

RECLAMATION

Managing Water in the West

Carson River Diversion Dam and Derby Diversion Dam Tender Houses Demolition and Removal Environmental Assessment LO-2012-1012



U.S. Department of the Interior
Bureau of Reclamation
Lahontan Basin Area Office
705 North Plaza Street, Room 320
Carson City, Nevada 89701

February 2015

Mission Statements

Department of the Interior

Protecting America's Great Outdoors and Powering Our Future

The Department of the Interior protects and manages the Nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities.

Bureau of Reclamation

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.

Cover Photo: Carson River Diversion Dam Tender House, Churchill County, Nevada.

TABLE OF CONTENTS

TABLE OF CONTENTS	i
LIST OF FIGURES	ii
LIST OF TABLES	ii
1.0 INTRODUCTION	1
1.1 Background	1
1.2 Locations and Descriptions	1
1.3 Need for the Proposal	4
1.4 Relevant Statutes, Regulations, and Permits	5
2.0 PROPOSED ACTION AND ALTERNATIVES	5
2.1 No Action Alternative	5
2.2 Proposed Action	5
2.3 Alternatives Considered but Dropped from Further Analysis	6
3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	6
3.1 Environmental Consequences	7
3.1.1 No Action Alternative	7
3.1.2 Proposed Action	7
3.1.2.1 <i>Wildlife and Special Status Species</i>	7
3.1.2.2 <i>Floodplains and Wetlands</i>	10
3.1.2.3 <i>Air Quality and Noise</i>	10
3.1.2.4 <i>Vegetation</i>	11
3.1.2.5 <i>Soil Resources</i>	12
3.1.2.6 <i>Cultural Resources</i>	13
3.1.2.7 <i>Environmental Justice</i>	15
3.1.2.8 <i>Visual Resources</i>	16
3.1.2.9 <i>Hazardous Materials</i>	19
4.0 OTHER NEPA CONSIDERATIONS	20
4.1 Cumulative Impacts	20
4.2 Irreversible and Irretrievable Commitments	20
5.0 CONSULTATION AND COORDINATION	21
6.0 REFERENCES CITED	21
7.0 LIST OF PREPARERS AND REVIEWERS	24
8.0 APPENDIX — Scoping Letters and Mailing List	25

LIST OF FIGURES

Figure 1. Bureau of Reclamation Lahontan Basin Area Office Projects and Facilities in California and Nevada, including the Carson River and Derby Diversion Dams in the Newlands Project.....	1
Figure 2. Carson River Diversion Dam tender house (left photo) and garage (right photo, with Dam in background at right), Churchill County, Nevada	2
Figure 3. Carson River Diversion Dam tender house site (star) with Carson River Diversion Dam (center), T-Line Canal (upper center), Carson River channel (center), and V-Line Canal (lower center), Churchill County, Nevada	3
Figure 4. Derby Diversion Dam tender house with garage/bunkhouse in background at right (left photo) and outbuildings (right photo), Storey County, Nevada	3
Figure 5. Derby Diversion Dam tender house site (star) between the Truckee River and Truckee Canal, Storey County, Nevada	4

LIST OF TABLES

Table 1. Newlands Project dam tender house locations and Bureau of Reclamation land status	2
Table 2. Natural Resources Conservation Service Web Soil Survey data for the Carson River and Derby Diversion Dam tender house sites, Nevada	13
Table 3. Human population, racial, and poverty demographic estimates (2008–2012) for geographic areas surrounding the Carson River and Derby Diversion Dam tender house sites, Churchill and Storey Counties, Nevada.....	16
Table 4. Bureau of Reclamation interdisciplinary team members involved in preparation of the draft Environmental Assessment for the Carson River and Derby Diversion Dam Tender Houses Demolition and Removal Project, Churchill and Storey Counties, Nevada.....	24

1.0 INTRODUCTION

1.1 Background

The Newlands Project (Project) was initiated by the Bureau of Reclamation (Reclamation) in 1903. It provides water from the Carson and Truckee Rivers for irrigation of approximately 57,000 acres in the Lahontan Valley near Fallon and Fernley in western Nevada (Figure 1). Dam tender houses were built by Reclamation to provide on-site housing for the operators of the diversion dams associated with the Project. The Truckee-Carson Irrigation District (District) has been operating and maintaining these dams and many other Project facilities and infrastructure under Reclamation contracts since December 31, 1926 (Contract No. 11r-93; and Contract No. 7-07-20-X0348, November 25, 1996). The District is a quasi-municipal political subdivision of the State of Nevada. The dam tender houses were previously used by the District and remain under Reclamation ownership, but they are no longer needed by the District or Reclamation for Project purposes.

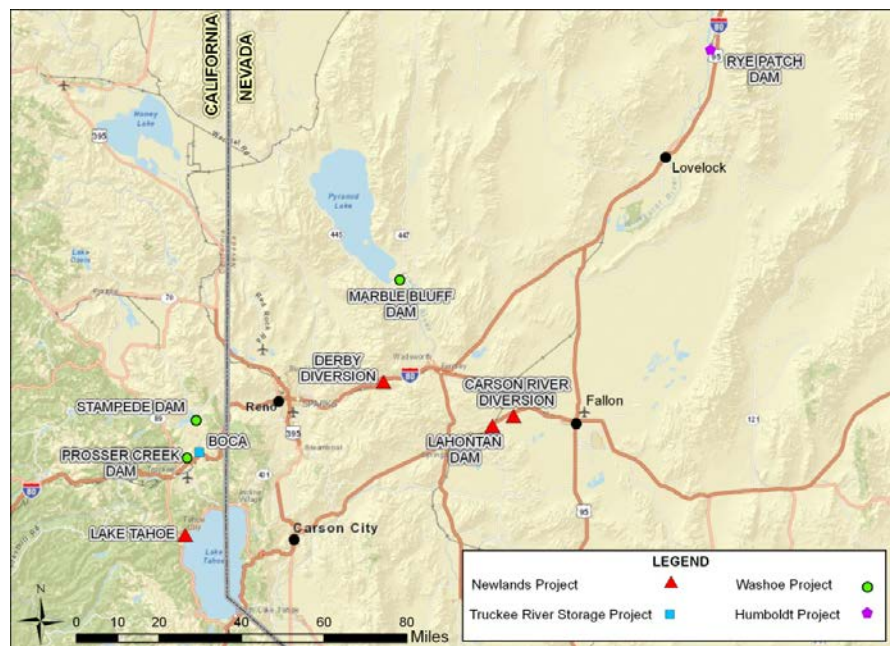


Figure 1. Bureau of Reclamation Lahontan Basin Area Office Projects and Facilities in California and Nevada, including the Carson River and Derby Diversion Dams in the Newlands Project.

1.2 Locations and Descriptions

There are two dam tender houses and associated structures in the Newlands Project which would be affected by the proposed action. They are located in the immediate vicinity of the Carson River Diversion Dam in Churchill County, Nevada, and the Derby Diversion Dam on the Truckee River in Storey County, Nevada (Table 1). Descriptions of the two dam tender houses and properties are provided below.

Table 1. Newlands Project dam tender house locations and Bureau of Reclamation land status.

House	Location	Land Status ^a
Carson River Diversion Dam	T19N, R27E, Sec. 19, NE¼SE¼ Churchill County, Nevada	Acquired
Derby Diversion Dam	T20N, R23E, Sec. 19, NE¼SW¼ Storey County, Nevada	Acquired

^a Acquired lands are lands (or an interest in land, which may include improvements or appurtenances) that Reclamation obtained from a non-Federal entity by purchase, donation, exchange, or condemnation (Reclamation Manual, Directives and Standards, Land Acquisition, LND 06-01).

Carson River Diversion Dam Tender House (Carson House)

The Carson House is located at 12255 Pioneer Way, Fallon, Nevada 89406 (Figure 2). It was constructed by Reclamation in 1910 (Reclamation 2002). This one-story house is wood-frame construction on a concrete slab foundation (Reclamation 2002). The original structure has had additions constructed as recently as 1981 (Reclamation 2002; R. Jardine, District, *in litt.* 2012). The size of the house is reported to be 1,782 square feet (ft²) (Reclamation 2002). Also present on the property are a 747.5 ft² detached garage constructed in 1910 (Reclamation 2002), a corral, sheds, power poles/lines, and fencing of various types. Prior on-site actions by the District include the removal of potentially hazardous materials from the property, termination of electrical service to the house, and removal of a propane tank (R. Jardine, District, *in litt.* 2012). However, the property is strewn with miscellaneous trash and debris, and a septic system remains on site.



Figure 2. Carson River Diversion Dam tender house (left photo) and garage (right photo, with Dam in background at right), Churchill County, Nevada.

The Carson House and associated structures are on an approximately 2-acre site within a 149.5-acre parcel of Reclamation acquired land (Churchill County APN 007-211-014). The site is bordered by the T-Line Canal to the north and west, Diversion Dam Road (unpaved) to the east, and the Carson River channel and Carson River Diversion Dam to the south (Figure 3). Beyond these adjacent Project features and access roads, bordering lands are primarily cultivated agricultural fields with widely dispersed rural residences and also undeveloped riparian and upland areas.



Figure 3. Carson River Diversion Dam tender house site (★) with Carson River Diversion Dam (center), T-Line Canal (upper center), Carson River channel (center), and V-Line Canal (lower center), Churchill County, Nevada.

Derby Diversion Dam Tender House (Derby House)

The Derby House is located at 999 West Canal Road, Sparks, Nevada 89434 (Figure 4). It was constructed by the District in 1982–1983 after the original Reclamation house was destroyed by fire. This one-story house is wood-frame construction on a concrete slab foundation (Reclamation 2002). The size of the house is reported to be 908 ft² (Reclamation 2002). There are multiple other structures on the property including a 432 ft² detached garage/bunkhouse constructed by the District when the Derby House was rebuilt (Reclamation 2002), two older sheds/outbuildings, a chicken coop, two well houses, and a corral and other fencing. The District previously arranged for removal of miscellaneous materials and debris from the Derby House property (R. Jardine, District, *in litt.* 2012).



Figure 4. Derby Diversion Dam tender house with garage/bunkhouse in background at right (left photo) and outbuildings (right photo), Storey County, Nevada.

The Derby House is situated downstream of the Derby Diversion Dam on a narrow spur of land between the Truckee Canal and the Truckee River (Figure 5). This approximately 2-acre site is part of a 143-acre parcel of Reclamation acquired land (Storey County APN 004-041-001). The property is bordered by the Truckee River to the north, the Derby Diversion Dam to the northwest, the Truckee Canal to the west and south, and undeveloped land to the east. Bordering lands include undeveloped Truckee River floodplain lands and undeveloped, sparsely-vegetated, rocky mountain foothills. Interstate 80 (I-80) and the Union Pacific Railroad tracks run east-west and essentially parallel the Truckee River beyond the primary floodplain terrace across the river north of the Derby House.

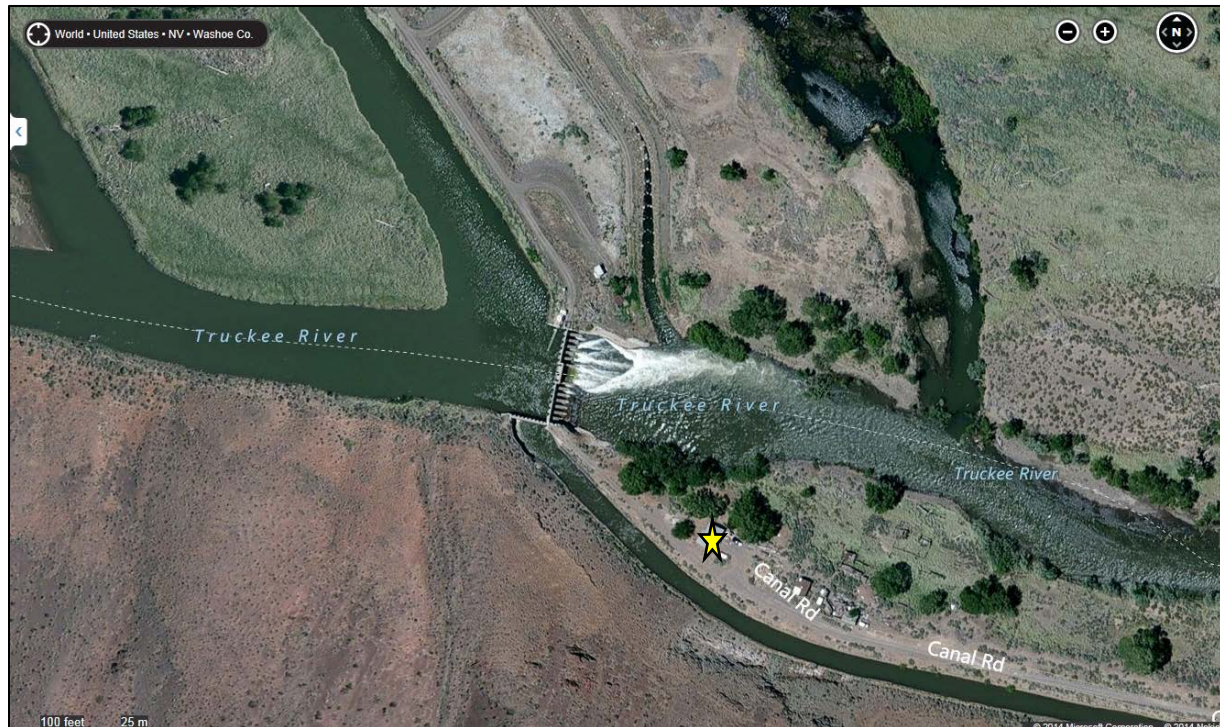


Figure 5. Derby Diversion Dam tender house site (★) between the Truckee River and Truckee Canal, Storey County, Nevada.

1.3 Need for the Proposal

The purpose of the proposed action is to demolish and remove the two dam tender houses and all of their associated structures. In February 2014, the District sent a letter to Reclamation stating that the District no longer requires use of the Carson and Derby Houses and associated structures for operations and maintenance associated with the Newlands Project (R. Jardine, District, *in litt.* 2014). Subsequently, Reclamation determined that they were also no longer needed for other Project purposes. Given their remote locations and unoccupied status, these structures are an attractive nuisance to draw in vandals and vagrants. There is also risk to the health and safety of District and Reclamation employees from the scattered debris on the two properties. Health and safety risks will increase as structural conditions deteriorate. Intruders may also attempt to enter these buildings in the future. Beyond the physical hazards (*e.g.*, rotted wood, nails, broken glass, etc.) inside old structures, there will be increasing potential for rodent infestations that may expose humans to diseases (*e.g.*, Hantavirus Pulmonary Syndrome). The District has installed

remotely operated (internet accessible) cameras at both sites to address security concerns. Implementation of the Proposed Action, in accordance with the District's request, would permanently eliminate future, long-term safety and security issues, as well as maintenance requirements.

1.4 Relevant Statutes, Regulations, and Permits

In addition to the National Environmental Protection Act (NEPA), Reclamation actions are guided by a number of statutes, regulations, permits, and agreements including, but not limited to:

- Reclamation Act
- Endangered Species Act (ESA)
- Migratory Bird Treaty Act
- Clean Water Act (Section 401, Water Quality Certification; Section 402, National Pollutant Discharge Elimination System; Section 404, Nationwide or Individual Permits)
- National Historic Preservation Act (NHPA; Sections 106, 110, and 111)
- State of Nevada Surface Area Disturbance Permit (Nevada Administrative Code 445B.22037, Emission of Particulate Matter: Fugitive Dust)
- Comprehensive Environmental Response Cleanup and Liability Act (CERCLA)
- Other pertinent state, local, or county regulations

2.0 PROPOSED ACTION AND ALTERNATIVES

2.1 No Action Alternative

Under the No Action Alternative, Reclamation would not demolish or remove the two houses, associated buildings, or other existing property infrastructure. Both acquired properties would also remain under Reclamation ownership. The District and Reclamation would continue to access the structures on an as needed or emergency basis. The houses would remain unoccupied, and the District would continue to provide basic maintenance and security of these Project facilities under their Reclamation contract. This would include restricting public access to the houses and buildings (*e.g.*, windows boarded up), as well as monitoring site security via remote cameras. However, the hazards to human health and safety would continue to exist and would likely worsen over time due to the increasing overall age of the structures, lack of human occupancy and regular use, and harsh desert climate conditions. The No Action Alternative is included in this Environmental Assessment (EA) to provide a basis for comparison of the effects of the Proposed Action and evaluating potential future conditions.

2.2 Proposed Action

The proposed action is to hire a contractor to complete the demolition, removal, and disposal of the dam tender houses and all outbuildings (garages, corrals, sheds), including all foundations and concrete slabs; interior (non-boundary) fencing and gates; and electrical service poles and wiring. Essentially all improvements associated with the dam tender houses on the acquired parcels would be removed, including any buried utility lines or tanks (*e.g.*, domestic water,

electric, sewer/septic, natural gas, propane), which would be removed in conformance with applicable local building codes. Disturbed bare ground (*e.g.*, utility excavation sites) would be graded or filled to match the surrounding topography contours and/or maintain natural runoff drainage patterns, as necessary. All compacted disturbed ground would be lightly scarified to facilitate natural plant successional processes. However, revegetation (*e.g.*, seeding, planting) is not included in the Proposed Action. Site cleanup would include removal of all accumulated trash and debris. Materials removed would be disposed of at permitted landfills and appropriate recycling facilities. Some portion of the perimeter fencing around the sites may need to be removed to enable heavy equipment access, but it would be replaced upon project completion to continue to limit access by unauthorized individuals. The existing access roads at both sites would remain in place to provide continued District and Reclamation vehicle access to the diversion dams.

The types of heavy equipment, tools, and vehicles that are commonly used for demolition and removal of houses and small buildings include a backhoe or excavator with hydraulic thumb to break down structures, a small mobile crane to lift and load materials, a portable or vehicle-mounted hydraulic hammer to break up concrete, a front end loader to scoop up debris and load it for transport off site, commercial capacity dumpsters (*e.g.*, 40 yards), a dump truck to haul debris, a bulldozer to break down structures and/or grade and fill disturbed ground, a drill rig with auger to construct fencing, a water tender truck with hoses to control dust, a diesel fuel and hydraulic fluids truck to refuel and maintain heavy equipment, pickup trucks to transport personnel, a semi tractor with low-boy trailer to transport heavy equipment to and from the project sites, and miscellaneous hand tools. The hired contractor may elect to use any or all of the above types of equipment, tools, and vehicles at one or both of the sites under the Proposed Action.

2.3 Alternatives Considered but Dropped from Further Analysis

Reclamation internally assessed the merits of putting one or both of the dam tender houses up for sale for removal off site. Due to potential presence of asbestos and/or lead paint and associated Reclamation obligations under CERCLA, and the likely difficulty and significant expense for buyers in relocating the houses from these sites, Reclamation determined that selling either of the dam tender houses was not feasible. Reclamation also determined that allowing local firefighting agencies to utilize either or both dam tender houses for structural protection crew training was not feasible due to CERCLA obligations, as well as the potential for an escaped wildfire under the current multi-year drought and elevated fire danger conditions in western Nevada.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

The affected environment is the existing environmental condition and trend of the sites for the Proposed Action and surrounding areas. This includes the two parcels of Reclamation-acquired land occupied by the dam tender houses and associated structures. The surrounding areas are combined with their respective site to form the Resource Study Areas (RSAs) for purposes of this EA. These RSAs are the areas of analysis for each resource that may be directly or indirectly affected by the Proposed Action or No Action Alternative. The two RSAs include

lands within an approximate 1-mile (mi) radius of the dam tender houses. The impact analyses include identifying the context and intensity of any direct, indirect, or cumulative effects (e.g., environmental consequences). The following resources were considered but not analyzed in this EA because they are not present or not affected by the Proposed Action and No Action Alternative: Economics, hydrology and water resources, climate, fisheries, geology, mineral resources, recreation, land use, transportation, Indian Trust Assets, Indian sacred sites, and energy.

3.1 Environmental Consequences

3.1.1 No Action Alternative

There would be no effects and no changes from current conditions or changes in condition trends from the No Action Alternative to any of the resources analyzed in this EA.

3.1.2 Proposed Action

3.1.2.1 Wildlife and Special Status Species

Publically available wildlife distribution information was reviewed for the western Great Basin and for the RSAs. The western Great Basin is a relatively cold, high-elevation desert. Upland Great Basin vegetation communities are often low in plant and animal species diversity relative to other North American deserts. However, perennial streams flowing into the Great Basin from the Sierra Nevada, such as the Carson and Truckee Rivers, provide natural riparian habitats with enhanced local plant and animal species diversity. River flows also support irrigated agriculture in the floodplains, which may geographically expand habitat use corridors for certain wildlife species.

Special status species addressed in this section include those that are federally listed as threatened or endangered under the ESA, species that are proposed or candidates for ESA listing, and species listed as endangered, threatened, or sensitive by the State of Nevada. Online data on special status species from the Nevada Natural Heritage Program (NNHP) were reviewed for Churchill and Storey Counties (NNHP 2014), and online lists of trust resources were also obtained from the U.S. Fish and Wildlife Service (USFWS) for the RSAs (USFWS 2014a, 2014b).

Special status species that are reported to occur in Churchill County (NNHP 2014, USFWS 2014a) and which may utilize habitats present in the Carson House RSA include:

- Spotted Bat (*Euderma maculatum*) – Nevada Threatened Mammal
- Pallid Bat (*Antrozous pallidus*) – Nevada Protected Mammal
- Fringed Myotis (*Myotis thysanodes*) – Nevada Protected Mammal
- Mexican Free-tailed Bat (*Tadarida brasiliensis*) – Nevada Protected Mammal
- Townsend's Big-eared Bat (*Corynorhinus townsendii*) – Nevada Sensitive Mammal
- Western Red Bat (*Lasiurus blossevillei*) – Nevada Sensitive Mammal
- Pale Kangaroo Mouse (*Microdipodops pallidus*) – Nevada Sensitive Mammal

- Northern Leopard Frog (*Lithobates pipiens*) – Nevada Protected Amphibian
- Yellow-billed Cuckoo (*Coccyzus americanus*) – ESA Candidate, proposed as threatened; Nevada Sensitive Bird
- Greater Sage-grouse (*Centrocercus urophasianus*) – ESA Candidate
- Bald Eagle (*Haliaeetus leucocephalus*) – Nevada Endangered Bird
- Brewer's Sparrow (*Spizella breweri*) – Nevada Sensitive Bird
- Sand (a.k.a. sagebrush) cholla (*Grusonia pulchella*) – Nevada Protected Cactus

Special status species that are reported to occur in Storey County (NNHP 2014, USFWS 2014b) and which may utilize habitats present in the Derby House RSA include:

- Spotted Bat (*Euderma maculatum*) – Nevada Threatened Mammal
- Fringed Myotis (*Myotis thysanodes*) – Nevada Protected Mammal
- Mexican Free-tailed Bat (*Tadarida brasiliensis*) – Nevada Protected Mammal
- Townsend's Big-eared Bat (*Corynorhinus townsendii*) – Nevada Sensitive Mammal
- Dark Kangaroo Mouse (*Microdipodops megacephalus*) – Nevada Sensitive Mammal
- Northern Leopard Frog (*Lithobates pipiens*) – Nevada Protected Amphibian
- Cui-ui (*Chasmistes cujus*) – ESA Endangered
- Lahontan Cutthroat Trout (LCT; *Oncorhynchus clarkii henshawi*) – ESA Threatened
- Greater Sage-grouse (*Centrocercus urophasianus*) – ESA Candidate
- Bald Eagle (*Haliaeetus leucocephalus*) – Nevada Endangered Bird
- Brewer's Sparrow (*Spizella breweri*) – Nevada Sensitive Bird
- Sand (a.k.a. sagebrush) cholla (*Grusonia pulchella*) – Nevada Protected Cactus

Special status species habitat descriptions were reviewed (Quattrini and Pitkin 2010; Nevada Department of Wildlife 2012; NNHP 2001, 2014; USFWS 1992, 2009, 2013a, 2013b), with a focus on specific habitat types known or potentially present within the sites and associated RSAs. Abbreviated habitat utilization descriptions are provided below only for special status species with State and/or Federal endangered, threatened, candidate or protected designations:

- Spotted bats infrequently roost on or in buildings, with foraging occurring over riparian vegetation and meadows, and along forest edges.
- Pallid bats utilize riparian habitats and mixed woodlands for foraging, roost in buildings, and often occur near rocky outcrops and water.
- Fringed myotis roost in trees and buildings and forage within vegetated areas.
- Mexican free-tailed bats will roost in buildings and dead trees; foraging areas include riparian habitats, agricultural fields, and orchards.
- Northern leopard frogs require permanent water with emergent aquatic vegetation, such as along streams, canals, and reservoirs; they also use floodplains and seasonally frequent wet meadows and fields.
- Yellow-billed cuckoos require unfragmented riparian areas with dense, 25-acre stands of mature cottonwood (*Populus* spp.) and willow (*Salix* spp.) trees for both nesting and foraging.
- Greater sage-grouse use shrub steppe habitats and require sagebrush. Areas of bare soil, short grass steppe, windswept ridges, exposed knolls, or other relatively open sites

provide sage-grouse breeding sites (leks); nesting areas have sagebrush with an understory of native grasses and forbs.

- Cui-ui occupy the littoral zone (60–100 feet deep) of Pyramid Lake year round and seasonally migrate up the Truckee River to spawn.
- LCT occupy Pyramid Lake and the Truckee River all year. LCT are obligatory stream spawners, so lacustrine LCT from Pyramid Lake seasonally utilize the Truckee River and tributaries as spawning habitat, similar to resident fluvial LCT.
- Bald eagles nest in trees or on cliffs near water bodies; thick cottonwood groves are used as roost sites.
- Sand cholla occupy areas of loose, sandy (dunes) or gravelly/rocky soils on valley floors and on gently sloping alluvial fans in shadscale (*Atriplex confertifolia*), mixed shrub, big sagebrush (*A. tridentata*), and lower pinyon-juniper zones. They often grow under native shrubs.

No special status species were observed on the sites or within the RSAs during Reclamation visits. Special status bat species may forage or roost temporarily within the RSAs, but there are no known roosts. Similarly, special status songbirds, raptors, sage-grouse, and mice may occur within the RSAs (*e.g.*, foraging, raptor roosting), but there are no known observations or known nests/leks/burrows within the sites. Habitat for the northern leopard frog and waterfowl may be present immediately adjacent to the Carson House site in the Carson River channel and also seasonally in the T-Line and V-Line Canals. However, frogs would not be expected to occur in the dry habitats associated with the active work areas surrounding the dam tender houses except during rainy periods that facilitate cross-country movements. Yellow-billed cuckoos may temporarily utilize the Carson River riparian area for foraging when migrating to known occurrence locations upstream of Lahontan Reservoir (USFWS 2013a). Cui-ui and LCT from Pyramid Lake are not currently known to migrate upstream as far as Derby Dam on the Truckee River during their spawning runs. Derby Dam has a fish passage facility, but it has not been routinely operated during a cui-ui spawning run to date. Therefore, there is no potential for cui-ui to be present in the unscreened Truckee Canal. LCT are periodically stocked by Federal and State agencies at various locations in the Truckee River, most often miles upstream of Derby Dam. There is a possibility of LCT occurring in the Truckee River downstream of Derby Dam, as well as a more remote possibility of LCT presence in the unscreened Truckee Canal.

During the demolition and removal of the houses and their associated structures, local avian and terrestrial wildlife present within the sites and RSAs may be displaced by noise, physical disturbance, and human presence. Displacement of wildlife within the RSAs would be temporary, with the level of effect depending on their distance from the sites (*e.g.*, active work zones) and access roads. Permanent displacement of wildlife, most likely bats, could result from the removal of any structures currently used. Other permanent or temporary wildlife displacement could occur if the contractor must remove or trim existing vegetation to access structures. The active work zones of both sites are upland riparian habitats. No work would occur within natural aquatic habitats or Project canals, so there would be no direct effects to aquatic species. Indirect effects that could occur later may include minor sediment runoff from exposed disturbed ground at the Derby House site during a significant precipitation event, but it would be unlikely to reach the Truckee River due to the intervening belt of riparian vegetation.

The Carson House site sits in a low flat area sheltered by vegetation, which is unlikely to experience sediment runoff.

3.1.2.2 Floodplains and Wetlands

Wetlands are “lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water” (Cowardin *et al.* 1979). A floodplain is a “flat expanse of land bordering an old river....Often the floodplain may take the form of a very level plain occupied by the present stream channel, and it may never, or only occasionally, be flooded...” (Reid and Wood 1976, as cited in Cowardin *et al.* 1979). Wetlands, deepwater habitats (permanently flooded lands), and floodplains are critical for a wide variety of resident and migratory wildlife and fish species.

The Carson House is located approximately 150 feet from the lower Carson River. The Derby House is located within 150 feet of the lower Truckee River. Neither site has been identified to have wetland habitat based on a review of National Wetlands Inventory data (USFWS 2014c). The sites do not support predominantly hydrophytic vegetation associated with wetlands. In addition, none of the primary soils present within the two sites are undrained hydric soils typically associated with wetlands. Soils at the Carson House site consist of primarily Carwalker sand with lesser amounts of saline dia loam (Natural Resources Conservation Service (NRCS) 2014). Carwalker sand is associated with floodplains, occasionally flooded, and moderately well drained (NRCS 2014). Saline dia loam is associated with stream terraces, rarely flooded, and somewhat poorly drained (NRCS 2014). Soils at the Derby House site consist of primarily Carwalker sandy loam with some Perazzo very stony sandy loam (NRCS 2014). Carwalker sandy loam is associated with floodplains, occasionally flooded, and moderately well drained (NRCS 2014). Perazzo very stony sandy loam is associated with alluvial fans, never flooded, and well drained (NRCS 2014). The RSA for the Derby House site does contain small amounts of Introduced Riparian and Wetland Vegetation and North American Arid West Emergent Marsh cover types (U.S. Geological Survey (USGS) 2011).

There would be no adverse impacts to wetlands or floodplains, including groundwater or surface water resources, from the Proposed Action unless there was a petroleum product spill. The contractor would have a spill prevention and containment plan in place for any petroleum products used on the sites. Reclamation Safety and Health Standards would be followed during demolition and removal of all structures (Reclamation 2014a). The activities at both sites would have small areal footprints and ground depth impacts, and would avoid all natural and anthropogenic surface water resources that could potentially be associated with wetland vegetation. Floodplain habitats at both sites would experience minor benefits from the Proposed Action through small reductions in impermeable surfaces due to the removal of the structures.

3.1.2.3 Air Quality and Noise

The Nevada Division of Environmental Protection (NDEP) collects data through an ambient air quality monitoring network. The closest monitoring station to the Carson House site is in Fallon, Nevada; the closest station for the Derby House is in Fernley, Nevada. Currently, only active monitoring of ground-level ozone is occurring at the Fallon and Fernley monitoring sites (NDEP

2014). Based on current real-time data from these stations, air quality at the dam tender house sites is rated as good (NDEP 2014). From 2000 to 2010, monitored pollutants included ground-level ozone and particulate matter ≤ 10 micrometers in diameter (PM_{10}) at both Fallon and Fernley, with the addition of particulate matter ≤ 2.5 micrometers in diameter ($PM_{2.5}$) at Fernley (NDEP 2010). None of these pollutants exceeded national ambient air quality standards during that 10-year period, and ambient concentrations of $PM_{2.5}$ actually decreased in Fernley during that period (NDEP 2010). In addition, Churchill and Storey Counties are not designated as air quality nonattainment areas by the U.S. Environmental Protection Agency (EPA) (EPA 2014). Under the Proposed Action, there may be localized increases in fugitive dust emissions during demolition and removal activities at both sites. However, these dust emissions would primarily be short-term and temporary. The contractor would be required to use a water truck to control blowing dust on site during demolition and removal activities. Slight longer-term increases in dust emissions may occur under the Proposed Action during windy periods until exposed and scarified soils are revegetated through natural vegetation succession. However, much of the ground surface at both sites is either gravel, packed dirt, or has remnant sod cover.

Due to the rural locations of the sites, there are relatively few human-caused generators of noise within the RSAs. For the Carson House site, noise sources include human activity at distant rural residences, vehicle traffic on nearby dirt roads, seasonal operation of agricultural machinery, and District or Reclamation activities at the Carson River Diversion Dam or on the V-Line and T-Line Canals. Vehicular traffic on I-80 and train traffic on the Union Pacific Railroad tracks, as well as District or Reclamation activities at Derby Diversion Dam or on the Truckee Canal are the greatest causes of noise around the Derby House site. Under the Proposed Action, there would be localized increases in ambient noise levels during demolition and removal activities. However, these increases will be short-term and temporary. The sound of flowing water from the diversion dam gates may mask some of these noise increases depending on the timing of Proposed Action implementation and proximity to the dams.

3.1.2.4 Vegetation

Available vegetation data from public sources were reviewed for the sites and RSAs. Site visits were also conducted by Reclamation, which included nearby reaches of the Carson and Truckee Rivers. Data on special status plant species from NNHP (2014) were reviewed for Churchill and Storey Counties. Similarly, data on trust resource plant species from USFWS (2014a, 2014b) were reviewed for the RSAs.

One special status plant has been recorded in Churchill and Storey Counties — the sand (a.k.a. sagebrush) cholla (*Grusonia pulchella*) (NNHP 2014). The sand cholla is protected in Nevada as a cactus (Nevada Revised Statute 527.060–.120; NNHP 2010). No sand cholla individuals were observed at the two sites during Reclamation visits, and habitat conditions do not appear suitable within the Carson or Derby House sites (see 3.1.2.1 *Wildlife and Special Status Species*).

The Carson House site supports a number of large trees including native cottonwoods, a few conifers (*Pinus* spp.), and mature fruit trees (pear, *Pyrus* spp.; red mulberry, *Morus rubra*), as well as many smaller trees and shrubs such as nonnative Russian olive (*Elaeagnus angustifolia*). The vegetation on site has been subjected to heavy human disturbance for over 100 years. The

USGS's Gap Analysis Program has mapped land cover vegetation types for the United States (USGS 2011). The land cover types for the Carson House site have been mapped as Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland with some Cultivated Cropland (USGS 2011). The surrounding RSA contains Inter-Mountain Basins Mixed Salt Desert Scrub, Cultivated Cropland, Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland, Open Water (fresh), Introduced Riparian and Wetland Vegetation, North American Arid West Emergent Marsh, and Inter-Mountain Basins Greasewood Flat cover types, in decreasing order of abundance (USGS 2011).

The Derby House site also supports a number of large trees and shrubs including native cottonwoods and willow, as well as smaller native shrubs such as sagebrush (*Artemisia* spp.) and rabbitbrush (*Chrysothamnus* spp.). The site vegetation has been subjected to heavy human disturbance for decades. The land cover types for the site have been mapped as Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland with Inter-Mountain Basins Montane Sagebrush Steppe (USGS 2011). The surrounding RSA contains Inter-Mountain Basins Montane Sagebrush Steppe, Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland, Introduced Upland Vegetation – Perennial Grassland and Forbland, Inter-Mountain Basins Mixed Salt Desert Scrub, Great Basin Pinyon-Juniper Woodland, and Open Water (Fresh) cover types, in decreasing order of abundance (USGS 2011).

The demolition and removal of structures may impact the vegetation immediately surrounding them from falling debris, crushing by vehicles, damage from heavy equipment, or intentional removal or trimming where needed for access. Most impacts, except for potential mature tree or shrub removal, would be minor; and trimmed or damaged vegetation (tree branches, ornamental shrubs) would be expected to recover or grow back over the long-term. No revegetation plan would be developed or implemented under the Proposed Action. Weed management on the sites would continue to be implemented by the District under Reclamation contract.

3.1.2.5 Soil Resources

Soil resource data were obtained from the NRCS's online Soil Survey Geographic Database (NRCS 2014); specifically, the survey of the Fallon-Fernley area, and parts of Churchill, Lyon, Storey, and Washoe Counties, Nevada (NV603). Soils at the Carson House site consist of primarily Carwalker sand with lesser amounts of saline Dia loam. Soils at the Derby House site consist of primarily Carwalker sandy loam with some Perazzo very stony sandy loam. Soil map units identified at each site are assessed for their susceptibility to both water and wind erosion below. Please see also 3.1.2.2 *Floodplains and Wetlands* for additional soil characteristics.

Susceptibility to water erosion at each project site was assessed based on the K-factor of the whole soil for each soil map unit. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used by the NRCS in the Universal and Revised Universal Soil Loss Equation to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentages of silt, sand and organic matter, and on soil structure and saturated hydraulic conductivity. The estimates are modified by the presence of rock fragments. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the K value, the more susceptible the soil is to sheet and rill

erosion by water. For the purposes of this EA, soils with a K value less than 0.20 have a low susceptibility to water erosion and those between 0.20 and 0.40 have a moderate susceptibility.

Susceptibility to wind erosion at each project site was assessed based on NRCS Wind Erodibility Groups (WEG) for each soil map unit. A WEG consists of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to Group 1 are the most susceptible to wind erosion, and those assigned to Group 8 are the least susceptible. Soils that are almost pure sand or silt with little to no binding agents (such as clay or organic material) are most susceptible to wind erosion; whereas rock outcrops or areas covered in a rock armor, such as desert pavement, are not as susceptible to wind erosion.

Table 2. Natural Resources Conservation Service Web Soil Survey data^a for the Carson River and Derby Diversion Dam tender house sites, Nevada.

Soil Map Unit	Unit Percent Area	K Factor	Wind Erodibility Group
Carson River Diversion Dam Tender House			
Carwalker sand, 0 to 2 percent slopes	71	0.05	6
Dia loam, saline, rarely flooded, 0 to 1 percent slopes	29	0.37	6
Derby Diversion Dam Tender House			
Carwalker sandy loam, occasionally flooded	53	0.17	3
Perazzo very stony sandy loam, 4 to 15 percent slopes	47	0.10	6

^a Fallon-Fernley Area, Nevada, Parts of Churchill, Lyon, Storey, and Washoe Counties (NV603); from NRCS (2014).

3.1.2.6 Cultural Resources

Cultural resources are defined as prehistoric and historic sites, buildings, structures, objects, districts, cultural landscapes, sacred sites, and traditional cultural properties. Cultural resources include both archaeological sites depicting evidence of past human use of the landscape and the built environment represented in structures such as dams, canals, and buildings. Within the broad range of cultural resources are those that have recognized significance, which are called historic properties. The National Historic Preservation Act (NHPA) of 1966 (54 U.S.C. § 300101 *et seq.*), as amended, is a primary legislation that defines the Federal government's responsibility to cultural resources. Section 106 of the NHPA requires that Federal agencies take into consideration the effects of their undertakings on historic properties. Under Section 106 of the NHPA, historic properties are defined as cultural resources that are listed on or eligible for inclusion in the National Register of Historic Places (National Register). The 36 CFR Part 800 regulations implement Section 106 of the NHPA and outline the procedures necessary for compliance with the NHPA. Section 111 of the NHPA requires Federal agencies, where

practicable, to establish and implement alternative uses for historic buildings or structures it owns but no longer needs for current or projected Reclamation purposes.

To identify cultural resources and to evaluate those resources for eligibility for listing on the National Register, Reclamation conducted archival and record searches and a pedestrian survey of the area of potential effects (Reclamation 2014b). Reclamation also requested information from Indian tribes regarding resources of cultural or religious significance. Both the Carson River Diversion Dam and Derby Diversion Dam dam-tender residential complexes are the only cultural resources identified in the direct area of potential effects. Other components of the Newlands Project, including Carson River Diversion Dam, Derby Diversion Dam, Truckee Canal, and T-Line Canal, and a segment of the California Emigrant Trail (Carson River Route) are in the vicinity of the direct area of potential effects. No prehistoric cultural resources were identified in the action area.

Portions of the Newlands Project were listed in the National Register on March 25, 1981, as “Newlands Reclamation Thematic Resources,” under the theme of conservation (U.S. Department of the Interior 1981). The Newlands Project, started in 1903, was among the first projects constructed as a result of National legislation passed to reclaim the arid lands of the west for agricultural uses. Hardesty and Buhr (2001) present a background on the history of the Newlands Project and its National Register eligibility. Pfaff (2002) expands on the Hardesty and Buhr (2001) report and includes a more detailed historic context. The Newlands Project as a whole has yet to be formally determined eligible for listing on the National Register, although, Reclamation has been treating portions of the Newlands Project as eligible on a project-by-project basis, based on the Hardesty and Buhr (2001) and Pfaff (2002) recommendations. Reclamation is currently consulting with the Nevada State Historic Preservation Officer (SHPO) on an approach to identify and document the Newlands Project as a historic district.

The historic context and property types developed by Pfaff (2002) present a valid discussion for the eligibility of the Newlands Project under Criterion A, as defined in 36 CFR § 60.4, because of its association with events that have made a significant contribution to the broad patterns of history. Pfaff’s (2002) context states that:

“The Newlands Project first and foremost marks the beginning of direct Federal involvement in promoting settlement of the arid American West through the development of irrigated agriculture. With passage of the Reclamation Act of 1902, the Federal government assumed a major role in designing and constructing large-scale irrigation projects throughout the West. As one of the first five projects authorized and built under the Reclamation Act, the Newlands Project (originally known as the Truckee-Carson Project) has achieved national significance. A network of water storage, diversion, and conveyance structures provides water for irrigating about 73,000 acres of farmland in an area that receives less than 4.5 inches of annual precipitation; additionally, the project generates hydroelectric power and controls flooding.”

Therefore, Reclamation considers the Newlands Project as eligible for listing in the National Register under Criterion A with the themes of reclamation, irrigation, and the development of agriculture in the State of Nevada.

The two dam tender complexes were evaluated for listing on the National Register and determined to be ineligible as individual properties but determined to be contributing components to the Newlands Project, under the property type of Ongoing Support Features (as defined in Pfaff (2002)). Ongoing Support Features are defined as structures constructed for operation and maintenance of the Newlands Project and includes such structures as project offices, service yards, and dam tenders' and ditchriders' housing. Disposing of both dam tender complexes, combined with previous disposals of Newlands Project ditchrider houses, will result in very few remaining Newlands Projects Ongoing Support Features. This was found to be an adverse effect to the Newlands Project under 36 CFR § 800.5(a), as the proposed action will result in the physical destruction of or damage to part of the historic property. No significant effects were found on the other Newlands Project features or on the Emigrant Trail situated outside the direct area of potential effects as visual changes to the historic setting will be minimal. The adverse effect will be resolved under Section 106 of the NHPA through documentation of the complexes, additional archival research, and public education, through continued consultations with the SHPO. As a result, the proposed action will have no significant impact on historic properties.

Reclamation considered the location and conditions of the buildings in determining alternative uses other than demolition and disposal. Both houses are located in remote locations and next to dams. Reclamation will retain ownership of the property because of their proximity to dams, and for security reasons, public or private use of the land is not desirable. The buildings are in poor condition. Reclamation determined that no additional alternative uses are feasible for these buildings, in consideration of Section 111 of the NHPA.

3.1.2.7 Environmental Justice

Executive Order No. 12898, Environmental Justice, is intended "to promote nondiscrimination in Federal programs substantially affecting human health and the environment, and to provide minority and low-income communities' access to public information on, and an opportunity for participation in, matters relating to human health and the environment." It requires each federal agency to achieve environmental justice as part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects, including social and economic effects, of its programs, policies, and activities on minority and low-income populations. EPA guidelines for evaluating potential adverse environmental effects of projects require specific identification of minority populations when a minority population either exceeds 50 percent of the population of the affected area or represents a meaningfully greater increment of the affected population than of the population of some other appropriate geographic unit. The race, ethnicity, and poverty data reported in this section were acquired from the U.S. Census Bureau's American Community Survey (U.S. Census Bureau 2014) and represent data collected between 2008 and 2012. The poverty level was based on the Office of the Assistant Secretary for Planning and Evaluation's 2014 Poverty Guidelines.

The closest population to the Carson House site includes residences along Pioneer Way, with the closest single residence located across the Carson River and the V-Line Canal approximately 0.25 mi to the south-southeast and another single residence located to the northeast within approximately 0.33 mi; a series of residences also starts approximately 0.37 mi to the northwest

along the California Emigrant Trail and the Old Carson Highway (now U.S. 50). The Carson House is located in Census Tract 9507 within Churchill County, which includes 23.4 percent of the County's estimated total population of 24,353 (Table 3; U.S. Census Bureau 2014). The Carson House site is located in an area with a slightly lower percentage of minorities and slightly higher percentage of households below the poverty level than the rest of Churchill County (Table 3). In comparison with the State of Nevada, the Carson House site has a much lower percentage of minorities and a slightly lower percentage of households below the poverty level (Table 3).

The closest population to the Derby House site includes a string of widely-spaced residences starting approximately 1.25 mi to the east along Canal Road. The Derby House is located on the northern edge of Storey County, which has an estimated 3,967 residents (Table 3; U.S. Census Bureau 2014). Storey County consists of a single Census Tract (9702). The Derby House site is located in an area with a much lower percentage of minorities and a poverty level about half that in the rest of the State of Nevada.

Based on these data, the Proposed Action would not disproportionately affect minority or low-income populations within the community at either dam tender house site. Therefore, environmental justice is not affected by the proposed project.

Table 3. Human population, racial, and poverty demographic estimates (2008–2012) for geographic areas surrounding the Carson River and Derby Diversion Dam tender house sites, Churchill and Storey Counties, Nevada.^a

Nevada Location	Total Population	White Alone and Not Hispanic (%)	Total Racial and Ethnic Minorities (%)	Households Below Poverty Level (%)
Statewide	2,718,565	1,898,761 (69.8)	819,804 (30.2)	446,840 (16.4)
Churchill County (all)	24,353	20,181 (82.9)	4,172 (17.1)	3,198 (13.1)
Churchill County (Census Tract 9507)	5,696	4,950 (86.9)	746 (13.1)	887 (15.6)
Storey County (=Census Tract 9702)	3,967	3,755 (94.7)	212 (5.3)	342 (8.6)

^a From U.S. Census Bureau (2014).

3.1.2.8 Visual Resources

Per Reclamation (2003), the visual resources analysis was based on the Bureau of Land Management's (BLM) Visual Resource Management system (BLM 1986), and it addresses the potential visual effects of the proposed action on landscape scenic quality and key observation points (KOP) or viewing locations. Data were collected adjacent to the dam tender houses and within the RSAs (1-mi radius) utilizing existing land use plans, aerial photography, Reclamation data, and site visits. Following are descriptions of the existing project site settings, scenic quality designations, and KOPs.

Site Settings

Both house sites are located in the Great Basin section of the Basin and Range physiographic province (Fenneman 1931), which is characterized by isolated, roughly parallel mountain ranges that are separated by closed desert basins. Prehistoric Lake Lahontan once filled many of the valleys in western Nevada, including those containing the two RSAs, before drying up after the last ice age.

Although the predominant National Vegetation Classification (NVC) Macrogroups in the larger area surrounding the Carson House are Great Basin Saltbrush Scrub, Cool Semi-Desert Alkali-Saline Wetland and Herbaceous Agricultural Vegetation, the Carson House is located within the narrow riparian zone of the lower Carson River, where vegetation is primarily in the Rocky Mountain and Great Basin Flooded & Swamp Forest Macrogroup (USGS 2011).

The predominant NVC Macrogroup in the larger area surrounding the Derby House is Great Basin & Intermountain Tall Sagebrush Shrubland & Steppe (USGS 2011). However, the Derby House is located primarily within the Rocky Mountain and Great Basin Flooded & Swamp Forest Macrogroup; nearby floodplain areas also contain Great Basin Saltbrush Scrub and Introduced & Semi Natural Vegetation Macrogroups (USGS 2011).

Scenic Quality

Scenic quality is a measure of the aesthetic value of a specific area of land defined by landform, vegetation, water, color, adjacent scenery, scarcity, and cultural modifications. The three scenic quality designation classes available for the dam tender house sites include: A, outstanding; B, above average; and C, common (BLM 1986).

The Carson House property is rated as Class C scenic quality. This site is characterized by flat valley bottom topography, a limited variety of vegetation, non-dominant flowing water features, subtle color variations in substrates and vegetation, moderate visual enhancement from adjacent scenery, regional non-scarcity of on-site scenic features, and with surrounding cultural modifications that include the Carson River Diversion Dam, T-Line and V-Line Canals, multiple unpaved roads (*e.g.*, Diversion Dam Road, Pioneer Way, California Emigrant Trail/Cadet Road), U.S. 50, rural residences, and irrigated agricultural lands. However, Class B landscapes are generally associated with much of the lower Carson River/riparian corridor.

The Derby House property is rated as Class B scenic quality. The site is characterized by flat valley bottom topography, a limited variety of vegetation, dominant flowing water features, subtle color variations in substrates and vegetation, great visual enhancement from adjacent scenery, regional non-scarcity of scenic features, and with surrounding cultural modifications that include the Derby Diversion Dam, Truckee Canal, an unpaved road (Canal Road W), Union Pacific Railroad tracks, and I-80.

Key Observation Points

The KOP inventory for the dam tender house sites included three components: (1) identification of key public viewing locations and visual sensitivity, (2) distance zones, and (3) viewing conditions (*i.e.*, neutral, superior, inferior). The KOPs are inventoried for residential, recreational, and travel route viewers as described below.

Residential

Residential viewers are inventoried as high-sensitivity due to their long-term viewing duration and concern for aesthetics. There are several residences within 0.25–0.37 mi of the Carson House site; however, these residences have totally obstructed views of the Carson House site due to the dense surrounding overstory and understory vegetation, as well as the topography screening created by the Carson River, Carson River Diversion Dam, V-Line Canal, and T-Line Canal. For the Derby House site, the closest residence is approximately 1.25 mi east along Canal Road. The view of the Derby House property from this residence is entirely obstructed by the steep slopes of the foothills on the south side of Canal Road.

Recreation

Instream flows in the lower Carson River are often minimal due to upstream water storage in Lahontan Reservoir and irrigation diversions at the Carson River Diversion Dam, which limits the overall diversity of recreational opportunities. There are no formal public recreation facilities near the Carson House site (*e.g.*, campgrounds, wildlife-viewing areas, picnic areas, boat ramps). The lower Carson River does provide opportunities for low-use level public recreational activities such as wildlife observation. Participants would experience only short-term Carson House property viewing durations of an inferior nature. Views from the Carson River bank are partially to fully screened due to vegetation and topography.

The lower Truckee River also provides opportunities for low-use level public recreational activities such as fishing, wildlife observation, and rafting (during high water years). There are no formal public recreation facilities near the Derby House site, and such activities typically would provide participants with only short-term site viewing durations. As these activities also commonly occur at or near the river surface and/or bank elevations, only inferior views are provided of the property uplands where the one-story house and majority of the structures sit. Views would be partially screened due to the topography and the intervening riparian overstory and understory vegetation.

Travel Routes

For the Carson House site, the closest travel route is Diversion Dam Road (KOP 1), running adjacent to the east side of the site for approximately 550 feet. The viewing duration for travelers on this route is anticipated to be short (less than 5 minutes), even when considering the anticipated slow vehicle speeds (25 mi/hour or less) on this short, straight segment of unpaved road with its sharp curves approaching the site from either direction. Views of the Carson House and structures for travelers on Diversion Dam Road are also screened in both directions by overstory and understory vegetation and somewhat obstructed by topography because the structures sit at a lower elevation than the road surface. The Carson Route of the California Trail is located approximately 0.25 mi to the northeast of the Carson House site. This unpaved emigrant travel route would typically be inventoried as a high-sensitivity viewing location and KOP because of its National Historic Trail designation. However, views of the Carson House property and structures for travelers in both directions are screened by overstory and understory vegetation and obstructed by topography (T-Line Canal embankments).

The closest travel route to the Derby House site is Canal Road, which terminates at the eastern site boundary. An approximately 0.5-mi long segment of this unpaved road represents an

intermittent viewing location (partial vegetation screening) for west-bound travelers before they have to turn around. However, other than Reclamation and District staff, this road segment receives little traffic and is considered a low-sensitivity viewing location. I-80 is a major national travel route located approximately 0.28 mi to the north across the Truckee River from the Derby House site. East-bound and west-bound travelers on I-80 would have obstructed views (vegetation screening) of the Derby House site. The viewing duration for travelers is anticipated to be short due to the high speed limit on this reach of I-80 (65 mi/hour). The Union Pacific Railroad tracks run parallel to I-80 and are situated similarly in relation to the Derby House site as I-80 but slightly closer. These tracks carry daily Amtrak passenger trains (California Zephyr route), in addition to substantial commercial rail traffic. Railroad passengers would experience similar site viewing conditions to those discussed above for vehicles on I-80.

3.1.2.9 Hazardous Materials

The District has previously removed known hazardous materials (*e.g.*, leftover household chemicals) from the Carson and Derby Houses and outbuildings (R. Jardine, District, *in litt.* 2012). Prior to any demolition activities, Reclamation's Safety and Health Office will survey the two houses, other buildings, and surrounding properties to determine if any hazardous materials remain. If such materials are identified, Reclamation will arrange for their safe removal and disposal.

Asbestos was banned from use in home construction in the United States in August 1989 (EPA 1989). The dam tender houses were constructed in 1910 (Carson House) and 1982–1983 (Derby House). Therefore, asbestos surveys are required under CERCLA prior to any demolition activities. Asbestos surveys will be performed by a state-licensed inspector. The asbestos standard¹ for the construction industry (29 CFR Part 1926.1101) regulates asbestos exposure for the following activities, among others:

- Demolishing or salvaging structures where asbestos is present.
- Removing or encapsulating asbestos-containing material.
- Constructing, altering, repairing, maintaining, or renovating asbestos-containing structures or substrates.
- Transporting, disposing, storing, containing, and housekeeping involving asbestos or asbestos-containing products on a construction site.

Demolition and removal of all asbestos-related materials from the house sites will be managed through the Nevada Occupational Safety and Health Administration to ensure demolition workers are protected from exposure and to assure Reclamation that such materials are properly disposed of.

¹ The standard does not apply to asbestos contained in asphalt roof coatings, cements, and mastics.

4.0 OTHER NEPA CONSIDERATIONS

4.1 Cumulative Impacts

Cumulative effects would result from the implementation of the Proposed Action combined with the effects of other past and present actions. The majority of actions within the region of influence include linear rights-of-way such as power lines, roads, and canals (Truckee, T-Line, V-Line) and structures such as the Carson River and Derby Diversion Dams. The Proposed Action includes the demolition and removal of the existing dam tender houses and associated structure. The boundary fences and dirt access roads would be the only elements that remain. The majority of impacts would result from the approximately 2 acres of temporary construction disturbance associated with each of the Carson and Derby House sites.

Due to the absence of reasonably foreseeable future actions, the cumulative impacts analysis consists of the incremental impact of the Proposed Action on past and present actions. Cumulative impacts to a historic property resulting from removal of additional contributing components of the Newlands Project will be resolved through mitigation pursuant to 36 CFR § 800.6, implementing regulations for Section 106 of the NHPA. Cumulative visual impacts are related to the removal of existing structures from the landscape, ground disturbance, and sensitive viewers. Cumulative visual impacts from the Proposed Action would be reduced because the vegetation at the two sites would remain mostly intact and continue to blend with the similar vegetation structural composition in the area of influence. Based on the relatively small permanent ground disturbance footprints, the temporary construction activity period, and the use of Best Management Practices, cumulative impacts to wildlife, threatened and endangered species, floodplains and wetlands, air quality and noise, vegetation, soil resources, environmental justice, visual resources, and hazardous materials are expected to be negligible.

4.2 Irreversible and Irretrievable Commitments

Irreversible and irretrievable resource commitments involve the use of nonrenewable resources and the effects of their use on future generations. An irreversible commitment of resources occurs when, once committed an action, the resource would continue to be committed throughout the life of that action. Irreversible effects primarily result from the use, removal, or destruction of specific resources that cannot be replaced within a reasonable time frame, such as energy and minerals. An irretrievable commitment of resources refers to those resources that, once used, consumed, destroyed, or degraded during implementation of an action, would cause the resource to be permanently unavailable for use by future generations. Examples of irretrievable types of resources include nonrenewable resources, such as mineral and cultural resources, as well as renewable resources that would be unavailable for the use of future generations such as extinction of a threatened or endangered species.

Implementation of the proposed action would require the irreversible and irretrievable commitments of fossil fuels (diesel, gasoline, oils, and hydraulic lubricants) used by construction equipment and vehicles. There would be an irretrievable loss of potential habitat for some wildlife species that utilize buildings as habitat, possibly including special status species.

However, this permanent small-scale loss of anthropogenic habitat would not jeopardize the continued existence of any species.

5.0 CONSULTATION AND COORDINATION

This section describes the consultation and coordination activities Reclamation has carried out with interested agencies, organizations, tribes, and individuals for the draft EA. The NEPA and Council on Environmental Quality regulations require the public's involvement in the decision-making process, as well as allow for full environmental disclosure. Scoping letters for the draft EA were mailed to interested parties and tribes. The letters announced the availability of the draft EA and requested comments on the proposed action. Copies of the letters and the mailing list are included as an appendix to this document.

Endangered Species Act

Reclamation has determined that the Proposed Action will have no effect on federally-listed or proposed species, or proposed or designated critical habitat. Thus, ESA Section 7 consultation is not required (USFWS and National Marine Fisheries Service 1998).

Cultural Resources

Reclamation identified three federally-recognized Indian tribes as potentially having knowledge of or concerns with impacts on cultural resources of cultural or religious significance in portions of the project area (Bureau of Indian Affairs 2012). On March 24, 2014, Reclamation notified the Fallon Paiute-Shoshone Tribe, Pyramid Lake Paiute Tribe, and Reno-Sparks Indian Colony of the proposed action and invited their participation in the Section 106 of the NHPA consultation process. On July 28, 2014, the Fallon Paiute-Shoshone Tribe replied, requesting notification if sites of religious or cultural significance are identified in the project location. No other responses or concerns were received.

Reclamation consulted with the SHPO under Section 106 of the NHPA on determinations of eligibility for the dam tender complexes and on a finding of adverse effect for the removal of these two complexes as components of the larger Newlands Project. On November 10, 2014, Reclamation submitted a finding of adverse effect to historic properties and a proposed resolution of the adverse effect to the SHPO. SHPO responded on December 17, 2014, with concurrence on the finding of effect. SHPO also agrees with Reclamation's approach to resolving the adverse effect through the development a Memorandum of Agreement regarding effects on Newlands Project Ongoing Support Features.

6.0 REFERENCES CITED

- Brown, D.E. 1994. Biotic Communities: Southwestern United States and Northwestern Mexico. University of Utah Press, Salt Lake City. 346 pp.
- Bureau of Indian Affairs. 2012. Indian entities recognized and eligible to receive services from the Bureau of Indian Affairs. Federal Register 77:47,868–47,873.
- Bureau of Land Management (BLM). 1986. BLM Manual H 8410-1. Visual Resource Inventory. Release 8–28. January 17, 1986. 28 pp.

- Bureau of Reclamation (Reclamation). 2002. Building and Quarters Inventory Sheets – TCID Carson Diversion Dam Caretaker’s House (Building No. 0029–0014–00), TCID Carson Diversion Dam Garage (Building No. 0029–0014–01), Derby Dam Caretaker’s House (Building No. 0029–0040–00), and Derby Dam Garage/Bunkhouse (Building No. 0029–0040–01). Form MP-1638. April 2002. 4 pp.
- Bureau of Reclamation (Reclamation). 2003. Resource Management Plan Guidebook: Planning for the Future. February 2003. Technical Services Center, Denver, Colorado. 86 pp. + attachments.
- Bureau of Reclamation (Reclamation). 2014a. Reclamation Safety and Health Standards. July 2014. Denver, Colorado. Various pagination.
- Bureau of Reclamation (Reclamation). 2014b. Cultural Resources Report for the Disposal of Two Dam-tender Residential Complexes Newlands Project, Nevada. October 2014. Mid-Pacific Regional Office, Sacramento, California. 70 pp.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service, Office of Biological Services, Washington, D.C. 131 pp.
- Fenneman, N.M. 1931. Physiography of western United States. McGraw-Hill Book Company, New York. 534 pp. + map.
- Hardesty, D.L., and L. Buhr. 2001. Evaluating the National Register eligibility of cultural resources in the Newlands Project, Nevada. Prepared for the U.S. Department of Interior, Bureau of Reclamation, Mid-Pacific Region, Sacramento, California. 43 pp.
- Jardine, R. 2012. Dam site security and risk elimination at Derby and Carson Diversion Dams. Letter dated July 13, 2012, to Kenneth Parr, Bureau of Reclamation, from Truckee-Carson Irrigation District, Fallon, Nevada. 4 pp.
- Jardine, R. 2014. Disposition of dam tender houses. Letter dated February 7, 2014, to Kenneth Parr, Bureau of Reclamation, from Truckee-Carson Irrigation District, Fallon, Nevada. 1 p.
- Natural Resources Conservation Service. 2014. Web soil survey. Accessed online at <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx> on August 25, 2014.
- Nevada Department of Wildlife. 2012. Nevada’s Wildlife Action Plan. Reno, Nevada. 547 pp. + appendices.
- Nevada Division of Environmental Protection (NDEP). 2010. Nevada Air Quality Trend Report 2000–2010. Accessed online at https://ndep.nv.gov/docs_13/air_quality_trend_report_2000-2010.pdf on August 22, 2014.

- Nevada Division of Environmental Protection (NDEP). 2014. Ambient Air Quality Monitoring Program - Near Real Time Monitoring Data. Accessed online at <http://nvair.ndep.nv.gov/> on August 22, 2014.
- Nevada Natural Heritage Program (NNHP). 2001. Rare plant fact sheet for *Opuntia pulchella* Engelm., Sand cholla. Compiled June 25, 2001. Carson City, Nevada. 2 pp.
- Nevada Natural Heritage Program (NNHP). 2010. Animal and plant at-risk tracking list. November 2010. Carson City, Nevada. Accessed online at http://heritage.nv.gov/sites/default/files/other_docs/track.pdf on February 12, 2015. 12 pp.
- Nevada Natural Heritage Program (NNHP). 2014. Species information results for Churchill and Storey Counties, Nevada. Accessed online at http://heritage.nv.gov/species/process_list.php on August 20, 2014.
- Pfaff, C. 2002. Draft Newlands Project Nevada: A Multiple Property Documentation Form. Bureau of Reclamation, Mid-Pacific Region, Sacramento, California. 70 pp.
- Pitkin, M., and L. Quattrini. 2010. Pocket Guide to Sagebrush Birds. Sagebrush Steppe Treatment Evaluation Project, Contribution Number 40. Rocky Mountain Bird Observatory, Brighton, Colorado, and PRBO Conservation Science, Petaluma, California. 68 pp.
- U.S. Census Bureau. 2010 Census. Accessed online at <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t> on August 27, 2014.
- U.S. Census Bureau. 2014. S1701 Poverty Status in the Past 12 Months. 2008–2012 American Community Survey 5-Year Estimates. Accessed online at http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_12_5YR_S1701&prodType=table on August 28, 2014.
- U.S. Department of the Interior. 1981. National Register of Historic Places Inventory-Nomination Form. Newlands Reclamation Thematic Resources. National Park Service, Washington D.C. 13 pp.
- U.S. Environmental Protection Agency (EPA). 1989. Asbestos: Manufacture, Importation, Processing, and Distribution in Commerce Prohibition; Final Rule. Federal Register 54:29,461–29,513.
- U.S. Environmental Protection Agency (EPA). 2014. Current nonattainment counties for all criteria pollutants (as of July 2, 2014). Accessed online at <http://www.epa.gov/oaqps001/greenbk/ancl.html> on August 22, 2014.
- U.S. Fish and Wildlife Service (USFWS). 1992. Cui-ui (*Chasmistes cujus*) Recovery Plan. Second Revision. Region 1, Portland, Oregon. 47 pp.

- U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service. 1998. Endangered Species Act Consultation Handbook: Procedures for Conducting Section 7 Consultations and Conferences. March 1998. Various pagination.
- U.S. Fish and Wildlife Service (USFWS). 2009. Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*) 5-Year Review: Summary and Evaluation. Nevada Fish and Wildlife Office, Reno, Nevada. 199 pp.
- U.S. Fish and Wildlife Service (USFWS). 2013a. Proposed threatened status for the western distinct population segment of the yellow-billed cuckoo (*Coccyzus americanus*). October 3, 2013. Federal Register 78:61,621–61,666.
- U.S. Fish and Wildlife Service (USFWS). 2013b. Greater sage-grouse Species Assessment and Listing Priority Assignment Form. April 24, 2013. Wyoming Field Office, Cheyenne. 157 pp.
- U.S. Fish and Wildlife Service (USFWS). 2014a. Trust resources list for Carson River Diversion Dam tender house. Accessed online at <http://ecos.fws.gov/ipac/wizard/chooseLocation!prepare.action/> on August 20, 2014.
- U.S. Fish and Wildlife Service (USFWS). 2014b. Trust resources list for Derby Diversion Dam tender house. Accessed online at <http://ecos.fws.gov/ipac/wizard/chooseLocation!prepare.action/> on August 20, 2014.
- U.S. Fish and Wildlife Service (USFWS). 2014c. National Wetlands Inventory. Wetlands Mapper. Accessed online at <http://www.fws.gov/wetlands/Data/Mapper.html> on September 5, 2014.
- U.S. Geological Survey. 2011. Gap Analysis Program (GAP). August 2011. National Land Cover, Version 2. Accessed online at <http://gapanalysis.usgs.gov/gaplandcover/viewer/> on August 22 and September 8, 2014.

7.0 LIST OF PREPARERS AND REVIEWERS

Preparation of this EA was an interdisciplinary team effort. Specialists from Reclamation have reviewed and approved the analysis contained within this EA, as well as provided document preparation oversight (Table 4).

Table 4. Bureau of Reclamation interdisciplinary team members involved in preparation of the draft Environmental Assessment for the Carson River and Derby Diversion Dam Tender Houses Demolition and Removal Project, Churchill and Storey Counties, Nevada.

Name	Agency	Project Role/Professional Expertise
Rena Ballew	Bureau of Reclamation	Resources Division Manager
Jennifer Birri	Bureau of Reclamation	Project Manager/Water and Lands Specialist
BranDee Bruce	Bureau of Reclamation	Architectural Historian
Selena Werdon	Bureau of Reclamation	Natural Resource Specialist
Scott Williams	Bureau of Reclamation	Archaeologist

8.0 APPENDIX — Scoping Letters and Mailing List



IN REPLY REFER TO
LO-660
ENV-6.00

United States Department of the Interior

BUREAU OF RECLAMATION

Lahontan Basin Area Office
705 N. Plaza Street, Rm 320
Carson City, NV 89701

Interested Parties (See Enclosed List)

Subject: Draft Environmental Assessment for the Carson River Diversion Dam and Derby Diversion Dam Tender Houses Demolition and Removal Project, Churchill and Storey Counties, Nevada

Dear Ladies and Gentlemen:

The Bureau of Reclamation has released for public review a Draft Environmental Assessment (EA) for the proposed Carson River Diversion Dam and Derby Diversion Dam Tender Houses Demolition and Removal Project. This letter is a request for comments, concerns, or issues related to this proposed project.

Reclamation is proposing to hire a contractor to demolish, remove, and safely dispose of the two subject dam tender houses and all associated outbuildings (*e.g.*, garages, corrals, sheds), including their foundations; interior (non-boundary) property fencing; power poles and electrical wiring; and buried utility lines or tanks (*e.g.*, domestic water, electric, sewer/septic, natural gas, propane). Essentially all improvements associated with the dam tender houses on Reclamation land would be removed. Site cleanup would also include removal of all accumulated trash. Materials removed would be disposed of at permitted landfills and appropriate recycling facilities. Disturbed bare ground (*e.g.*, utility excavation sites) would be graded or filled to match the surrounding topography contours and natural runoff drainage patterns. The existing unpaved access roads at both sites would remain in place to provide continued vehicle access to the Carson River and Derby Diversion Dams for the Truckee-Carson Irrigation District and Reclamation. The EA assesses the potential environmental impacts that could result from the proposed action.

A copy of the EA is enclosed, and it is also available online at (http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=20845). Reclamation encourages your participation in this scoping process. Written comments may be submitted through March 27 2015, by mail to:

Ms. Selena Weldon
Natural Resource Specialist
Bureau of Reclamation
705 N. Plaza Street, Suite 320
Carson City, Nevada 89701

Comments may also be faxed to 775-884-8376, or e-mailed to swerdon@usbr.gov. For additional information, please contact Ms. Werdon at 775-884-8366.

Sincerely,

A handwritten signature in cursive script, reading "Rena Ballew". The signature is written in dark ink and is positioned above the printed name.

Rena Ballew
Acting Resources Division Manager

Enclosure

INTERESTED PARTIES

Mr. Edward Koch
Field Supervisor
U.S. Fish and Wildlife Service
1340 Financial Blvd., Suite 234
Reno, Nevada 89502

Mr. Skip Canfield
Nevada State Clearinghouse
Dept. of Conservation & Natural Resources
901 S. Stewart St., Suite 5003
Carson City, Nevada 89701

Ms. Kristine Hansen
Senior Project Manager
Reno Regulatory Field Office
Sacramento District, USACE
Clifton Young Federal Building
300 Booth St., Room 3060
Reno, Nevada 89509

Ms. Lee Kreutzer
Archaeologist
National Trails Intermountain Region
324 South State St.
Salt Lake City, Utah 84111

Ms. Eleanor Lockwood
Churchill County Manager
155 North Taylor Street, Suite 153
Fallon, Nevada 89406

U.S. Environmental Protection Agency
Region 9: Pacific Southwest
Environmental Review Office
75 Hawthorne St.
San Francisco, California 94105

Mr. Raul Morales
Deputy State Director
Natural Resources
Bureau of Land Management
Nevada State Office
1340 Financial Blvd.
Reno, Nevada 89502-7147

Mr. Rusty Jardine
District Manager
Truckee-Carson Irrigation District
P.O. Box 1356
Fallon, Nevada 89407-1356

Mr. Pat Whitten
Storey County Manager
P.O. Box 176
Virginia City, Nevada 89440



IN REPLY REFER TO

LO-660
ENV-6.00

United States Department of the Interior

BUREAU OF RECLAMATION

Lahontan Basin Area Office
705 N. Plaza Street, Rm 320
Carson City, NV 89701

Honorable Vinton Hawley
Chairman
Pyramid Lake Paiute Tribe
Post Office Box 256
Nixon, Nevada 89424

Subject: Request for Comments - Draft Environmental Assessment for the Carson River Diversion Dam and Derby Diversion Dam Tender Houses Demolition and Removal Project, Churchill and Storey Counties, Nevada

Dear Chairman Hawley:

The Bureau of Reclamation has released for public review a Draft Environmental Assessment (EA) for the proposed Carson River Diversion Dam and Derby Diversion Dam Tender Houses Demolition and Removal Project. This letter is a request for comments, concerns, or issues related to this proposed project.

Reclamation is proposing to hire a contractor to demolish, remove, and safely dispose of the two subject dam tender houses and all associated outbuildings (*e.g.*, garages, corrals, sheds), including their foundations; interior (non-boundary) property fencing; power poles and electrical wiring; and buried utility lines or tanks (*e.g.*, domestic water, electric, sewer/septic, natural gas, propane). Essentially all improvements associated with the dam tender houses on Reclamation land would be removed. Site cleanup would also include removal of all accumulated trash. Materials removed would be disposed of at permitted landfills and appropriate recycling facilities. Disturbed bare ground (*e.g.*, utility excavation sites) would be graded or filled to match the surrounding topography contours and natural runoff drainage patterns. The existing unpaved access roads at both sites would remain in place to provide continued vehicle access to the Carson River and Derby Diversion Dams for the Truckee-Carson Irrigation District and Reclamation. The EA assesses the potential environmental impacts that could result from the proposed action.

A copy of the EA is enclosed, and it is also available online (http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=20845). Reclamation encourages your participation in this scoping process. Written comments may be submitted through March 27, 2015, by mail to:

Ms. Selena Werdon
Natural Resource Specialist
Bureau of Reclamation
705 N. Plaza Street, Suite 320
Carson City, Nevada 89701

Comments may also be faxed to 775-884-8376, or e-mailed to swerdon@usbr.gov. For additional information, please contact Ms. Werdon at 775-884-8366.

Sincerely,

A handwritten signature in dark ink, appearing to read "Terri A. Edwards". The signature is fluid and cursive, with the first name "Terri" being more prominent.

Terri A. Edwards
Area Manager

Enclosure

cc: Ms. Marilyn Bitisillie
Acting Superintendent
Bureau of Indian Affairs
Western Nevada Agency
311 E. Washington Street
Carson City, Nevada 89701

Ms. Cathy Wilson
Water Rights Specialist
Bureau of Indian Affairs
Western Region
Division of Natural Resources, MS-460
2600 N. Central Ave., 4th Floor
Phoenix, Arizona 85004



United States Department of the Interior

BUREAU OF RECLAMATION

Lahontan Basin Area Office
705 N. Plaza Street, Rm 320
Carson City, NV 89701

IN REPLY REFER TO:

LO-660
ENV-6.00

Honorable Len George
Chairman
Fallon Paiute-Shoshone Tribe
565 Rio Vista Drive
Fallon, Nevada 89406

Subject: Request for Comments - Draft Environmental Assessment for the Carson River Diversion Dam and Derby Diversion Dam Tender Houses Demolition and Removal Project, Churchill and Storey Counties, Nevada

Dear Chairman George:

The Bureau of Reclamation has released for public review a Draft Environmental Assessment (EA) for the proposed Carson River Diversion Dam and Derby Diversion Dam Tender Houses Demolition and Removal Project. This letter is a request for comments, concerns, or issues related to this proposed project.

Reclamation is proposing to hire a contractor to demolish, remove, and safely dispose of the two subject dam tender houses and all associated outbuildings (*e.g.*, garages, corrals, sheds), including their foundations; interior (non-boundary) property fencing; power poles and electrical wiring; and buried utility lines or tanks (*e.g.*, domestic water, electric, sewer/septic, natural gas, propane). Essentially all improvements associated with the dam tender houses on Reclamation land would be removed. Site cleanup would also include removal of all accumulated trash. Materials removed would be disposed of at permitted landfills and appropriate recycling facilities. Disturbed bare ground (*e.g.*, utility excavation sites) would be graded or filled to match the surrounding topography contours and natural runoff drainage patterns. The existing unpaved access roads at both sites would remain in place to provide continued vehicle access to the Carson River and Derby Diversion Dams for the Truckee-Carson Irrigation District and Reclamation. The EA assesses the potential environmental impacts that could result from the proposed action.

A copy of the EA is enclosed, and it is also available online at (http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=20845). Reclamation encourages your participation in this scoping process. Written comments may be submitted through March 27, 2015, by mail to:

Ms. Selena Werdon
Natural Resource Specialist
Bureau of Reclamation
705 N. Plaza Street, Suite 320
Carson City, Nevada 89701

Comments may also be faxed to 775-884-8376, or e-mailed to swerdon@usbr.gov. For additional information, please contact Ms. Werdon at 775-884-8366.

Sincerely,



Terri A. Edwards
Area Manager

Enclosure

cc: Ms. Marilyn Bitisillie
Acting Superintendent
Bureau of Indian Affairs
Western Nevada Agency
311 E. Washington Street
Carson City, Nevada 89701

Ms. Cathy Wilson
Water Rights Specialist
Bureau of Indian Affairs
Western Region
Division of Natural Resources, MS-460
2600 N. Central Ave., 4th Floor
Phoenix, Arizona 85004