally notified about the flood hazard map revision application by letters from AEC dated May 2, 2019.

As summarized from the Dittes and Guardino Consulting baseline report (2017), the predominant soils in lower Carpenter Valley are Aquolls and Borolls, 0 to 5 percent slopes (AQB). These soils are formed from weathered stream deposits and are characterized by slow runoff and a high-water table. Aquolls and Borolls support native wet meadow and riparian vegetation such as sedges, rushes, grasses, alders, willows, and aspens.

Soils found in forested areas upslope from the meadow are variable. The predominant soil associated with the forested area is Meiss-Waca complex, 30 to 50 percent slopes (MKF). These soils originate from volcanic parent material and are loamy in texture. Soil depth ranges from shallow to moderately deep, with rapid permeability and runoff. Depending on available water capacity, vegetation on these soils range from grasses and forbs to dense conifers.

Environmental Consequences

No Action Alternative

Under the No Action Alternative there would be no change to hydrology and stream flows. Continued dispersed access and a lack of interpretive signage could lead to damage to sensitive hydrological features such as springs, fens, stream banks, and seasonal ponds.

Proposed Action

The Proposed Action would effectively manage visitor access to the North Fork Prosser Creek meadow basin by providing a system of designed trails in upland areas, elevated walkways (punchcons) and viewing punchcons in seasonal wet areas, a pedestrian bridge that avoids the 100-year flood zone, a designated parking area, and a new gate. These features are designed to eliminate user-created trails into hydrologically sensitive areas. Signs would inform and advise visitors about the need to stay on trails to protect sensitive areas. There would be no change to stream flows as a result of implementing the Proposed Action.

The Proposed Action avoids wetland areas and has been designed to minimize soil and vegetation disturbance. Where a trail crosses seasonally wet ground, punchcons would be used to cross. The North Fork of Prosser Creek is to be spanned in one location with a pedestrian bridge, which would be located outside the 100-year flood zone. Materials for bridge construction on the north side of the creek would be carried manually or brought in aerially by high line or helicopter. Most construction work would be done manually using salvaged on-site materials such as logs, boulders, and wood chips. Mechanized equipment would be limited to a crane to move and place the bridge materials, a small excavator, and construction vehicles.

In addition to avoidance measures in the project layout and design, BMPs, other environmental protection measures would be used to minimize disturbance and stabilize the areas that are disturbed. A detailed description of the environmental protection measures for the project are in the engineer drawings (AEC 2019a), and are also summarized below:

- Removal of native vegetation would be minimized. All disturbed areas would be stabilized with a 3-inch layer of mulch or covered with an erosion control blanket.
- The areas of soil and vegetation disturbance shall be limited to that required for construction purposes. Except where required for access, there would be no disturbance in areas to be left in a natural state. Construction traffic would be limited to areas to become permanent circulation (e.g., existing roadways and parking areas).
- Orange mesh construction fencing would be used at the limits of the roadway and parking area to protect existing vegetation and limit the area of disturbance.
- Temporary erosion control materials (silt fence, fiber roll) would be placed downslope of bridge abutments.
- Individual or group tree protection would be provided for all trees within 10 feet of the limits of disturbance.
- For winterization, prior to October 15th, seed (appropriate species local to the Truckee area), fertilizer, and mulch would be applied to all disturbed areas and all exposed cut and fill slopes not protected by rock.
- On slopes greater than 2:1, other measures such as netting or tackifiers would be utilized to hold materials in place until vegetation is established.
- Local pine needle mulch and/or woodchip material may be used as mulch or ground cover. Any straw used would be certified weed free.
- Temporary erosion control measures and details as shown on the plan are suggested minimum methods of controlling erosion during construction. The contractor would implement additional measures as dictated by field conditions to control erosion and sedimentation.
- If inclement weather is forecast, contractor would take necessary steps to protect areas disturbed by construction from erosion and/or subsequent discharge of earthen materials from the site.
- Stockpiles would be protected from erosion. This may consist of placing filter fabric dikes around stockpiles and/or covering with plastic sheeting.
- All temporary erosion control features would be inspected weekly and prior to inclement weather and corrective action taken as necessary to insure proper function.
- Only native brush and grass species would be used for revegetation. Existing areas of disturbance within each construction phase would be restored pursuant to BMPs. This includes revegetation of existing dirt roads which will no longer be utilized for vehicular access. Revegetation undertaken from April 1 to October 1 would include regular watering to ensure adequate growth.

- Disturbance created by construction would be stabilized within 24 hours of cessation of travel into such areas. If work has ceased in an area or if an area is found to be subject to potential erosion problems associated with vegetation loss and soil compaction, efforts to stabilize such areas would be initiated the next work day following the inspection. Stabilization of these areas would be carried out utilizing BMPs.
- The contractor would maintain adequate dust control. Measures would include but not be limited to the following:
 - Major dust-generating activities would occur when wind velocities are low.
 - Work areas, construction equipment travel routes, and equipment would be sprinkled to control dust. Construction vehicles would be prevented from tracking mud onto neighboring roads and highways. All trucks and vehicles within construction site would be restricted to a maximum speed of 15 miles per hour.
 - All project-related vehicles would park on existing compacted road shoulders.

3.3 Biological Resources

Affected Environment

Plants

Lower Carpenter Valley is distinctive for its variety of terrestrial and aquatic plant communities. In their survey of the TDLT's newly acquired property, Dittes and Guardino (2017) delineated and mapped several major plant communities including Coniferous Forest, Montane Chaparral/Brushfield, Rock-Slope/outcrop, Big Sagebrush Scrub, Willow Riparian Scrub, Mountain Alder -Riparian Scrub, Montane Meadow, Groundwater Springs Wetlands, Fens, Side Channel/Oxbow Wetlands, and Montane Dry Meadow. Of special botanical importance are several relatively pristine fen communities which support four special status vascular plants and one special status moss (Dittes and Guardino 2017).

The lower Carpenter Valley Fen communities are highly ranked for conservation status. Fed by groundwater, fens are defined as areas with at least 20 centimeters of organic soil material (i.e., peat) in the upper 40 centimeters of the soil profile, year-round saturated soils, and the presence of wetland plant species (Weixelman *et al* 2011). The California Native Plant Society (CNPS) assessed ten fens within lower Carpenter Valley in 2016. Dittes and Guardino (2017) provided additional fieldwork to improve the accuracy of lower Carpenter Valley fen boundaries. The fens of lower Carpenter Valley are considered "sloping fens," with groundwater spring complexes entering and leaving the fens. The fens support four special-status vascular plant species (mud sedge [*Carex limosa*]; English sundew [*Drosera anglica*]; slender cotton-grass [*Eriophorum gracile*]; lesser bladderwort [*Utricularia minor*]), one special-status moss (hump moss [*Meesia triquetra*]), and possibly a nesting pair of greater sandhill cranes (*Grus Canadensis*). Relatively undisturbed fens such as those in Carpenter Valley are rare in the Sierra Nevada. In their field study, CNPS noted an off-highway vehicle incursion in one fen. (CNPS 2016).

In 2018, Salix conducted a Biological Resource Assessment and Rare Plant Survey in the lower Carpenter Valley proposed trail, puncheon, bridge and parking area project (Salix 2019a). The survey focused on plant communities that could support special status species known to occur in

the area. A variable width corridor was field surveyed during the summer. Five biological communities were identified within the Proposed Action area, including riparian scrub, upland meadow, wetland meadow, sagebrush scrub, and coniferous forest. Acreages for each are listed in Table 3.1 below.

Table 3.1 - Biological communities/habitat types within the lower Carpenter Valley study area (from Salix 2019a)

Biological Community	Acreage
Riparian Scrub	0.1
Wetland Meadow	0.2
Upland Meadow	0.4
Sagebrush Scrub	0.8
Coniferous Forest	8.9
Total	10.4

Riparian Scrub

Riparian scrub habitat is a common component in the North Fork of Prosser Creek corridor where it is intermixed with upland and wetland meadow. Willow species along the creek are primarily Pacific willow (*Salix lasiandra*) and Lemmon’s willow (*Salix lemmonii*). The trail alignment approaches the creek in a few locations and travels near several willow patches. The proposed trail would intercept 0.1-acre of riparian scrub habitat.

Wetland Meadow

Lower Carpenter Valley supports abundant meadow habitat. Meadows along the northern perimeter are fed by hillside groundwater discharge while meadows on the valley floor are supported by surface waters as well as groundwater. Wetland meadow areas support numerous sedges (*Carex* spp.) and rushes (*Juncus* spp.) along with grasses including meadow barley (*Hordeum brachyantherum*), tufted hairgrass (*Deschampsia cespitosa*), and pullup muhly (*Muhlenbergia filiformis*).

Upland Meadow

The drier non-wetland transitional areas between the wetland meadows and the sagebrush scrub or coniferous forest are defined in the Salix survey as upland meadows. These areas are similar to wetland meadows but typically support more grass species and do not contain wetland hydrology. They are often located adjacent to downcut streams which draw water from adjacent areas and at the edges of the meadow where the flat basin begins to slope up and transition to sagebrush or forest. Kentucky bluegrass (*Poa pratensis*), big-leaved Avens (*Geum macrophyllum*), spiked checkerbloom (*Sidalcea oregona* ssp. *spicata*), and bowl clover (*Trifolium cyathiferum*) are common components.

Sagebrush Scrub

Sagebrush scrub habitat is patchy and scattered throughout Lower Carpenter Valley. These areas are characterized by a few species of shrubs, primarily big sagebrush (*Artemisia tridentata*) and antelope bitterbrush (*Purshia tridentata*). Grasses and forbs are abundant and include several species of rockcress (*Boechera spp.*), mountain mules' ears (*Wyethia mollis*), common yarrow (*Achillea millefolium*), and squirrtail (*Elymus elymoides*).

Coniferous Forest

The most common habitat type in the region as well as in the study area is coniferous forest (8.9-acres). There are two very common trees in the study area, lodgepole pine (*Pinus contorta*) and white fir (*Abies concolor*). The shrub layer is well represented with green-leaved manzanita (*Arctostaphylos patula*), Sierra gooseberry (*Ribes roezlii*), wax currant (*R. cereum*), mountain whitethorn (*Ceanothus cordulatus*), and Utah service berry (*Amelanchier utahensis*). Common herbs in the forest areas include mountain strawberry (*Fragaria virginiana*), western wall flower (*Erysimum capitatum*), Orcutt's brome (*Bromus orcuttianus*), and western needlegrass (*Stipa occidentalis*),

Salix (2019a) identified 14 special-status plant species that were reported to occur within a five-mile radius of the Proposed Action area: None of these was observed in the 2018 field surveys and most were determined to be unlikely to occur due to a lack of suitable habitat within the "footprint" of the Proposed Action area.

Several non-native, invasive plants and noxious weeds were observed but not mapped during the baseline documentation field survey of TDLT's lower Carpenter Valley property (Dittes and Guardino 2017). All of these plant species have the potential to spread and replace native plants. Plant seeds were likely to have been introduced through livestock feed, erosion control materials, range seeding, vehicles or equipment. The following species were noted during that survey:

- Cheatgrass (*Bromus tectorum*)
- Field bindweed (*Convolvulus arvensis*)
- Kentucky bluegrass (*Poa pratensis pratensis*)
- Klamathweed (*Hypericum perforatum*)
- Lamb's Quarters (*Chenopodium album*)
- Timothy grass (*Phleum pretense*)
- Sheep sorrel (*Rumex acetosella*)

In their project-specific rare plant survey in 2018, Salix observed cheatgrass in the vicinity of the proposed trail (Salix 2019a).

Terrestrial Wildlife

The variety of upland, wetland, and aquatic habitats and minimal disturbance has resulted in an area with exceptional value for wildlife. Salix (2019a) identified several special-status terrestrial wildlife species that have been reported within a five-mile radius of the Proposed Action Area, with potential to occur or as reported occurrences in lower Carpenter Valley: northern goshawk

(*Accipiter gentilis*); greater sandhill crane (*Grus canadensis tabida*); willow flycatcher (*Empidonax traillii*); yellow warbler (*Setophaga petechia*); Sierra Nevada snowshoe hare (*Lepus americanus tahoensis*); Sierra Nevada mountain beaver (*Aplodontia rufa californica*); Sierra Nevada red fox (*Vulpes necator*); fisher -west coast DPS (*Pekania pennanti*); wolverine (*Gulo* sp).

Aquatic Wildlife

Lower Carpenter Valley's aquatic habitat is high quality, abundant and varied. As in much of the Sierra Nevada, native species have been forced to compete with introduced species, resulting in habitat that is unoccupied or only partially occupied by native species. Two federally listed species were identified by the USFWS as having potential to occur in the proposed project area or that could be affected by the proposed project.

Sierra Nevada Yellow-legged Frog

Sierra Nevada yellow-legged frog (*Rana sierra*) was listed as Endangered by the USFWS on April 29, 2014 (USFWS 2014). Critical habitat for SNYLF was designated by final rule on August 26, 2016 (USFWS 2016). A section of the 2C. Black Buttes subunit overlaps the proposed project area. The proposed trail (1,775 linear feet) and existing road (2,130 linear feet) traverses designated critical habitat. Figure 3-1 displays the proposed action within the SNYLF designated critical habitat.

According to historical museum records, mountain yellow-legged frogs were collected from over 30 sites in the TNF (USFS 2018). Since the 1990s the TNF has initiated or hosted several amphibian or mountain yellow-legged frog-specific surveys. Current TNF database records show SNYLF at 20 general localities, including four sites on the Truckee Ranger District.

SNYLF are not reported in the Prosser Creek drainage but were noted two miles southeast of the proposed project area, along Alder Creek, southwest of Prosser Hill, north of Truckee in the TNF. At least one individual was observed in 1997 (Salix 2019a). Another population of SNYLF exists approximately five air miles to the north in the lower Independence Creek drainage. This latter population is separated by a major ridge and is not directly connected hydrologically to Carpenter Valley. The California Natural Diversity Database reported SNYLF in the Sagehen Creek basin north of the TDLT property (Salix 2019a).

On August 6, 2015, TNF biologists conducted a SNYLF survey on North Fork Prosser Creek less than a half mile downstream of the proposed project area. Field notes from the survey stated, "habitat looks good. There is a good deal of riparian vegetation. The water is clear. There was sign of recent beaver activity. 2 American Dippers were seen foraging up the stream. No frogs were detected." (USFS 2015).

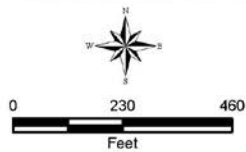
Figure 3-1: Proposed action activities within SNYLF critical habitat

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RECLAMATION

Lahontan Basin Area Office
705 N. Plaza Street, Carson City, NV 89701



Carpenter Valley Recreational Enhancements
Proposed Action Activities within SNYLF Critical Habitat

Figure 3-1

A 1986 administrative report by the California Department of Fish and Wildlife (CDFW 1986) documented a 1983 survey of South Fork Prosser Creek near the confluence with North Fork Prosser Creek (about ½ stream mile from the southernmost part of the proposed project area). Brown Trout (*Salmo trutta*), Rainbow Trout (*Oncorhynchus mykiss*), Mountain Whitefish (*Prosopium williamsoni*), Tahoe Sucker (*Catostomus tahoensis*), and Paiute Sculpin (*Cottus beldingi*) were captured in the survey. This older survey confirms recent anecdotal information that introduced trout (Brown and Rainbow Trout) are residents of North and South Fork Prosser Creek along with native fishes (Mountain Whitefish, Tahoe Sucker, and Paiute Sculpin).

A field assessment for SNYLF was conducted on September 18, 2018 by TNF Aquatics and Wildlife Technicians and Salix (planning team) biologists (Salix 2019b). The biologists examined the proposed bridge crossing in depth and conducted an instream survey for all stream sections adjacent to the proposed trail, including the segment in the designated critical habitat at the west end of the proposed project area. No SNYLF were detected. An individual Sierran treefrog (*Pseudacris sierra*) was found in a shallow pool in the channel at the west end of the proposed project area. Also noted were Paiute Sculpin, Tahoe Sucker and evidence of American beaver (*Castor canadensis*) activity.

Lahontan Cutthroat Trout

Lahontan Cutthroat Trout (LCT) (*Oncorhynchus clarkii henshawi*) is currently federally listed as threatened by the USFWS. In 1995, the USFWS released its recovery plan for LCT, encompassing six river basins within the historic range of LCT (USFWS 1995). The Recovery Plan is in the process of being revised. A technical team is updating long-term recovery and restoration actions within the Truckee River basin. The Truckee River Basin Recovery Implementation Team wrote a 2003 short-term action plan, which includes goals and objectives, timeline and priorities, actions needed and stakeholder participation plan (USFWS 2003). Carpenter Valley is not mentioned in either of the existing plans. Critical habitat has not been designated for this species.

According to the short-term recovery plan for LCT in the Truckee River, LCT populations are affected by (1) degraded and/or limited habitat, (2) displacement and/or hybridization with non-native trout, (3) competition with non-native fishes, and (4) decreased viability. At present, there are over 40 non-native fish species within LCT's historic range. Non-native salmonids have adverse effects on the distribution and abundance of native species in Sierra Nevada streams. The most prevalent non-native salmonids in the Truckee River are Rainbow and Brown trout.

LCT is an inland subspecies of Cutthroat Trout, endemic to the Lahontan Basin of northern California, western Nevada, and southern Oregon. LCT historically occupied over 600 miles of the Truckee River watershed, including the main stem Truckee River, streams and several lakes. The loss of LCT from its historic range has been attributed to many factors including competition from (and hybridization with) introduced trout species, stream channel alteration, migration blockage by dams, low flows during critical life stages, and pollution.

Self-sustaining populations of LCT in the Truckee watershed have been extirpated except for Independence Lake (CA). Other population of LCT can be found in Summit Lake (NV), and all but a few isolated stream segments. The nearest populations of LCT to the proposed project are Independence Lake and upper Independence Creek (approximately 3 air-miles, with no

hydrologic connection) and Prosser Creek Reservoir, which is the terminus of Prosser Creek. Prosser Creek Reservoir which is about 4 air-miles southeast of the proposed project. The reservoir was constructed in 1962 and allows no fish passage past the dam. The reservoir is stocked with Pilot Peak strain LCT fingerlings and sub-catchables. This strain of LCT is found in the mainstem Truckee River and elsewhere in the Truckee River Basin other than Independence Lake and upper Independence Creek. Pilot Peak is considered the native strain of LCT for the mainstem Truckee River (Tim Loux personal communication, 2018). It is unknown if these stocked fish move out of the reservoir into the branches of Prosser Creek.

A 1983 CDFW survey (CDFW 1986) found Brown Trout and Rainbow Trout in South Fork Prosser Creek near the confluence with the North Fork (about ½ stream mile downstream of the proposed project). The presence of LCT is unlikely if these trout species have remained local residents.

In addition to competition from introduced trout, only marginal LCT habitat exists in parts of Carpenter Valley. Historic natural and human-caused disturbance have caused changes to the channel and flows that have eliminated essential LCT stream habitat.

Prior to the construction of Prosser Creek Dam in 1959, LCT may have seasonally migrated in North Fork Prosser Creek, but it was unlikely a resident population existed in Carpenter Valley due to naturally warm, open stream conditions. If LCT were able to persist in deep, shaded pools, planted non-native trout would have eliminated those fish when trout stocking became widespread during the early- to mid-1900s. Recent site-specific data is lacking, but a 1983 electroshock fish survey captured only Brown Trout, Rainbow Trout, Mountain Whitefish, Tahoe Sucker and Paiute Sculpin in South Fork Prosser Creek (CDFW 1986). For the purposes of this EA, LCT are assumed not present in the analysis area.

Migratory Birds, Bald Eagles, and Golden Eagles

Carpenter Valley's diverse, high quality wildlife habitat is likely used by a variety of migratory birds. No formal surveys have been completed, but some species have been observed in the course of other survey work. Riparian areas in Carpenter Valley are known to support a breeding population of willow flycatcher. Yellow warblers and nesting greater sandhill cranes were observed during the baseline study (Dittes and Guardino 2017). Golden eagles have not been recorded to date. The nearest bald eagles are at Donner Lake, approximately five miles south of the proposed project area. Bald eagles are unlikely to inhabit Carpenter Valley since there is not a large body of water there.

Environmental Consequences

No Action Alternative

If visitor access improvements in the Proposed Action were not implemented, authorized and managed visitation would be limited to docent-led hikes. Unauthorized off-site access could increase over time. Damage from user-created trails into sensitive areas would remain at current levels or potentially increase. Disturbance to wildlife could increase if unauthorized visitors roamed freely on the TDLT property.

Proposed Action

The Proposed Action would not result in a significant change in the surrounding environment and would not result in short-term or long-term adverse impacts to biological resources. Wetland avoidance measures and implementation of the BMPs and environmental protection measures identified as part of the Proposed Action would avoid or substantially reduce potential adverse effects to special status plants and wildlife species. Construction of trails, puncheons, the pedestrian bridge, and trailhead parking is designed to minimize the disturbed area and use of heavy equipment.

SNYLF and LCT are assumed to be absent in North Fork Prosser Creek. Although unlikely, if LCT or SNYLF were discovered in North Fork Prosser Creek, mitigation measures resulting from consultation with the USFWS, project mitigation measures, as well as Best Management Practices to protect the stream environment, would provide protection. Livestock grazing, motorized recreation, equestrian use, and dogs are not allowed TDLT's Carpenter Valley property, so impacts from these uses would not occur.

Construction in areas adjacent to willow and alder thickets used by willow flycatchers would be delayed until after the breeding and rearing season (generally after August 1).

Management objectives of the Carpenter Valley property by the TDLT are to maintain and improve the ecological values of Carpenter Valley, which will enhance habitat for rare species over the long-term.

3.4 Recreation

Affected Environment

Recreation use in lower Carpenter Valley is seasonal and relatively light as a result of a long history of private property ownership with no authorized public access. As a result of interest following the property acquisition by TDLT, docent-led hikes began in June 2017. Despite limited authorized access, a network of user-created trails and evidence of wetland damage from motorized incursion exist because the TDLT property can be accessed from adjacent ownerships. Horses and dogs are not allowed past the gate on Carpenter Valley Road at Alder Creek Road and on TDLT property in Carpenter Valley due to sensitive resources. Private property and National Forest boundaries are clearly marked and signed.

Environmental Consequences

No Action Alternative

If visitor access improvements in the Proposed Action were not implemented, authorized and managed visitation would be limited to docent-led hikes. Off-site access could be expected to increase as a result of publicity about the TDLT property acquisition. Damage from user-created trails into sensitive areas would remain at current levels or potentially increase.

Proposed Action

Under the Proposed Action a designed network of trails and puncheons, a pedestrian bridge, dirt parking area, vault toilet, picnic tables and interpretive signage would be provided to accommodate seasonal public access. Use of motorized vehicles, dogs, and horses would be prohibited. The public access improvements in the Proposed Action would concentrate use onto

“hardened” facilities and away from sensitive riparian and wetland areas with signage to reinforce the need to stay on designated trails and off private property. Resource damage by user-created trails and parking areas would be reduced or eliminated and a vault toilet at the trailhead provided for sanitation. Authorized visitation would increase over the docent-led 2017 levels but be limited by the number of designated parking spaces (13). Visitors would be educated to respect sensitive resources through interpretive and informational signage.

3.5 Aesthetics

Affected Environment

Lower Carpenter Valley has high scenic quality with its varied views of surrounding mountains and ridges, dense conifer forest, and extensive meadows, ponds, and streamside. Development is limited to a one-lane rustic dirt road and wooden bridge, a gate, a few signs and user-created trails, and scattered remnants of historic logging and ranching operations. For most visitors, lower Carpenter Valley is a backcountry or near-wilderness experience, especially in contrast to urbanized development in the nearby Tahoe Donner subdivision.

Environmental Consequences

No Action Alternative

No substantial changes to scenic values would be expected under the No Action Alternative, although the number of user-created trails may increase.

Proposed Action

Although the new facilities would be designed to be minimally visually intrusive, the proposed trails, footbridge, trail puncheons, viewing puncheon, picnic tables, dirt parking area, gate, and interpretive signs would add new human elements to certain areas of lower Carpenter Valley. The overall high scenic quality would not be diminished, but specific areas would appear less rustic and more developed.

3.6 Transportation/Traffic

Affected Environment

Carpenter Valley Road, a native surface road, provides access to the proposed project area. A gate at the intersection with Alder Creek Road blocks public traffic. The area between the gate and Alder Creek Road currently provides informal trailhead parking on the shoulder of the road. Locks on the gate allow authorized access for the USFS, TDA, TDLT and other private landowners in Carpenter Valley. Carpenter Valley Road traverses National Forest land from the gate at Alder Creek Road to the TDA property boundary. An existing gate on TDA property, about 0.5 miles south of the proposed trailhead access road, currently blocks public vehicle traffic year-round. The gate is proposed to be moved to the intersection at the trailhead access road or replaced with a new gate at that location.

Carpenter Valley Road has an existing road use agreement that allows private property owners and their guests to use the road, including visitors accessing TDLT land. Vehicle traffic is light because of current public access restrictions and limited development in upper Carpenter Valley.

Environmental Consequences

No Action Alternative

No change to existing traffic or access would occur under the No Action Alternative.

Proposed Action

When the Proposed Action is implemented summer season vehicular public access would move to the new (or relocated) gate and trailhead parking area. The number of vehicles would be limited by parking spaces (13) in the designated trailhead parking area. Approximately six to eight vehicles are expected to access the TDLT property on weekdays and 12 to 16 vehicles on weekends. No change to current restrictions on horses and off-highway vehicles would occur. Wet season use of Carpenter Valley Road would be controlled by the USFS gate at Alder Creek Road.

The trail system and other recreational improvements would be maintained as needed, generally by volunteers. Maintenance would generally occur early in the season to repair winter damage. Traffic from maintenance work would be controlled by TDLT, with negligible impacts to traffic on Carpenter Valley Road.

3.7 Noise

Affected Environment

Ambient noise in lower Carpenter Valley is limited to natural sounds, high altitude aircraft, occasional summer vehicles on Carpenter Valley Road, and non-motorized dispersed recreation use from June through September. Dogs are not permitted on TDLT lands in lower Carpenter Valley and do not contribute to noise.

Environmental Consequences

No Action Alternative

Under the No Action Alternative, no changes would occur to existing noise levels.

Proposed Action

The Proposed Action would increase localized noise levels temporarily during the estimated eight weeks of construction in late summer and fall 2019. Noise at the trailhead and pedestrian bridge area would be generated by the crane, mini-excavator, chipper, workers, and construction vehicle traffic. Most trail and puncheon construction would be done manually and would produce little noise. Signs on Carpenter Valley Road and a news release by TDLT would advise visitors of construction activities. Visitor access during the proposed construction period would be limited.

Post-construction seasonal visitation is expected to increase over current levels as a result of the new recreation access amenities. Noise would be concentrated in the access road and parking area, wildlife viewing puncheon, picnic areas, and on designated trails. Access and use of the area would be limited by the size of the new parking area (13 spaces). No off-highway vehicles, dogs, or horses would be allowed. Most visitors would be in the area to hike, picnic, and observe wildlife, passive uses that are expected to generate relatively little noise. Therefore, despite an increase in visitation, noise is not expected to increase significantly over current levels.

3.8 Air Quality

Affected Environment

The proposed project site is located in Nevada County, California, which is in the Northern Sierra Air Quality Management District. Air quality at Carpenter Valley is generally excellent. The valley is in an isolated sub-alpine environment with development limited to a few scattered cabins. Almost all access occurs from June through September. Carpenter Valley is accessed by low standard dirt roads, which limit vehicle traffic and vehicle speeds, thereby limiting fugitive dust and exhaust emissions. The nearest urban development is the Tahoe Donner subdivision, approximately 1.5 air miles from the proposed project area.

Air quality in lower Carpenter Valley can be affected by drifting smoke from wildfires and prescribed burns during the summer months. Ozone levels can become elevated by emissions from the Bay Area and Sacramento areas to the west, although these occurrences are rare.

Environmental Consequences

No Action Alternative

There would be no effect on conditions and trend in air quality. Under the No Action alternative there would be no change from current conditions. No construction activity would occur in the proposed project area; therefore, air pollution emissions would not be generated.

Proposed Action

Air quality impacts from the Proposed Action would be minor, short-duration and localized. Ground disturbing activities would result in the temporary emissions of fugitive dust and vehicle combustion pollutants while constructing new trails and the trail bridge, and during the parking area clearing. To mitigate or eliminate fugitive dust, wood chips and water would be applied to disturbed areas during construction. A post-construction increase in private vehicle access on Carpenter Valley Road during the summer would occur, but only to the new gate, access road, and 13-space trailhead parking area.

3.9 Fire and Fuels

Affected Environment

Carpenter Valley has not experienced a large fire in several decades. The TDLT property has not been logged in recent times, although in 2018 dead trees were removed and small trees thinned on the TDA portion of the proposed action area (trailhead and access road area). The upland areas of lower Carpenter Valley are similar to many areas of the surrounding eastside mixed conifer forest with open forest interspersed with unnaturally dense patches of conifers. Trees in these conditions must compete for limited water, sunlight, and nutrients and exhibit reduced vigor and susceptibility to insect and disease problems, especially during droughts. Lower tree vigor and a higher component of dead trees lead to an increase in surface fuel loads, increasing the wildfire hazard. Meadow areas also show the effects of fire exclusion by encroachment of lodgepole pine. Aspen stands are similarly invaded by shade intolerant conifers such as white fir which compete with aspen for light and moisture.

Plants and animals in the Sierra Nevada adapted to fire frequency, pattern, and severity for each forest type. Prior to 19th century grazing, logging, and fire suppression, eastside pine and mixed

conifer Sierra forests burned at regular intervals, commonly as patchy understory fires. Various studies have found an average fire return interval of about 7 to 12 years. Fires were a result of lightning and cultural practices by Native Americans.

CAL FIRE and the TNF are working cooperatively with private landowners in the area to treat fuels in a strategic manner to reduce the risk of damaging large fires. Several large projects have been implemented, including fuel treatment work at Independence Lake and in the Sagehen basin.

Environmental Consequences

No Action Alternative

A low level of summer visitors currently accesses TDLT's lower Carpenter Valley property through docent-led hikes. There would be no effect on the current situation if the proposed project were not implemented.

Proposed Action

No increase in risk from human caused fires is expected from the proposed project. The number of people would be limited by the 13-space parking lot and gate. No fires, camping, or motorized vehicles would be allowed, which further reduce the risk.

3.10 Cultural Resources and Historic Properties

Affected Environment

"Cultural resources" is a term used to describe both 'archaeological sites' depicting evidence of past human use of the landscape and the 'built environment,' which is represented in structures such as roadways and buildings. The NHPA of 1966 is the primary legislation, which outlines federal agencies' responsibilities to consider cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of its undertakings on historic properties, which are cultural resources listed or eligible for listing on the National Register of Historic Places (National Register).

Implementing regulations for Section 106 (36 CFR Part 800) describe the process that Federal agencies must use to identify historic properties and determine the level of effect that a proposed undertaking would have on such properties. In summary, it must first be determined whether the action is the type of activity that has the potential to affect historic properties. If the action is that type of activity, then the agency must identify the area of potential effects (APE), determine if historic properties are present within the APE, determine the effect that the undertaking would have on historic properties, and seek to resolve any adverse effects through consultation with the California State Historic Preservation Office (SHPO) and any other consulting parties.

In 2016 Great Basin Consulting Group (GBCG) completed a cultural resource inventory and historic property identification in lower Carpenter Valley on TDLT lands for the TDLT and Reclamation. GBCG's report included results of a background and records search, and a field survey for the APE. GBCG found a total of eight cultural resources, seven of which were newly identified. Two were pre-historic and six were historic-era resources. GBCG, Reclamation, and

California SHPO concurred that none of the cultural resources met the criteria for eligibility to the National Register and determined there would be no historic properties affected by the proposed project.

In 2018 when project planners relocated the proposed site of the access road, trailhead parking area and pedestrian bridge to TDA-owned lands. In 2018, GBCG completed a second cultural resource inventory and Historic Properties identification report for the additional 17 acres involved in addition project features. GBCG's second report again included results of a background and records search, and a field survey for the APE. Two historic sites were identified, recorded, and evaluated for eligibility to the National Register. There was consensus between Reclamation and California SHPO that none of the cultural resources met the criteria for eligibility to the National Register and determined there would be no historic properties affected by the proposed project.

In addition to the GBCG inventories, Reclamation contacted the Native American Heritage Commission who provided a Native American contact list (one Tribe and two individuals) and a negative finding in the sacred land file. Reclamation invited the Washoe Tribe of Nevada and California to assist in identifying historic properties of concern that might be affected by the proposed project. Reclamation invited the two individuals to identify issues regarding effects on historic properties in 2016 and again in 2018, concerning the additional 17-acre parcel. No response was received.

Environmental Consequences

No Action Alternative

Under the No Action alternative, Reclamation would not provide grant funding to NFWF for the project, Reclamation would not have an undertaking as defined by Section 301(7) of the NHPA, and there would be no impacts to cultural resources.

Proposed Action

Based on all of the available information, Reclamation found the overall project will result in a finding of no adverse effect to historic properties pursuant to 36 CFR §800.5(b). The SHPO responded by letters dated May 2, 2017, and February 21, 2019, concurring with Reclamation's determination.

In the event of an unanticipated discovery of unknown cultural resources during the implementation of the proposed action, Reclamation would be immediately notified. Any ground-disturbing activities within 50 feet of the discovery would be stopped until the find can be inspected by a qualified archaeologist, and avoidance or recovery measures could be developed in consultation with Reclamation, as outlined at 36 CFR §800.13. Work would not resume at that specific location until authorized by Reclamation.

3.11 Cumulative Effects

According to the CEQ regulations for implementing the procedural provisions of NEPA, a cumulative impact is defined as *the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such*

other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

Future trail connections have been discussed with a timeframe of 5 to 15 years from present. About five miles of new trail could connect to the TDLT trail which would allow a 15-mile trail network. These trails would most likely originate from TDA property on Alder Creek Road. A separate planning and public involvement process would occur for any potential trail connections.

There are no significant adverse impacts associated with implementing the Proposed Action. With the exception of a potential future trail system connection, there are no cumulative effects.

4 Consultation and Coordination

4.1 Agencies and Persons Consulted

Reclamation consulted and coordinated with Truckee Donner Land Trust, Blue Palm Consulting, Tahoe Donner Association, Salix Consulting, Inc., Auerbach Engineering Corporation, California State Office of Historic Preservation, U.S. Fish and Wildlife Service, Federal Emergency Management Agency, U.S. Army Corp of Engineers, Nevada County California, National Fish and Wildlife Foundation, California Department of Forestry and Fire Protection (CAL FIRE), California Department of Fish and Wildlife, Tahoe National Forest, and the Great Basin Consulting Group.

4.2 Endangered Species Act (16 USC § 1531 et seq.)

Section 7 of the Endangered Species Act requires Federal agencies to ensure that discretionary federal actions do not jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of the critical habitat of these species. A Biological Assessment (BA) was completed and a determination was made there would be “No Effect” regarding ESA-listed species and critical habitats.

4.3 Permits

As discussed in the hydrology section, the LOMR is in process. Assuming concurrence by FEMA, there would be no encroachment by the bridge, trail, or puncheons into the 100-year inundation (flood) zone and 401 or 404 permits would not be necessary. All other required permits would be obtained prior to implementation of the Proposed Action. These permits may include:

- CDFW stream alteration permit (1602).
- CDFW incidental take permit, although environmental protection and avoidance measures were designed to eliminate the need for this.
- Lahontan Regional Water Quality Board.
- Nevada County grading or building permit.

5 References

- Auerbach Engineering Corp. 2019a. Improvement Plans for Truckee Donner Land Trust Carpenter Valley Trail.
- Auerbach Engineering Corp. 2019b. Request for Letter of map Revision (LOMR) to Nevada County FIRM Panel No. 0250 MT-2 Revision Request Submittal for Parcel No. 040-18-00 and 110-01-000. Submitted to FEMA February, 2019.
- California Department of Fish and Wildlife (CDFW). 1986. Survey of Fish Populations in Streams of the Truckee and Carson River Drainages: 1983. By D. McEwan, J. Deinstadt and R. Wickwire. Inland Fisheries Administrative Report No. 86-1. 78 pages.
- California Native Plant Society. 2016. Characterization and Delineation of Fens in Carpenter Valley, Nevada County, California.
- Dittes & Guardino Consulting. 2017. *Lower Carpenter Valley Easement Documentation Report*. Prepared for the Nature Conservancy. September 2017.
- Loux, T. 2018. Personal communication. Telephone conversation with consultant Jane LaBoa 12 March, 2018 regarding LCT stocking and surveys in the Prosser Creek watershed.
- Salix Consulting, Inc. 2019a. *Biological Resources Assessment and Rare Plant (BRA/RPS) Survey for the 10.4-Acre Lower Carpenter Valley Study Area*. Prepared for the Truckee Donner Land Trust. February 2019.
- Salix Consulting, Inc. 2019b. *Memorandum for Initial Field Survey for Sierra Nevada yellow-legged frog (SNYLF) in the North Fork Prosser Creek, Lower Carpenter Valley, Nevada County, CA*. Dated April 5, 2019. Survey conducted by USFS aquatic biologists accompanied by Salix Consulting biologists on September 18, 2018. Memorandum prepared by Salix Consulting.
- Truckee Donner Land Trust (TDLT). 2019. Management Plan for the 10.4-acre Lower Carpenter Valley Access Plan Area. Prepared by Salix Consulting, Inc. and Auerbach Engineer Corp. for Submittal to Nevada County. Transmitted to Nevada County March 27, 2019.
- U.S. Bureau of Reclamation. 2008. Revised Draft Environmental Impact Statement/Environmental Impact Report for the Truckee River Operating Agreement, Alpine, El Dorado, Nevada, Placer, and Sierra counties, California, Carson City, Churchill, Douglas, Lyon, Pershing, Storey, and Washoe counties, Nevada: Prepared by the Bureau of Reclamation, U.S. Fish and Wildlife Service, U.S. Bureau of Indian Affairs, and the California Department of Water Resources.
- . 2019. Indian trust assets determination. 6 pages.

U. S. Fish and Wildlife Service (USFWS). 1995. Recovery plan for the Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*). Portland.

———. 2003. Short-term action plan for Lahontan cutthroat trout (*Oncorhynchus clarki henshawi*) in the Truckee River Basin. Reno: Developed by the Truckee River Basin Recovery Implementation Team for the U.S. Fish and Wildlife Service.

———. 2014. Endangered and Threatened Wildlife and Plants; Endangered Species Status for Sierra Nevada Yellow-Legged Frog and Northern Distinct Population Segment of the Mountain Yellow-Legged Frog, and Threatened Species Status for Yosemite Toad. Federal Register (Final Rule) 79:24255-24310.

———. 2016. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Sierra Nevada Yellow-Legged Frog, the Northern DPS of the Mountain Yellow-Legged Frog, and the Yosemite Toad. Federal Register (Final Rule) 81(166): 59046-59119.

U.S. Forest Service (USFS). 2015. Prosser Creek Frog Survey 8/6/15. Field notes, survey form, and map. Unpublished. Tahoe National Forest, Nevada City, CA.

———. 2018. Templates for Biological Evaluation/Biological Assessment. Tahoe National Forest, Nevada City, CA.

Weixelman, D.A., B. Hill, D.J. Cooper, E.L. Berlow, J.H. Viers, S.E. Purdy, A.G. Merrill, and S.E. Gross. 2011. *A Field Key to Meadow Hydrogeomorphic Types for the Sierra Nevada and Southern Cascade Ranges in California*. Gen. Tech. Rep. R5-TP-034. Vallejo, CA. USDA Forest Service, Pacific Southwest Region.