



2019 Annual Report to the Nevada Legislature

Fire Prevention and Forest Health in the Nevada portion of the Lake Tahoe Basin



Background

This update is produced in accordance with NRS 528.150, and was a recommendation of the California-Nevada Fire Commission following the 2007 Angora Wildfire. This is the ninth update, and provides a listing of activities and accomplishments of the State and Federal land management agencies and the two fire protection districts in the Nevada portion of the Lake Tahoe Basin as defined by NRS 528.150. The reader is referred to the original report, produced in 2009, and the subsequent updates for documentation of activities and accomplishments previous to this 2019 annual update. Click [here](#) to view those documents.

Forest restoration and wildfire hazard reduction/prevention activities are ongoing activities carried out by several entities at Lake Tahoe. In the Nevada portion of the Lake Tahoe Basin, those entities are Nevada Division of Forestry (NDF), Nevada Division of State Lands (NDSL), Nevada Division of State Parks (NDSP), USDA Forest Service - Lake Tahoe Basin Management Unit (USFS/LTBMU), North Lake Tahoe Fire Protection District (NLTFPD), Tahoe-Douglas Fire Protection District (TDFPD), and the Tahoe Regional Planning Agency (TRPA). Following passage of the White Pine County Conservation, Recreation, and Development Act of 2006, a 10-year Multi-Jurisdictional Basin-wide plan was developed by the agencies listed above (updated in 2014), along with several California Agencies, to direct fuel reduction planning and implementation. Since then, availability of federal funds through direct Forest Service Grants, the California Grant Clearing house, the Southern Nevada Public Land Management Act (SNPLMA), and other sources has led to sustained annual accomplishments in wildfire hazard reduction/prevention by responsible agencies. Accomplishments by these agencies and non-profits include coordinated planning for wildfire hazard reduction/prevention, fuel reduction on thousands of acres since 2007, coordinated public information campaigns, electronic tracking of progress, and modifying and streamlining the regulatory environment.

2019 Accomplishments

Many agencies, organizations and individuals contributed to the communication of vital fire safety and natural resource conservation or restoration information as well as to the planning and implementation of fuels reduction and ecosystem restoration projects in 2019. The 2019 report update maintains the format provided by NRS 528.150.

NRS 528.150 Report concerning fire prevention and forest health in Lake Tahoe Basin; contents of report.

1. On or before January 1 of each year, the State Forester Firewarden shall, in coordination and cooperation with the Tahoe Regional Planning Agency and the fire chiefs within the Lake Tahoe Basin, submit a report concerning fire prevention and forest health in the Nevada portion of the Lake Tahoe Basin to:

(a) The Legislative Committee for the Review and Oversight of the Tahoe Regional Planning Agency and Marlette Lake Water System created by [NRS 218E.555](#) and to the Director of the Legislative Counsel Bureau for transmittal to the Legislature;

(b) The Governor;

(c) The Tahoe Regional Planning Agency; and

(d) Each United States Senator and Representative in Congress who is elected to represent the State of Nevada.

2. The report submitted by the State Forester Firewarden pursuant to subsection 1 must address, without limitation:

(a) The status of:

(1) The implementation of plans for the prevention of fires in the Nevada portion of the Lake Tahoe Basin, including, without limitation, plans relating to the reduction of fuel for fires;

(2) Efforts concerning forest restoration in the Nevada portion of the Lake Tahoe Basin;

and

(3) Efforts concerning rehabilitation of vegetation, if any, as a result of fire in the Nevada portion of the Lake Tahoe Basin.

(b) Compliance with:

(1) The goals and policies for fire prevention and forest health in the Nevada portion of the Lake Tahoe Basin; and

(2) Any recommendations concerning fire prevention or public safety made by any fire department or fire protection district in the Nevada portion of the Lake Tahoe Basin.

(c) Any efforts to:

(1) Increase public awareness in the Nevada portion of the Lake Tahoe Basin regarding fire prevention and public safety; and

(2) Coordinate with other federal, state, local and private entities with regard to projects to reduce fire hazards in the Nevada portion of the Lake Tahoe Basin.

Accomplishments - Nevada portion of Lake Tahoe

NRS 528.150 requires the Nevada State Forester Firewarden to prepare a report concerning fire prevention and forest health in Lake Tahoe Basin.

(a) The Status of:

1. The implementation of plans for the prevention of fires in the Nevada portion of the Lake Tahoe Basin, including, without limitation, plans relating to the reduction of fuel for fires

Nevada Division of Forestry

The Spooner Landscape Resilience Project, located northeast of Spooner Lake in Lake Tahoe Nevada State Park, included treatment of 300 acres. In 2019, NDF personnel hand piled limb wood and other miscellaneous wood debris left after helicopter yarding on the Spooner project occurred in 2018. Most of the treatment area is steep terrain with abundant cultural resources, and limited road access. The final phase of treatment will be to burn the slash piles once prescribed fire is authorized.

Nevada Division of State Lands

A total of 31 parcels were treated by hand thinning, dead tree removal, or snow damaged riparian vegetation cleanup. Fuel remains in burn piles on some parcels and are in need of prescribed fire to complete the treatment. Additionally, vegetation management and forest restoration are ongoing components of the overall maintenance of NDSL conservation areas on the east shore of Lake Tahoe. A portion of the work was funded by SNPLMA Round 15.

Tahoe Douglas Fire Protection District

Tahoe Douglas FPD projects are in multiple stages of planning and implementation. The District is implementing a USFS planning grant to assess future fuel reduction projects on private land. The District is in negotiations to procure a multi-spectral image of priority private land for the entire Nevada portion of the Tahoe Basin to assist in this planning effort.

USFS Lake Tahoe Basin Management Unit

A hand thinning contract was secured in 2019 that resulted in 293 acres being treated for hazardous fuels reduction and forest health improvement within the State of Nevada. An additional 172 acres of treatments are scheduled for 2020 under the same contract.

North Lake Tahoe Fire Protection District

NLTFFPD is utilizing the 2015 Community Wildfire Protection Plan in the Lake Tahoe Basin to prioritize and implement projects within the district. In 2019, this included treatments taking place as part of the Incline Village Prescribed Fire Project (SNPLMA 15) as well as the Nevada Regional Fuels Reduction Project (SNPLMA 16). Projects also adhere to the Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy that was created by Tahoe Fire and Fuels Team (TFFT) partner agencies, published in August 2014.

Additionally, an annual Incident Action Plan (IAP) is created internally to guide project work throughout the year. The IAP for NLTFPD is compiled with IAPs from partner organizations of the TFFT to create an action plan for partner organizations within the Lake Tahoe Basin. For NLTFPD (2019), all objectives were completed for defensible space inspections, chipping in two fire districts, and hand thinning project work. Understory burning occurred on 31.5 acres, and additional acreage was prepared for understory burning in future years. Pile burning has begun and will continue through early 2020, weather permitting.



Lower Tyner Understory Prescribed Burn 2019

2. Efforts concerning forest restoration in the Nevada portion of the Lake Tahoe Basin

Nevada Division of Forestry

Satin Moth Study. NDF is supporting a research project of the Satin Moth conducted by Assistant Professor Dr. Sarah Bisbing at the University of Nevada, Reno (UNR). Funded through the Lake Tahoe License Plate program, the research project will identify the extent, severity, and potential consequences of the Satin Moth of this non-native defoliator on quaking aspen. The research project will continue through July, 2021.

Aspen Update. A project is underway that will identify aspen stands in the Lake Tahoe Basin that re-grow following conifer removal. This data will be used to delineate areas based on their suitability for aspen restoration. Researchers are using high resolution remote sensing techniques to: (1) model long-term changes in aspen canopy cover; (2) investigate the primary drivers of aspen stand performance including climate, topography, and conifer encroachment; and (3) map aspen restoration potential and site suitability. The findings from this project will inform future forest management decisions and guide restoration planning by locating priority areas for treatment and aspen regeneration. This project will provide online maps of aspen restoration suitability and will be presented to Lake Tahoe Basin resource managers and stakeholders. This project is funded through the Lake Tahoe License Plate Grant Program and terminates June 30, 2021.

Aspen restoration is an annual activity as part of the Environmental Improvement Program being implemented by the Nevada Tahoe Resource Team. The Spooner Landscape Resilience Project was the priority this year, and included conifer removal in aspen stands – 10 acres of aspen received a second entry to finalize conifer removal.

Tree Mortality. Lake Tahoe Nevada State Park has experienced some tree mortality, most noticeably on the dry west facing slope east of Sand Harbor. The mortality is still classified as endemic. As such, continual monitoring of the forest is necessary to detect any significant increase or “hot spot”. The mortality includes low levels of both white fir and Jeffrey pine. There

was also mountain pine beetle-related mortality in western white pine, lodgepole pine, and whitebark pine in the high elevation areas northwest, north, and east of Marlette Lake. The present course of action is to monitor the activity level of the insects; additional action, if warranted, would become an immediate priority.

Nevada Division of State Lands

One acre of a newly acquired seven-acre parcel along Edgewood Creek was transplanted with Jeffrey and Ponderosa pine seedlings. The site had heavy white fir mortality from the 1990 drought, which was treated in 2015. Conversion to a pine-dominated stand will create greater stand resiliency and ecological function on the parcel.

Tahoe Douglas Fire Protection District

Tahoe Douglas FPD, in partnership with NDF, began restoration and fuel reduction on the meadow around Slaughterhouse Creek in Glenbrook. The project includes pile burning and treating dead and decadent willow and alder that is choking the creek, creating wicks of dead fuel bifurcating Glenbrook, and preventing vector control from treating mosquitos. The first seven acres were treated in 2018. Final clean-up and burn was completed in 2019.



Hand thinning on Incline Village General Improvement District Public Works Parcel

North Lake Tahoe Fire Protection District

Fuels reduction treatments, like those performed by NLTFPD, are also forest restoration treatments. These treatments work to reduce the wildfire threat by mimicking the effect of natural fire on the landscape. At the end of 2019, very few acres of land owned by the Incline Village General Improvement District (IVGID) remain untreated for fuel reduction and forest restoration. The fire district has applied for funding that would allow for fuel reduction on 90.2 acres of untreated land within the Diamond Peak Ski Area. Funding options are being considered to restore 12 acres of Stream

Environment Zone along Wood Creek, to treat 14 acres for fuel reduction along Tyner Way, and to perform maintenance treatments on 200 acres of land owned by IVGID. Efforts are also underway to reduce fuels on multiple parcels that comprise the 2nd Creek Stream Environment Zone. Funding, along with property owner agreements and methodology to complete this treatment remain a challenge to completing this work.

3. Efforts concerning rehabilitation of vegetation, if any, as a result of fire in the Nevada portion of the Lake Tahoe Basin

Fortunately, there were no large fires in the Tahoe Basin in 2019. There were, however, many small incident fires, but nothing requiring any rehabilitation.

(B) Compliance with:

1. The goals and policies for fire prevention and forest health in the Nevada portion of the Lake Tahoe Basin

All fuel reduction/forest restoration projects comply with all rules and regulations in the Tahoe Basin and are in compliance with all goals and policies related to fire prevention and forest health in the Nevada portion of the Lake Tahoe Basin, especially the three tenets of the National Cohesive Wildland Fire Strategy: 1. restore and maintain resilient landscapes, 2. create fire adapted communities, and 3. provide safe and effective wildfire response.

The Lake Tahoe Basin has been a model of collaboration through the multi-agency Tahoe Fire and Fuels Team (TFFT). The TFFT agencies, including the agencies in this report, are signatory to the *Lake Tahoe Basin Multijurisdictional Fuel Reduction and Wildfire Prevention Strategy*, *The Lake Tahoe Basin Community Wildfire Protection Plan*, and work together on Fire Adapted Communities development, fuel reduction planning, and the Team collaborates on funding requests. The TFFT formed in 2008.

Nevada Division of Forestry

NDF began drafting a vegetation management plan in December 2019 for the Spooner Phase I project. This plan will allow the State Parks development of the Spooner property to be in compliance with 2018 International Wildland Urban Interface Code. The project includes collaboration with the Reno National Weather Service, who provided data on the number of critical fire weather days. The vegetation management plan will provide direction for treatment activity on a 42-acre tract within the state park so that vegetation treatment can be accomplished using one contract for all phases of park development.

Tahoe Douglas Fire Protection District

Tahoe Douglas FPD provides a number of fuel management services focused on modifying wildland fire behavior in and adjacent to communities to help prevent catastrophic wildland fires. Preventing catastrophic outcomes from wildland fire requires the reduction of wildland fuel in the Wildland Urban Interface, and the creation of defensible space around homes. Fuel reduction projects limit fire intensity, while defensible space prevents fire from reaching buildings in the community.

North Lake Tahoe Fire Protection District

The on-going goal for the Fuel Management Division at North Lake Tahoe Fire Protection District is described in the 2015 Community Wildfire Protection Plan, and further detailed in the North Lake Tahoe Chapter. In summary, the plan is consistent with NLTFPD's mission statement, which is "to reduce our community's wildfire risk and improve forest health by effective fuels management practices." NLTFPD's goal for treating acres for fire prevention and forest health varies over the years. In 2019, the District accomplished its goal of treating 181.7 acres with hand thinning.

NLTFPD works within the requirements of the TRPA Code of Ordinances, Chapter 61: Vegetation and Forest Health. Each project is assessed using the Initial Environmental Checklist (EIC), and a tree removal permit is obtained from the TRPA forester prior to initiating work.

NLTFPD also works within the requirements of the Nevada State Historic Preservation Office, and must receive a letter of approval prior to initiating project work. Projects meet the requirements of the National Historic Preservation Act of 1966. Based on 36 CFR § 800.13.b.3 and NRS 383.150-383.190, inclusive, NLTFPD will seek additional consultation should unidentified resources be discovered during project implementation.

All projects are governed by 2 CFR § 200 including Cost Principles 2 CFR Part 225 (A-87) and Subpart E; 200.416, 200.417. Audits if applicable would be completed using A-133.

Quarterly annual updates are provided to the BLM for projects funded by SNPLMA 15 and 16 as described in 2 CFR § 200.328 and further described in the SNPLMA Implementation Agreement Parts One and Two.

NLTFPD conforms to the appropriate sections of Nevada Revised Statutes and the compatible Nevada Administrative Codes. Project work is governed by NRS Chapter 528, where applicable. Controlled burns are conducted in accordance with NRS 527.122-128, inclusive, adhering to an authority-approved burn plan and conducted in compliance with laws related to air pollution. Activities are reported in accordance with NRS 528.150.

2. Recommendations concerning fire prevention or public safety made by a fire department or fire protection district

NDF is working with Tahoe Douglas FPD and North Lake Tahoe FPD to create supplemental project agreements through the Good Neighbor Authority Agreement to treat U.S. Forest Service-owned lands in the Lake Tahoe Basin. The purpose is to create seamless, landscape scale projects across multiple jurisdictions for the protection of communities, lives and property and enhancement of forest health and resiliency.

Nevada Division of Forestry

NDF staff coordinated with NV Energy to accomplish fuel reduction and widening of the corridor along a 160 KV power transmission line within the Van Sickle Unit of Lake Tahoe Nevada State Park at Stateline, Nevada. Side clearing limits on transmission lines were increased from 10 to 21 feet. This segment of line runs north of the California/Nevada state line to private property, and ties into line clearance work done by Liberty Utilities on the California side of Van Sickle Bi-State Park. This is in an area of high density housing, expensive residential property, and high use recreation.

NDF staff also coordinated minor work along the 60 KV distribution line that included three spans of line that crossed state parcels in the area between Daggett Summit and the Edgewood property in lower Kingsbury. Work included 11 side trims, two top trims, and six brush units (small trees directly below the line).

North Lake Tahoe Fire Protection District

As a fire protection district, NLTFPD is in compliance with the Fire Building Code and the Wildland Urban Interface Code as adopted by the fire district.



Picture is before treatment along 160 KV power transmission line at Van Sickle Bi-State Park.

(c) Any Efforts to:

1. Increase public awareness regarding fire prevention public safety

Public education is a critical component to reduce the threat of catastrophic wildfire at Lake Tahoe. In recognition of this, the Tahoe Fire and Fuels Team formed the Fire Public Information Team (Fire PIT) to fill this important need. The Fire PIT is comprised of public education and communications professionals to implement a comprehensive outreach strategy to raise awareness of wildfire issues at Tahoe and increase defensible space practices on private property. Members of the Fire PIT include Tahoe Basin fire agencies, CAL FIRE, Nevada Division of Forestry and related state agencies, University of California and Nevada Cooperative Extensions, the Tahoe Regional Planning Agency, the U.S. Forest Service Lake Tahoe Basin Management Unit, conservation districts from California and Nevada, the California Tahoe Conservancy, and the Lahontan Regional Water Quality Control Board.

The Fire PIT team remains active and member agencies meet monthly. The team regularly develops and distributes press releases and opinion columns for local and regional newspapers and advertisements in multiple publications. Community events and a host of other activities also spread key messages about fire safety and fuel reduction projects at Lake Tahoe.

Nevada Division of State Lands

NDSL provides ongoing informal resident contact while responding to inspection requests. During this process staff provide technical assessments and recommendations based on questions posed by home and landowners. Defensible space literature, such as Fire Adapted Communities brochures and Living with Fire program information, is provided to ensure that the residents can remain informed of their opportunities to improve forest health and fire safety on their properties and in their neighborhoods.

North Lake Tahoe Fire Protection District

The Fire Protection District uses a combination of youth education, adult education, and engagement activities to ensure that all age groups of residents understand the risks of fire, value

of maintaining forest health, and resources available to assist them in managing their living environments for their health, safety and wellbeing.

Youth Education

NLTFPD visited all 8th graders at Incline Village Middle School to provide education on defensible space, evacuation preparedness, and the importance of fuel reduction treatments. In 2019, there were 88 students in the 8th grade. NLTFPD conducts this classroom activity each year.

Adult Education

Defensible space block parties were held in two adjacent neighborhoods that were targeted for defensible space compliance. Approximately 80 residents attended the block parties in total. Residents were made aware of the services that are available to them, including free defensible space evaluations and chipping services, a free half-hour of crew time to implement defensible space, and a cost share rebate where work is more expensive or requires a tree service. NLTFPD's ability to offer these services is due to the District's partnership with the Tahoe Resource Conservation District and their SNPLMA 16 Project: Tahoe Network of Fire Adapted Communities.

Defensible space personnel were present at the 4th of July pancake breakfast held at the fire station as well as at the Summer Kick-Off event held over Memorial Day weekend at ACE Hardware. Approximately 30 homeowners were educated and defensible space information was provided at both events for their use while reducing wildfire fuels on their properties.



North Lake Tahoe Fire Protection District staff educating homeowners about defensible space practices at the 4th of July pancake breakfast held at the fire station.

Efforts are also underway to conduct a field trip for interested stakeholders and community members to view project areas and educate on forestry and fuel treatment effectiveness.

Tahoe Douglas Fire Protection District

During 2019, the District continued with its yearly fire prevention and public safety programs including:

Curbside Defensible Space Inspections

The Fire Prevention Division inspected approximately 25 percent of the single family homes in the fire district annually for compliance with the Douglas County defensible space ordinance.

Defensible Space Consultations

The Fuels Management Division consulted with property owners about defensible space through requested evaluations. The Fire District's forester, Zephyr Crew supervisor, Zephyr Crew foreman, fire marshal, and fire inspector meet with property owners about their defensible space. These inspectors are authorized to issue TRPA Tree Removal Permits should one be necessary to mitigate the fire hazard on the property.

Community Chipping Services

The Zephyr Fire Crew chipped slash when property owners remove vegetation necessary to create defensible space. The Zephyr Crew completed approximately 90 chipping requests in 2019.

Community Pile Burning

The Zephyr Crew helped homeowners with steep or difficult to access properties to create defensible space by burning any slash that may be generated from the vegetation management treatment. The Zephyr Crew burned piles on approximately 80 acres of residential parcels in 2019.

Compost your Combustibles

The fire district partnered with Heavenly Ski Resort, South Tahoe Refuse, and F&B Services to allow homeowners to dump pine needles and slash at Heavenly's Boulder Lodge parking lot from Memorial Day through the July 4th weekend. "Compost Your Combustibles" typically results in the removal and disposal of 500 tons of slash and pine needles from defensible space activities.

Community Work Days

The Zephyr Crew visited the eight regions within the fire district, canvassed the neighborhoods and provided assistance to homeowners as requested. The Zephyr Crew chipped any slash piles left by the roadside. The project provided a single weekend for residents to dispose of slash from work completed by Zephyr Fire crewmembers complied from cutting brush, small trees or assist homeowners with lifting materials up steep slopes. In 2019, each of the eight regions in the fire district were allocated a two-day weekend for Community Work Day assistance.

Fire Adapted Communities Development

The fire district worked with the Tahoe Resource Conservation District on the development of the Tahoe Network of Fire Adapted Communities. The Network became operational in 2018 and is creating an active neighbor-to-neighbor education element about wildland fire mitigation.

2. Coordinate with other federal, state, local and private entities with regard to projects to reduce fire hazards in the Nevada portion of the Lake Tahoe Basin.

Nevada Division of State Lands

Hand thinning and fuel reduction completed by TDFPD and NDF hand crews was conducted on NDSL parcels to complete treatments.

Tahoe Douglas Fire Protection District

Tahoe Douglas FPD continued to work closely with federal, state and local agencies. The District and NDF are currently awaiting awards to continue work on private lands within the Nevada side of the basin.

North Lake Tahoe Fire Protection District

In 2019, NLTFPD entered into an agreement with the LTBMU to complete pile burning operations on federally owned land within the jurisdiction of NLTFPD. These treatments may be implemented at the very end of calendar year 2019, but will primarily take place in 2020 or 2021. NLTFPD also worked with Washoe County to reduce fuels on two of their urban lots totaling 0.75 acres. Other agency collaboration occurred with the California Tahoe Conservancy and the North Tahoe Fire Protection District resulting in 63 treated acres (these project areas are in California).

Summary of Treatment Acres

Table 1 shows the cumulative effort of all major jurisdictions in the Tahoe Basin in addressing reduction of wildfire fuels.

Year(s)	NDF for NV State Parks	NV State Lands	NLTFPD	TDFPD	USFS-LTBMU	Total
2000	50	26	151**	unknown	677*	904
2001	55	24	215**	unknown	691*	985
2002	100	23	240**	unknown	1260*	1,623
2003	270	32	145**	unknown	1254*	1,701
2004	253	12	178**	unknown	1918*	2,361
2005	101	17	377	unknown	1913*	2,408
2006	171	20	unknown	unknown	2130*	2,351
2007-09	1,362	149	591	432	3,031	5,565
2010	210	108	305	164	108	895
2011	247	77	367	97	1,572	2,360
2012-13	894	91	207	287	1,714	3,193
2014	407	26	136	204	594	1,367
2015	131	42	90	157	565	985
2016	375	38	59	101	1,273	1,846
2017	52	32	234	183	598	1,099
2018	300	31	175	187	591	1,284
2019	318	293	176	80	22	889
TOTAL	5,296	1,041	3,646	1,892	19,941	30,927

*Includes lands in Nevada and California

**NLTFPD includes projects on federal lands, which were also reported by the USFS/LTBMU; therefore, the NLTFPD accomplishments were reduced by 42%, the amount of federal land in the fire district. Source: TRPA Fuel Reduction Plan prepared by Steve Holl Consulting (2007), NDSL, USFS/LTBMU.