



Report to Nevada State Legislature In Compliance with AB75 / NRS 528.150 Fire-Fuels-Forest Restoration Activities and Accomplishment at Lake Tahoe, Nevada



Compiled and Prepared by Nevada
Division of Forestry
2015

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Summary

This report is in accordance with Assembly Bill 75 and NRS 528.150 and is a recommendation of the Bi-State Fire Commission.

Forest restoration and wildfire hazard reduction/prevention activities are ongoing activities carried out by several entities at Lake Tahoe. On the Nevada side 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), Nevada Fire Safe Council (NVFSC) (since dissolved) 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, 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, and the Southern Nevada Public Land Management Act (SNPLMA) has led to increases in 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.

NOTE: The original report was produced in 2009 and is presented here in its entirety for reader background. Agency accomplishments for 2010 are contained Table 2 on page 2. Accomplishments within the Tahoe Basin are provided in greater detail in subsequent addendums: 2010 accomplishments on page 28, 2011 accomplishments on page 35, 2012-13 accomplishments on page 53, 2014 accomplishments on page 64, and 2015 accomplishments on page 71.

Fire Protection/Prevention Organizations

There are many government agencies responsible for forest management and fire prevention/suppression within the Lake Tahoe Basin. All are actively involved in protecting visitors and residents at Lake Tahoe through their mandated activities. The USFS/LTBMU is responsible for forest management and fire suppression on the National Forest System lands at Lake Tahoe. This accounts for approximately 29,100 acres on the Nevada side of the Lake Tahoe Basin. The two fire districts on the Nevada side of the Basin, TDFPD and NLTFPD, have responsibility for fire suppression on the private and local government-owned lands within Douglas and Washoe counties, which accounts for 5,331 acres and 10,442 acres respectively. NDF and NDSL have responsibility for forest management on state lands in the Basin which include approximately 8,000 acres of state parks and 214 acres of Tahoe Bond Act parcels. Wildfire suppression on these lands is NDF's responsibility.

Prior to the Angora Fire in 2007 and the subsequent Bi-State Fire Commission recommendations, all the agencies listed above were actively engaged in wildfire hazard reduction. Each land management agency and fire protection district was working relatively independently on managing the wildfire hazard on lands within their jurisdiction. Both fire districts in Nevada, TDFPD and NLTFPD had active defensible space and curbside chipping programs and NLTFPD had their own 20 person hand crew for hazardous fuel reduction and suppression. The Nevada Division of Forestry was assisting residents with forest management issues, silvicultural practices to improve forest health, marking trees for removal on private residential lots and issuing TRPA Tree Removal permits. NLTFPD began a prescribed burning program on greenbelt properties within their district in the early 1990s. The NDF forester attached to the Nevada Tahoe Resource Team was actively managing fuels on Lake Tahoe State Park lands and the Division of State Lands forester was managing fuels on

Tahoe Bond Act parcels. The LTBMU had been conducting vegetation projects on their lands for several years with the East Shore Project in the mid 1990s being one of the earlier, larger projects on the Nevada side of the Basin. Table 1 gives an indication of the agencies and their respective fuel reduction accomplishments back to 2000.

Table 1. Acres of fuel reduction projects completed by Lake Tahoe Basin agencies since 2000

| Year | USDA Forest Service LTBMU* | North Lake Tahoe FPD** | Nevada State Parks | Nevada State Lands | Total |
|--------------|----------------------------|------------------------|--------------------|--------------------|---------------|
| 2000 | 677 | 151 | 50 | 26 | 904 |
| 2001 | 691 | 215 | 55 | 24 | 985 |
| 2002 | 1,260 | 240 | 100 | 23 | 1,623 |
| 2003 | 1,254 | 145 | 270 | 32 | 1,701 |
| 2004 | 1,918 | 178 | 253 | 12 | 2,361 |
| 2005 | 1,913 | 377 | 101 | 17 | 2,408 |
| 2006 | 2,160 | | 171 | 20 | 3,009 |
| Total | 9,873 | 1,306 | 1,000 | 154 | 12,991 |

*Includes lands in Nevada and California

**North Lake Tahoe FPD 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.

Table 2. Acres of Fuel Reduction Completed Since the Bi-State Fire Commission in 2007

| | 2007 thru 2009 | 2010 | TOTAL |
|---------------------|----------------|------------|--------------|
| NDF for State Parks | 1,362 | 210 | 1,572 |
| NV State Lands | 149 | 108 | 257 |
| NLTFPD | 591 | 305 | 896 |
| TDFPD | 432 | 164 | 596 |
| USFS-LTBMU | 3,031 | 108 | 3,139 |
| TOTAL | 5,565 | 895 | 6,460 |

Wildfire Hazard Mitigation Plans at Lake Tahoe

SNPLMA funding became available to the Tahoe Basin fire agencies through the White Pine County Conservation, Recreation, and Development Act of 2006 (Act). A requirement of the Act was that the federal and state land managers, local agencies, and regulators were required to create a “Multi-Jurisdiction Fuels Reduction and Fire Prevention Strategy – 10 Year Plan” to be eligible for SNPLMA funding. The agencies in Nevada that participated in the plan development were the NDF, NDSL, NDSP, the Nevada Tahoe Resource Team, NLTFPD, USFS/LTBMU, TDFPD and TRPA.

The plan comprehensively combined existing wildfire hazard reduction plans prepared by the federal, state and local government agencies, and fire protection districts, including the Community Wildfire Protection Plans (CWPP), within the Basin, and provided a framework for participating agencies to identify priority areas and a strategy to work collaboratively on accomplishing those priorities. Figures 1 and 2 show the proposed treatment areas by 5 year planning periods and Figure 3 shows the annual schedule for proposed treatment areas.

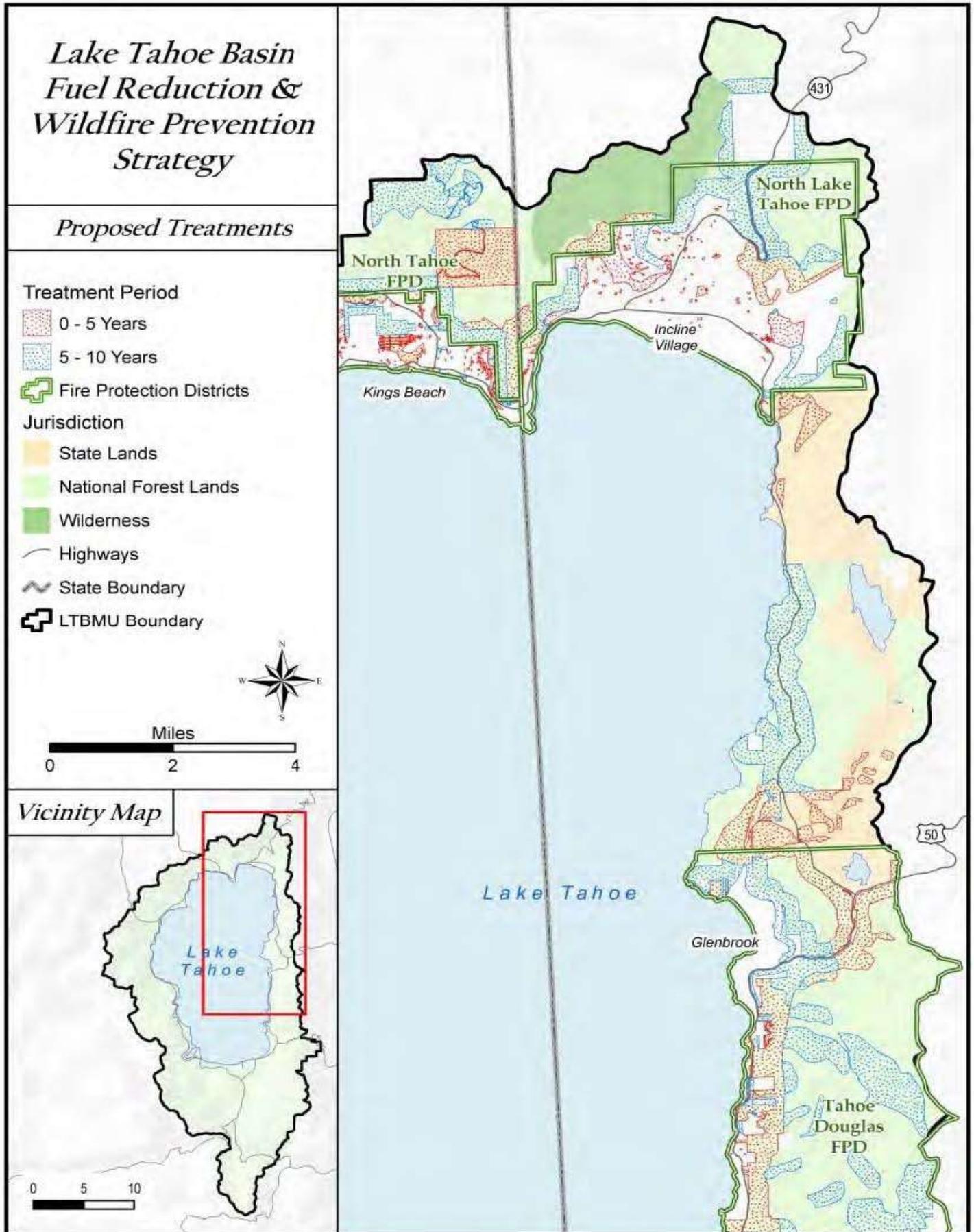


Figure 1. Proposed Treatment Areas for the North East Part of the Lake Tahoe Basin.

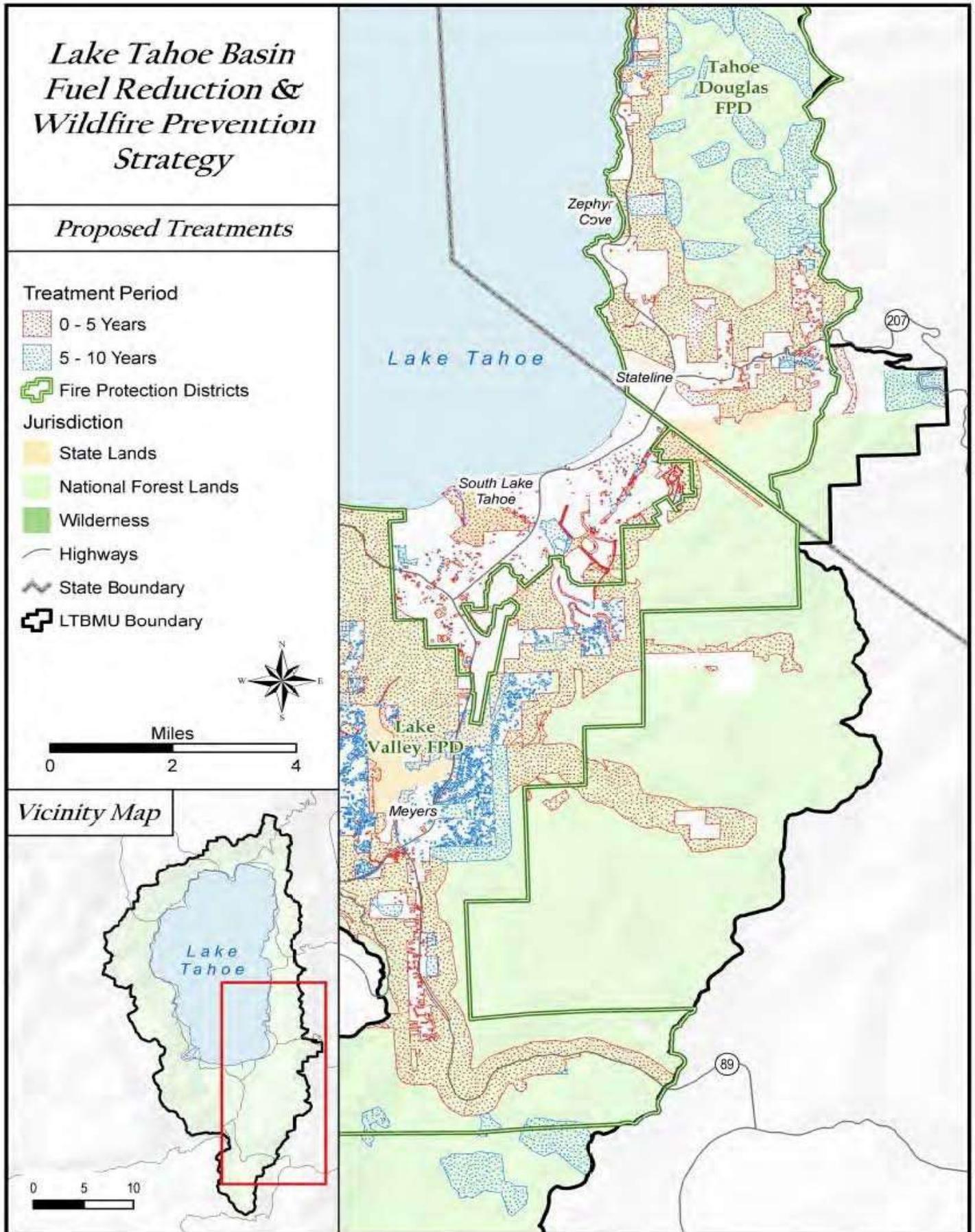


Figure 2. Proposed Treatment Areas for the South East Part of the Lake Tahoe Basin.

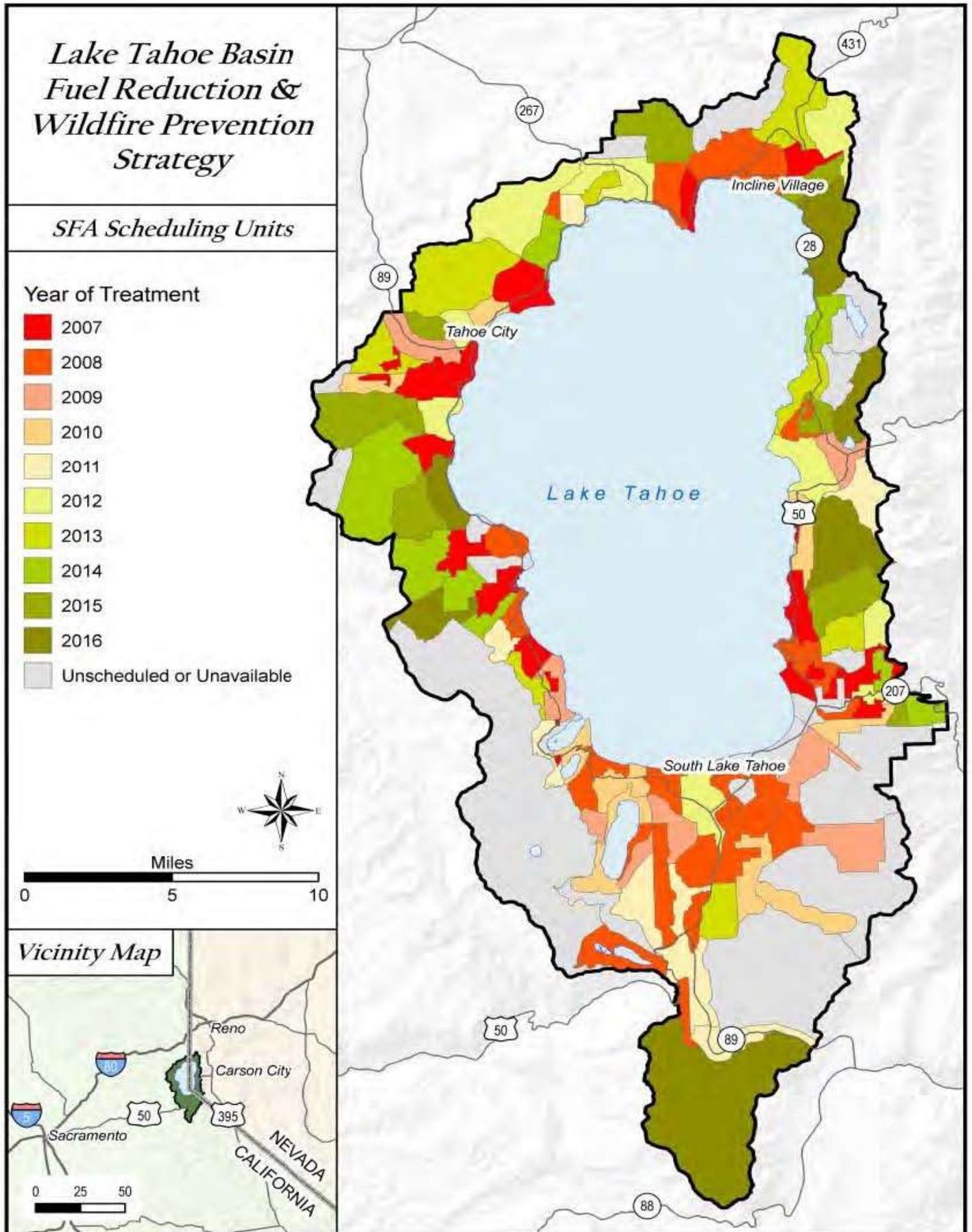


Figure 3. Proposed Schedule for Treatment Areas

The 10-Year Plan created an oversight body composed of the chief executive officers of the federal and state land management agencies and the local fire agencies. This group, called the Multi-Agency Coordinating Group (MAC) is the principal group that monitors the implementation of the 10-Year Plan. The MAC is charged with strategic management of fuels reduction in Lake Tahoe.

The local fire agencies also formed a basin wide implementation group called the Tahoe Fire and Fuels Team (TFFT). The TFFT includes members from the TRPA, Lahontan Regional Water Quality Control Board, Cal Fire and the local fire agencies. The TFFT is an organization responsible for implementing projects on non-federal lands that are consistent with the CWPP. And while the CWPP are a base document, final project locations are planned by the foresters for the fire district or state agency. In this respect, the TFFT is responsible for final treatment planning. The USDA-FS is responsible for planning and implementing projects on federal property within the Tahoe Basin.

Table 3. Summary of roles and responsibilities of agencies and individuals to implement the Strategy

| Agency | Land Management | Regulatory | Lead Agency for Environmental Compliance | Funding | Programmatic Oversight |
|--------------------------------|-----------------|------------|--|---------|------------------------|
| Individual Landowners | X | | | X | |
| TRPA | | X | X | X | X |
| Nevada Fire Safe Council | | | | X | X |
| USDA-FS LTBMU | X | X | X | X | X |
| Fire Protection districts | X | | X | | X |
| Nevada Division of Forestry | X | X | | X | |
| Nevada Division of State Parks | X | | | X | |
| Nevada Division of State Lands | X | | | X | X |

Accomplishments Since 2007

Nevada Tahoe Resource Team (Lake Tahoe State Park)

The Nevada Tahoe Resource Team (NTRT) is responsible for managing lands owned by the State of Nevada within the Lake Tahoe Basin. These lands consist of Lake Tahoe Nevada State Park and the smaller urban inter-mix parcels acquired through the Tahoe Bond Act.

The NTRT is funded through the Tahoe Bond Act and implements the Environmental Improvement Plan

(EIP) developed in 1997 for the properties. Phase Two of the EIP is nearly finalized and is expected to be adopted by the TRPA Governing board in the spring, 2010.



Before Treatment



After Treatment

Figure 4. Before and after fuel reduction at Tunnel Creek, Lake Tahoe State Park.

The plan includes a focus on wildfire hazard reduction, forest health and wildlife habitat improvement. Projects have been located in Slaughterhouse Canyon, North Canyon, Spooner Meadow, Van Sickle, Sand Harbor and Tunnel Creek (Figure 4). The majority of the work has been accomplished using NDF conservation crews. Some crew work has been contracted out and there have been two commercial timber harvests. There has been 840 acres of thinning and brush removal and 522 acres of pile burning completed on State Park lands since 2007. NDF's biomass transportation system hauled 885 tons of material to the power plant at Northern Nevada Correctional Center in Carson City. Fuel treatments are currently in progress on 400 additional acres and plans have been completed for 300 more. See Appendix maps 1-4 for project locations. The NTRT also received Round 8, 9, and 10 funding from SNPLMA for fuel reduction projects in the wildland-urban-interface (WUI). The NTRT is expected to complete fuel treatments identified in the 10-year strategy on time or ahead of schedule.

The NDSL forester is responsible for managing the vegetation on the Tahoe Bond Act parcels in the Tahoe Basin. SNPLMA Round 8, 9, and 10 funds have been received for treatment on these lands as well. Since January 2007, NDSL has treated 221 Tahoe Bond Act parcels. Treatments included thinning of over-stocked forest stands and brush reduction. In addition, 23 acres of piles were burned. Tahoe Bond Act expenditures

totaled \$34,000 and SNPLMA funds expended to date are \$111,550. SNPLMA funds are from Round 8 and the treatment portion is 75% complete. Total dollars spent on hand-thinning and pile burning is \$146,500. Parcels treated are located in Douglas and Washoe Counties and the goal is to complete Round 8 thinning treatments in the early 2010 field season. The largest remaining treatment area for Round 8 is Rocky Point which will tie in with State Parks treatment work.

Crews performing treatment and pile burning are NDF, TDFPD, and NLTFPD. Round 8 treatments began in Douglas County October 2008 and continued during the 2009 field season in Washoe County focusing on Crystal Bay and Incline Village. Douglas County parcel treatments continued into the 2009 season with the largest parcel on Daggett Summit (14 acres of initial entry work) completed by TDFPD.

NDSL anticipates burning 52 acres/71 urban lots comprising 2450 cubic yards of biomass and 530 piles beginning fall 2009 and into spring 2010. These piles were generated by SNPLMA funded hazardous fuels reduction treatment dollars.

Round 9 SNPLMA treatments are scheduled to commence in the 2010 field season. Seven parcels have been initially identified for entry in the Glenbrook/Hwy 50 corridor. Appendix maps 5 and 6 show the Tahoe Bond Act parcels and the treatment schedule for each.

Tahoe Douglas Fire Protection District

The availability of funds through Forest Service grants through the NVFSC, SNPLMA funds, and a district wide property tax override allowed TDFPD to expand their wildfire hazard reduction activities beyond defensible space inspections and curbside chipping. With the additional funds the District formed a 20-person fire crew, hired a forester and expanded fuel reduction efforts to larger acreages on lands identified in the CWPP within the district.



Figure 5. Before and after fuel reduction on private lands, Eastshore Lake Tahoe Basin.

The TDFPD hand crew has been extensively involved in fuel reduction projects on privately owned as well as on local-, state- and federal government-owned lands (Figure 5). The TDFPD forester has led the fuel reduction planning and implementation efforts on 432 acres of private and local government lands identified in the CWPP for the Fire District. See Appendix maps 7-9 for the locations of treatment areas. The fire crew has also contracted with the USFS and the State of Nevada to conduct fuel reduction work on 137 acres of state and federally-owned lands.

North Lake Tahoe Fire Protection District

NLTFPD has been actively working to reduce the wildfire threat in their district for many years. Their efforts in public education and proactive fuel management efforts have become a model for communities nationally. The Fire District has completed most of the non-federal areas surrounding their communities identified in the 2004 CWPP and current efforts are focused on high fire hazard areas in the urban core, as well as treating stream environment zones that have been difficult to access due to environmental regulations and high treatment costs.

Funding for work on private and local government-owned lands within the Fire District has come from SNPLMA, the Incline Village General Improvement District and USFS grants through the NVFSC. Using these funding sources, the NLTFPD has conducted fuel reduction treatments on 591 acres of private and local government-owned lands since 2007. Treatments have included hand thinning and pile burning, mechanical and prescribed burning (Appendix map 10).

The NLTFPD hand crews have been treating between 50 and 100 acres of LTBMU lands annually in their district through thinning and pile burning.

USDA-Forest Service, Lake Tahoe Basin Management Unit

The LTBMU manages the largest acreage at in the Lake Tahoe Basin. The 10-year plan prioritizes USFS owned lands for fuel and vegetation treatments. Those areas are largely located adjacent to the Communities at Risk identified in the 10-year Plan. In Nevada those lands with highest priority are identified as WUI lands located in the Kingsbury corridor, along Highway 50 from Roundhill to Logan Shoals, Glenbrook, Slaughterhouse Canyon and perimeter areas around Incline Village and Crystal Bay.

The USFS/LTBMU has completed, or nearly so, fuel reduction projects and treatments on approximately 600 acres of USFS/LTBMU urban lots in Incline Village, 950 acres in the Kingsbury corridor, 956 acres along Highway 50 from Roundhill to Zephyr Cove, and 525 acres in Slaughterhouse Canyon, near Glenbrook (see Appendix maps 11, 12 & 13). Treatments have been accomplished using hand crews and mechanical equipment contractors.

Project planning is underway, (or has been completed) for 3,800 acres of fuel and vegetation treatment projects running north from Zephyr Cove to Marlette Lake (USFS Spooner Project) and approximately 4,200 acres around Incline Village/Crystal Bay and Northwest along the Mt. Rose corridor (USFS Incline Project).

Nevada Fire Safe Council

The NVFSC has been working closely with TRPA and Fire Protection Districts to promote wildfire hazard awareness and defensible space. To encourage compliance with Nevada Revised Statutes 472.120 and recommendations in Living with Fire, the NVFSC developed a rebate program for residents who voluntarily implement defensible space measures on private property. As of December 2009, 456 residents have completed defensible space recommendations and received a rebate. Currently, the average rebate received by participating homeowners is \$827. Because the rebate amount is capped at \$1000, homeowners on average incur 63% of the defensible space costs. The rebate program has been funded with SNPLMA grant funds.

Additionally, the NVFSC has secured California Clearinghouse grants and direct grants from the USFS for defensible space treatment on residential lots throughout all the Nevada neighborhoods resulting in defensible space treatments on 147 lots

Forest Restoration and Rehabilitation

Although the focus of much of the work described above is on fuel and wildfire hazard reduction, restoration of the forest ecosystem is often accomplished by the same projects. The history of forest settlement and use over the past 150 years has significantly changed the Lake Tahoe Basin forest ecosystem, making it more prone to catastrophic wildfires. Generally speaking, the forests contain a greater number of trees, the distribution of tree species is less fire tolerant, the forest is even-aged and there is more biomass (fuel) available to burn. The vegetation management and wildfire hazard reduction efforts conducted by forest land managers and fire protection districts typically address these changes in the forest through selective thinning of the understory and over-story trees, cutting openings for new age classes of trees to establish, and burning of biomass. Consequently, in addition to reducing the fire hazard, these treatments help restore sustainable conditions our forests.

The east shore of Lake Tahoe has not experienced a significant wildfire since the Gondola fire in 2002. Consequently the need for fire rehabilitation since then has been minimal and largely confined to the rehabilitation of fire lines around burn piles.

Public Education

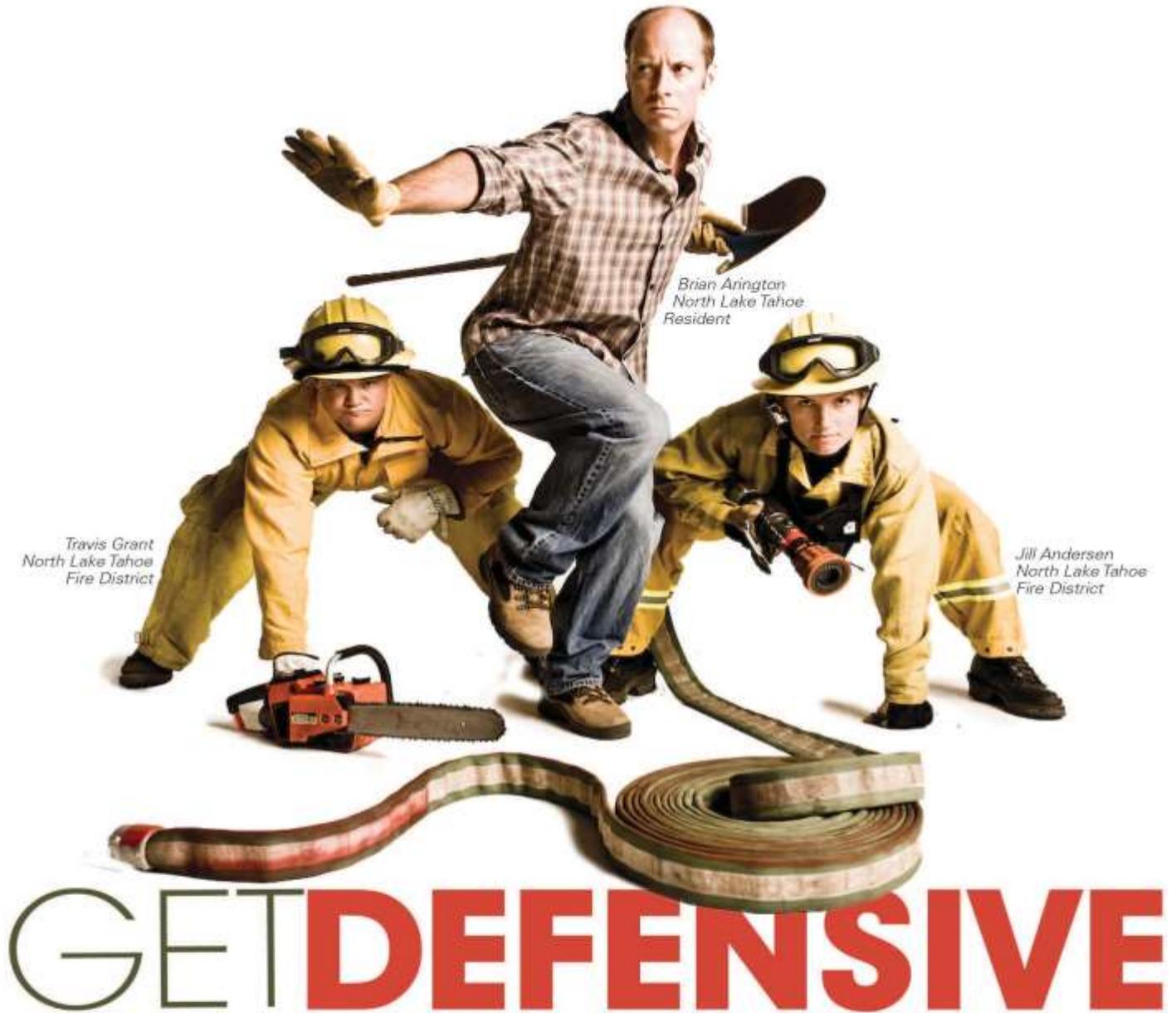
Public education is a critical component of the effort to reduce the threat of catastrophic wildfire at Lake Tahoe. Because public information is a distinct function in the incident command system, the Tahoe Fire and Fuels Team formed a sub-committee to address this important issue.

This sub-committee, the Fire Public Information Team (Fire PIT), is comprised of public education and communications professionals who implemented a comprehensive outreach strategy throughout 2008 and 2009 to raise awareness of wildfire issues at Tahoe and to increase defensible space practices on private properties. Members of the Fire PIT include NVFSC, TRPA, USFS/LTBMU, NLTFPD, the South Tahoe Public Utility District, the Tahoe Resource Conservation District, the Nevada Tahoe Conservation District, as well as the Co-operative Extensions of both the University of Nevada and the University of California, Davis. TRPA provided leadership and oversight for the execution of the outreach campaign, which resulted in development of a clear, concise message for the public. The team created the umbrella message “Healthy Forest-Healthy Lake” as part of a campaign to clear up confusion among property owners about the implementation of fire defensible space and erosion-control measures. Lessons learned from the Angora wildfire pointed to the urgent need for this clarification.

The team is responsible for the successful distribution of 10 press releases and five opinion columns in local and regional newspapers and advertisements in multiple publications. Community events and a host of other activities spread key messages about fire safety and fuels reduction projects at Lake Tahoe. Additional highlights of the Fire PIT’s projects include:

- Coordination to disseminate clear, concise, and consistent messaging with the Living with Fire publication. The team provided fire agencies and the NVFSC with enough copies of the publication to reach every homeowner in the Tahoe Basin. All environmental, land management and fire agencies agreed to use this publication as the message vehicle for the public.
- Developed the “Get Defensive” (see Figure 6) campaign for distribution via billboards and publications.
- Developed and placed print advertisements with “Healthy Forest-Healthy Lake” theme to promote integration of fire safety and Best Management Practices (BMPs).
- Coordinated Tahoe Basin Season-Long Events: block parties, demonstration garden events, Fire Fest, walking tours of fuels projects.
 - Organized media tours in the field throughout the season to showcase fuels reduction work underway by

the Tahoe Fire and Fuels Team.



GET UP TO \$1000 BACK BY CREATING DEFENSIBLE SPACE NOW.

Your efforts at hacking, whacking and trimming away defensible space around your home goes a long way toward winning the battle against wildfires. It also makes you an MVP to your neighbors and your lake. Plus, by doing it now you can score up to \$1000 back in rebates.

Go to tahoefiresafe.com for information.

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FIRE &
FUELS
TEAM**

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Figure 6. Defensible Space Public Education Program Flyer.

Tahoe Regional Planning Agency

The TRPA is increasingly active in addressing wildfire hazard and forest health issues in the Lake Tahoe Basin. The agency is involved in several wildfire hazard planning efforts and has modified its own regulations in an effort to further the wildfire hazard reduction and forest health improvement programs of the land management agencies at Lake Tahoe.

The Bi-State Fire Commission Report contains 30 Recommendations and 55 individual actions that are TRPA specific. Of the 55 action items, TRPA has fully implemented 34 items, partially implemented 9 items and has 12 action items either under development with partners or is in need of funding to complete. Some of the highlights of those actions are as follows:

TRPA Code Changes:

- Increased diameter of trees requiring a permit for removal to 14 inches DBH
- Added a “Defensible Space Assessor” definition to TRPA Code to allow FPD’s to get more Defensible Space inspections completed with trained personnel.
- TRPA accepted the recommendations in the Basin Fire Chiefs’ “Nine-Point Letter”.
- TRPA Advisory Planning Commission (APC)
- TRPA added representation of the Basin Fire Chiefs to the APC in 2007.
- Basin Fire Protection District (FPD) Plan Review
- TRPA has added FPD review of building projects in order to get their input on fire issues during the planning process.
- TFFT Fire Public Information Team (Fire PIT)

Permit Streamlining

- TRPA and the USFS created a Memorandum of Understanding with the USFS to streamline permitting of vegetation management activities.
- Defensible Space/Erosion Control BMP Integration
- Updated Erosion Control BMP requirements to integrate defensible space requirements.

Defensible Space Database Development

TRPA has utilized staff resources to create a defensible space database for the Tahoe Basin Fire Districts. This database is still under construction and Nevada recently awarded TRPA with \$110,500 to continue the effort.

TRPA continues to lead the Fire PIT as a communication and outreach sub-team of the TFFT. TRPA prompted the TFFT to allocate funding to the Fire PIT for an integrated media and communication campaign to raise awareness of wildfire issues at Lake Tahoe and to increase defensible space practices on private properties. The campaign includes:

- A series of columns running in local newspapers educating readers on fire services, defensible space and fire behavior.
- “Get Defensive” advertisements in publications and billboards
- Direct mail to all Nevada and California property owners
- Website and social media.

TRPA has represented the TFFT at numerous, high-profile community events to promote forest fuel reduction and defensible space. TRPA coordinated the design and layout of an oversized, portable display panel for events. The panel debuted at the annual Lake Tahoe Forum in Roundhill, NV in August, 2009.

TRPA communications staff regularly assists Nevada fire districts such as TDFPD to publicize fuel reduction projects by writing and disseminating press releases and assisting in design of project signage and flyers. The Zephyr Cove Park, Friday's Station, and Stateline fuel reduction projects received this type of assistance from TRPA.

Individual Landowners

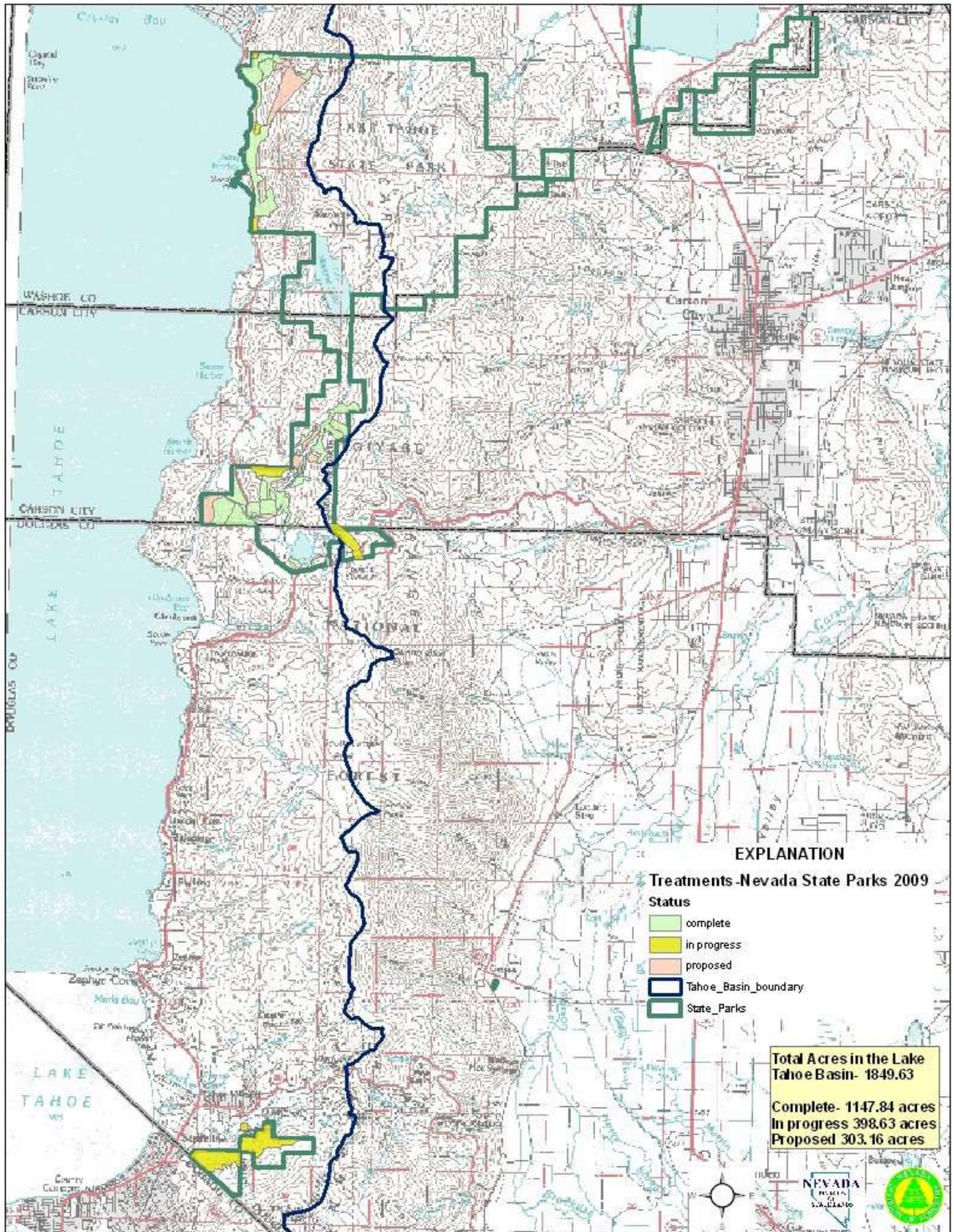
There is no up to date or comprehensive information source which can provide the cumulative actions of Lake Tahoe landowners have taken to provide wildfire protection on their properties. The Defensible Space database under development by the TRPA will be a useful tool for tracking the percent of properties within the Basin that have defensible space. The fire protection districts will populate the database once it's completed with data from their defensible space inspections.

Biomass Utilization

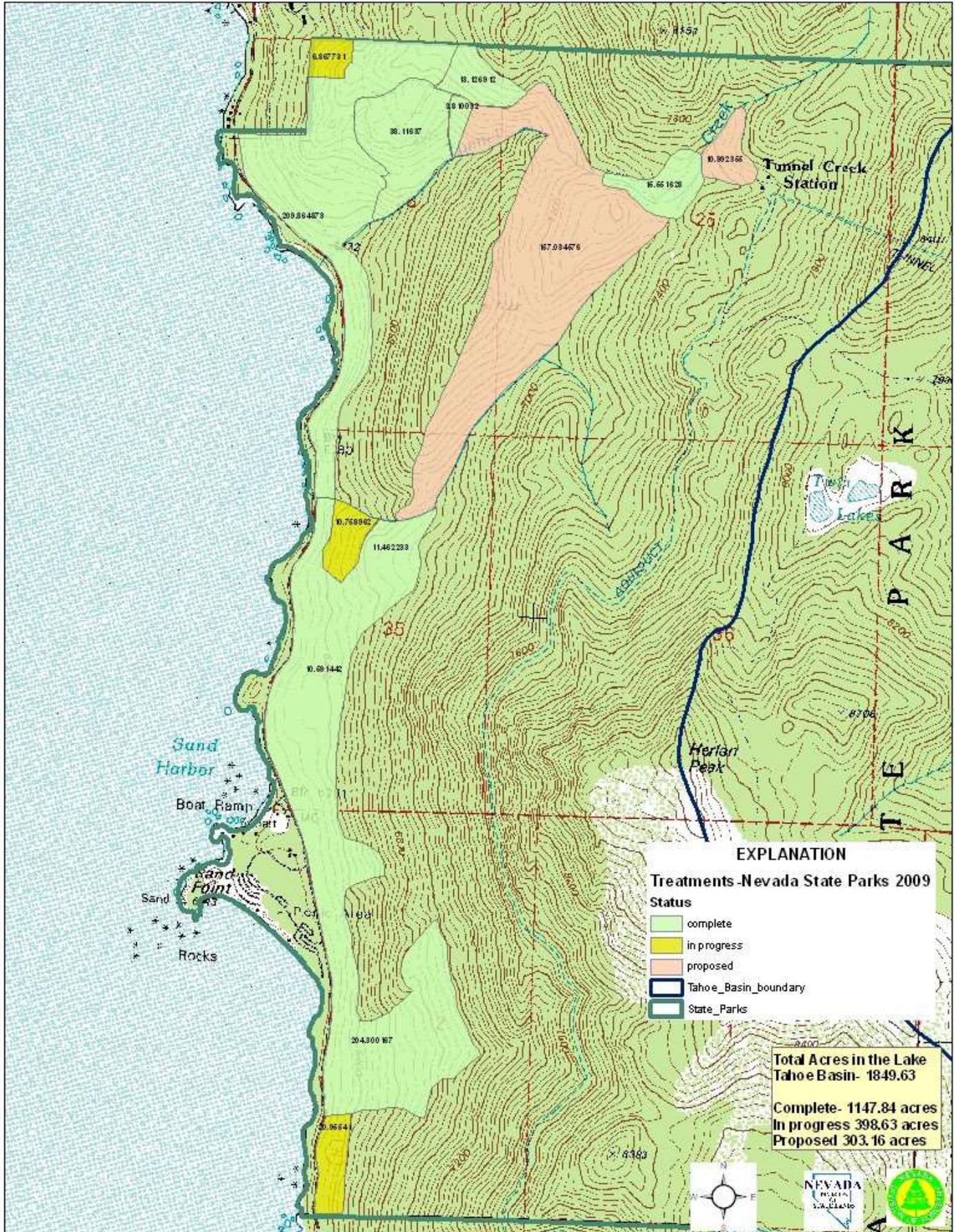
While much of the raw material resulting from fuel reduction and forest restoration treatments is broadcast on the forest floor or piled for burning, when it is feasible, the material is removed and transported to an end user. The nearest end user to the Lake Tahoe Basin is the co-generation facility at the Northern Nevada Correctional Center. Since 2007 approximately 26,588 tons of biomass has been delivered from the Lake Tahoe Basin to the plant. Other uses for cut material have been:

- Chips/mulch for on-site erosion control projects
- Firewood
- Sawlogs
- Co-generation at Loyalton, California
- High quality chips to the Rocklin Chipboard manufacturer, Rocklin, California

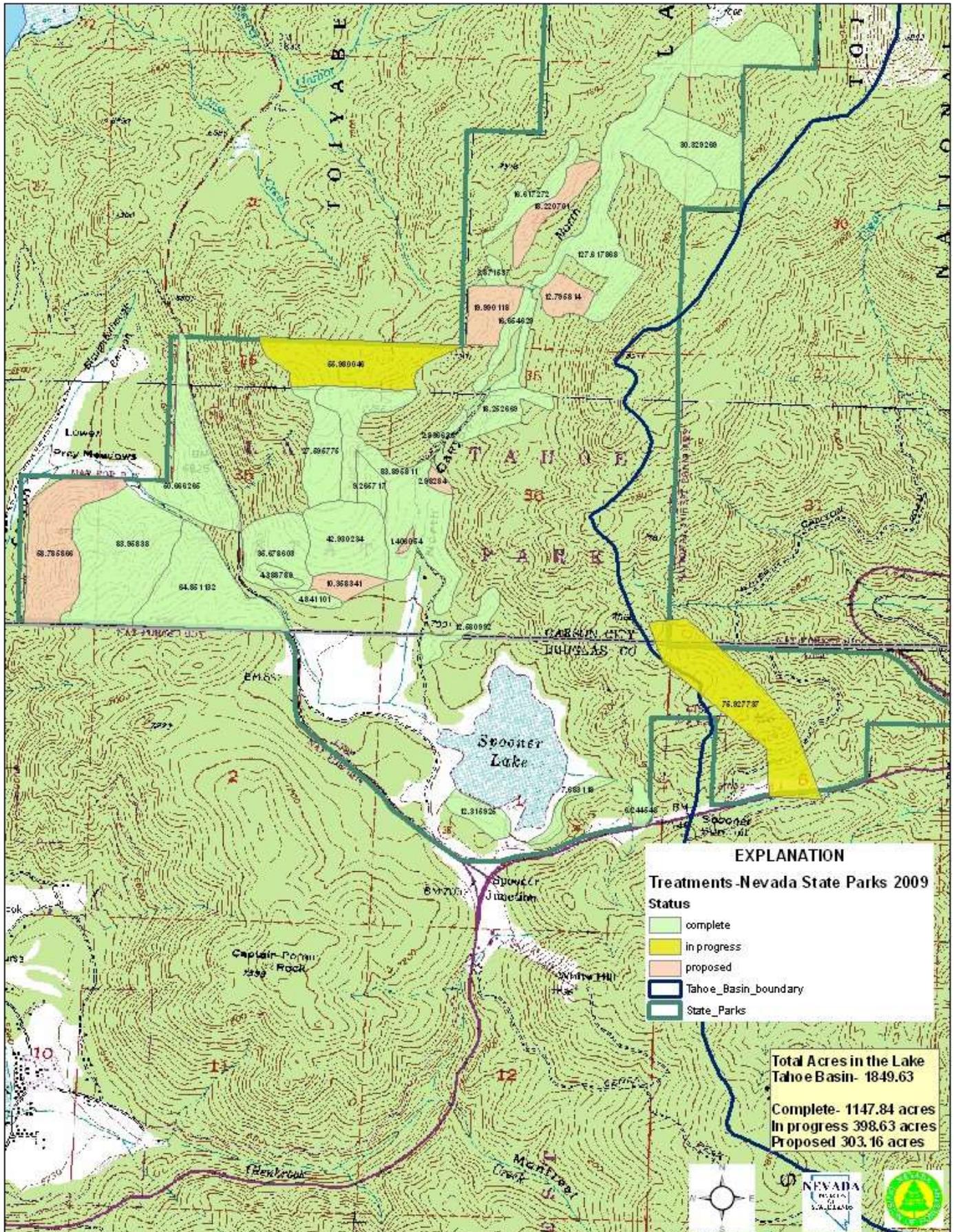
Appendix



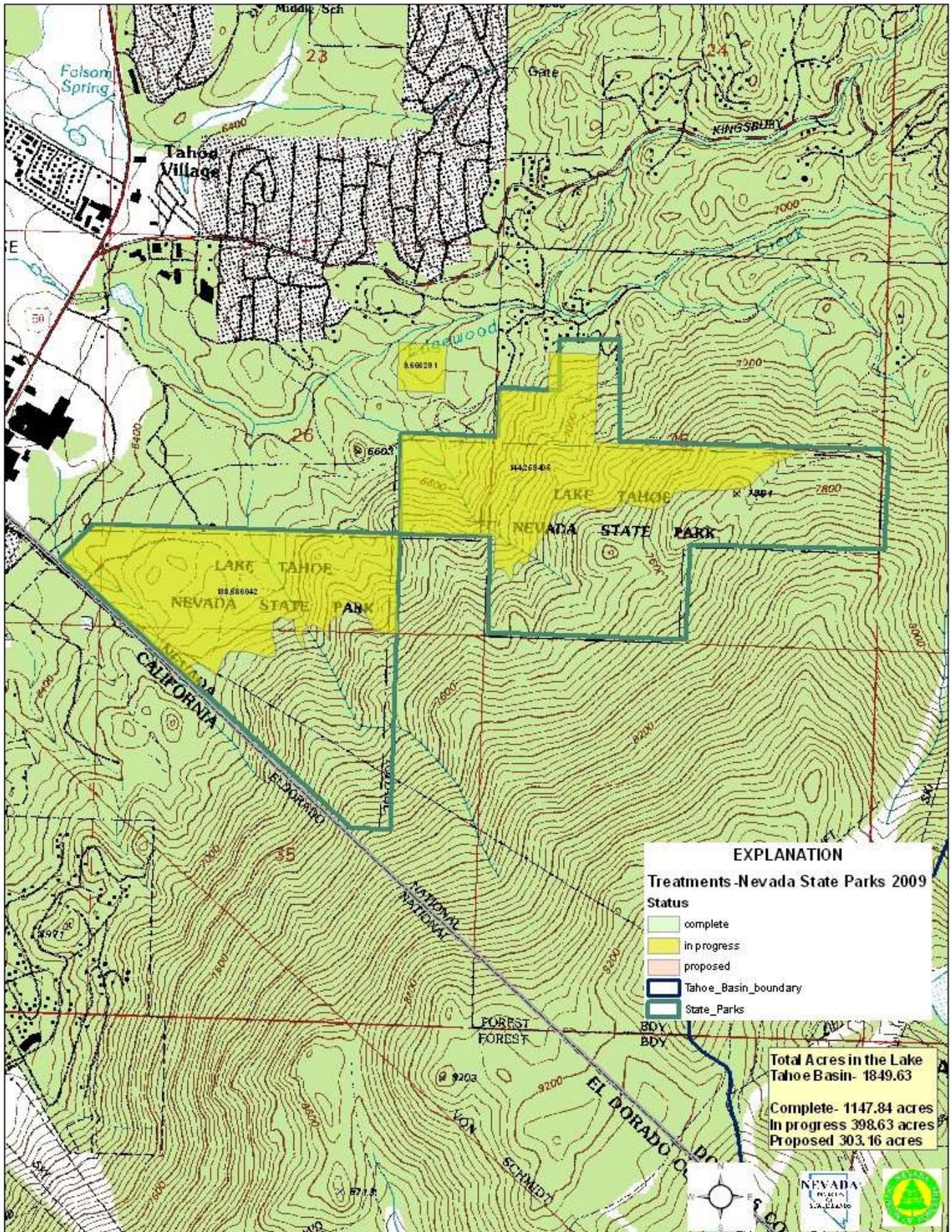
Map 1. Overview Map of Treatment Areas Done by the NTRT and NDF at Lake Tahoe State Park



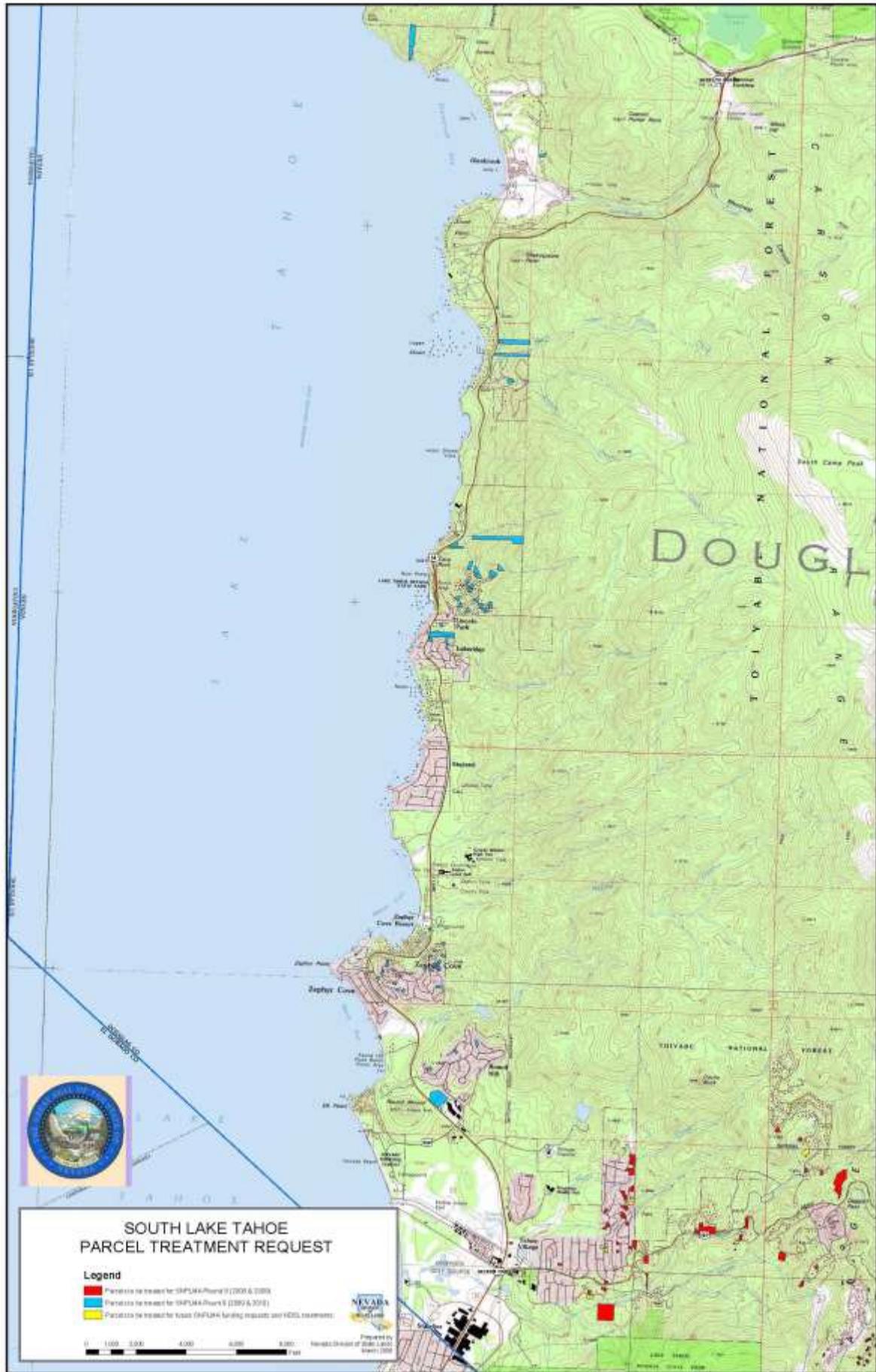
Map 2. Sand Harbor/Tunnel Creek Treatment Areas.



Map 3. Spooner Lake Treatment Areas

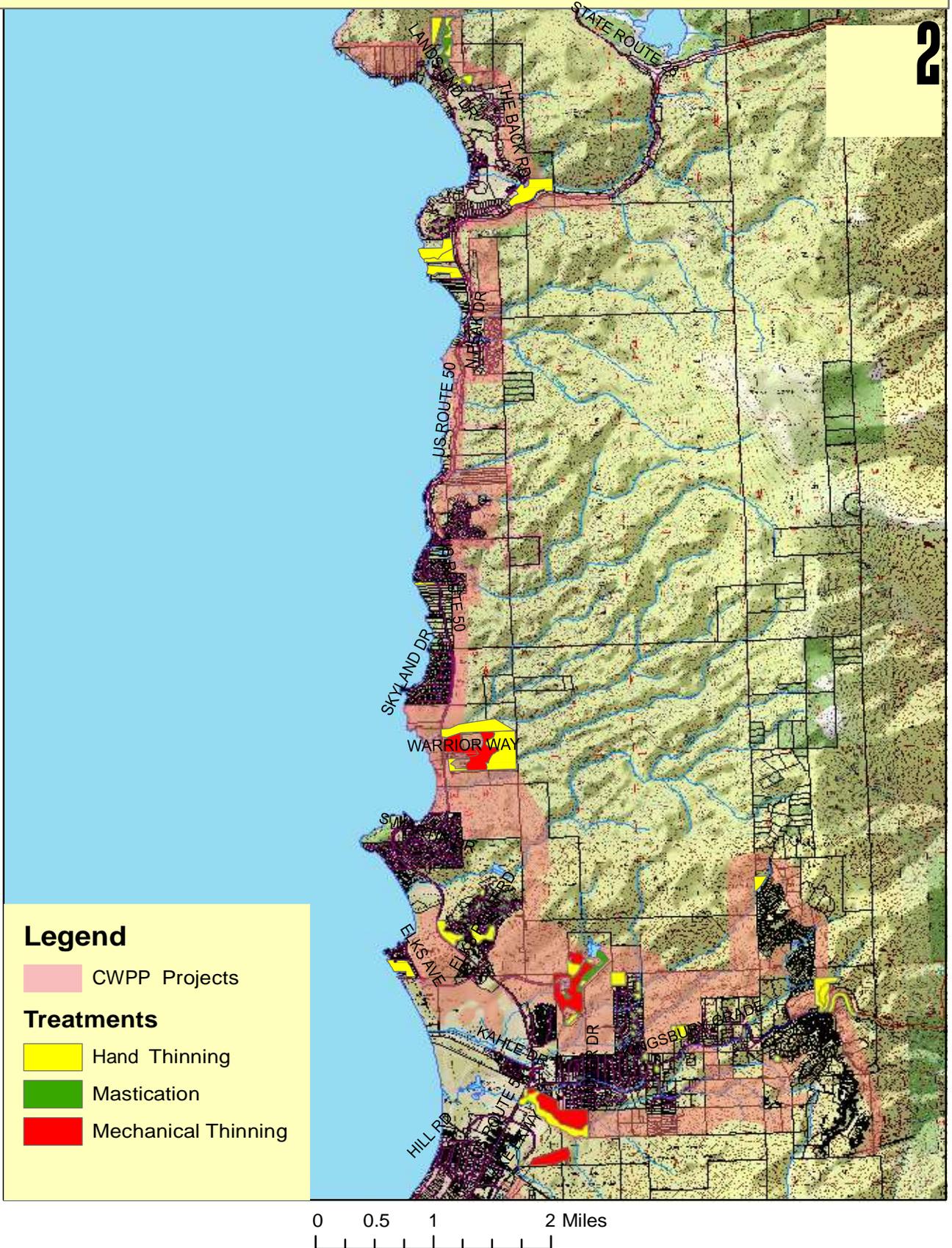


Map 4. Van Sickle Treatment Areas.



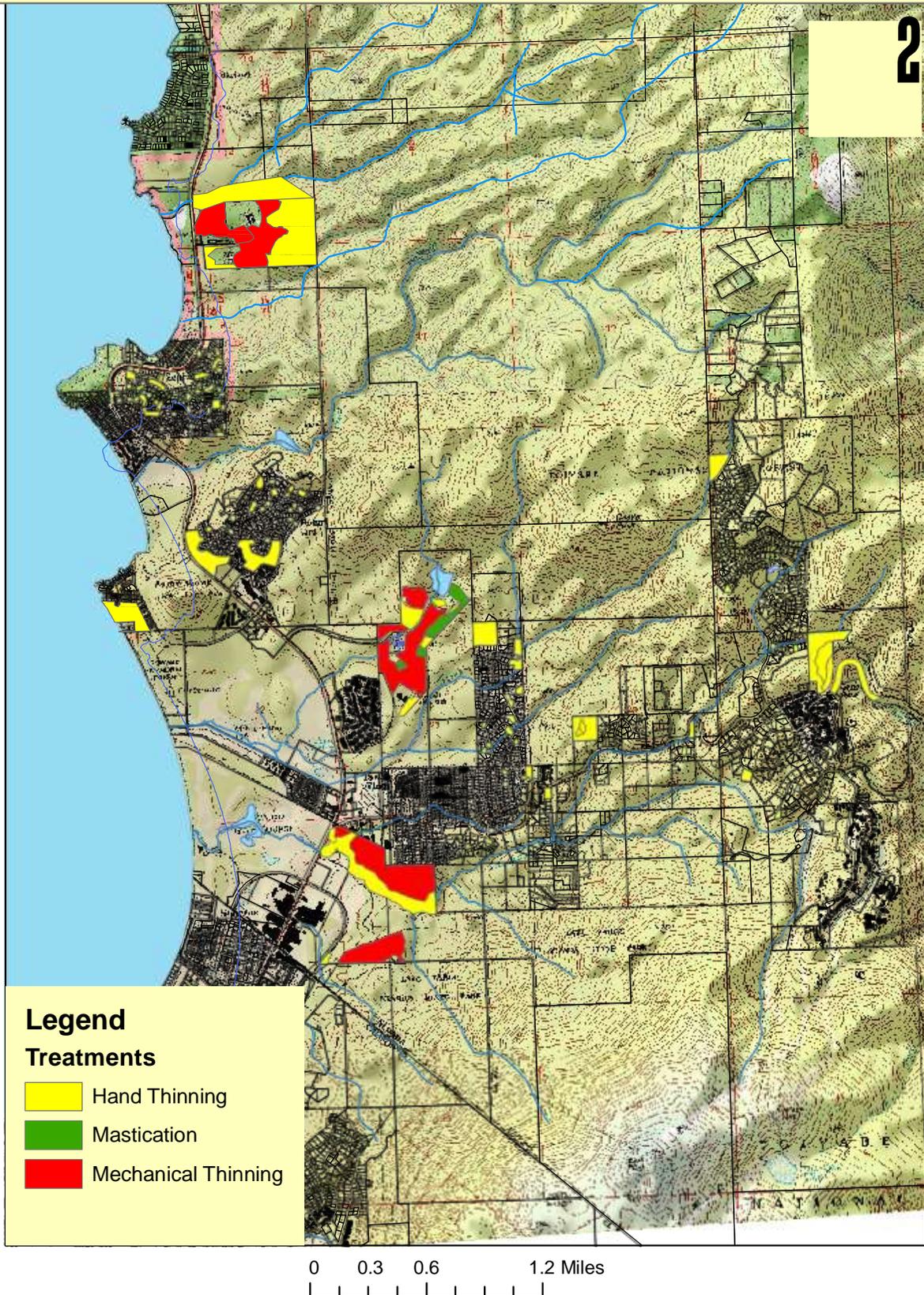
Map 6. Treatment Areas Tahoe Bond Act Parcels-South Lake Tahoe.

TDFPD CWPP Projects and 2008 and 2009 Field Season Accomplishments



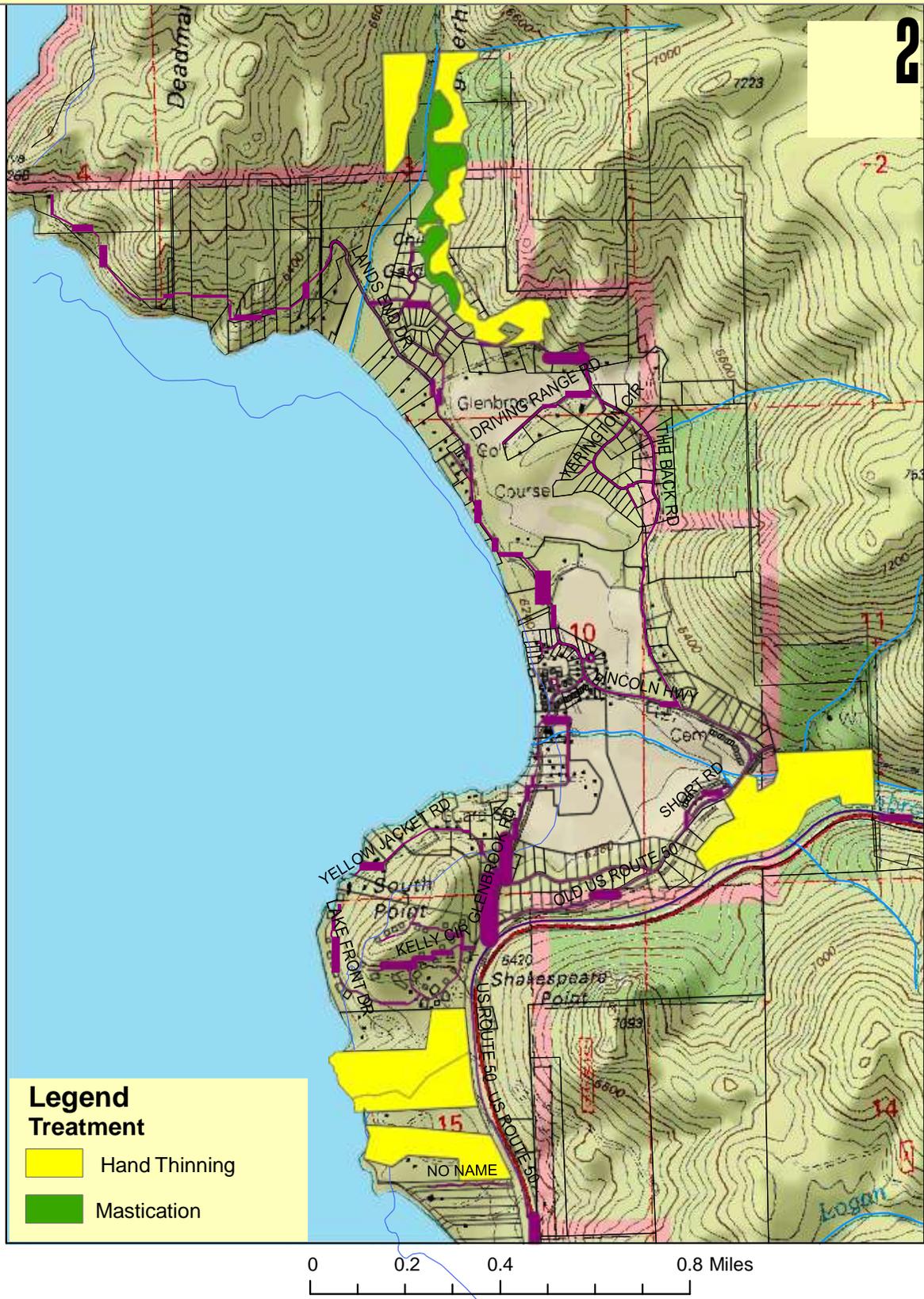
Map 7. TDFPD Projects-Overview.

TDFPD Kingsbury Region Fuels Reduction Projects 2008 and 2009 Field Season

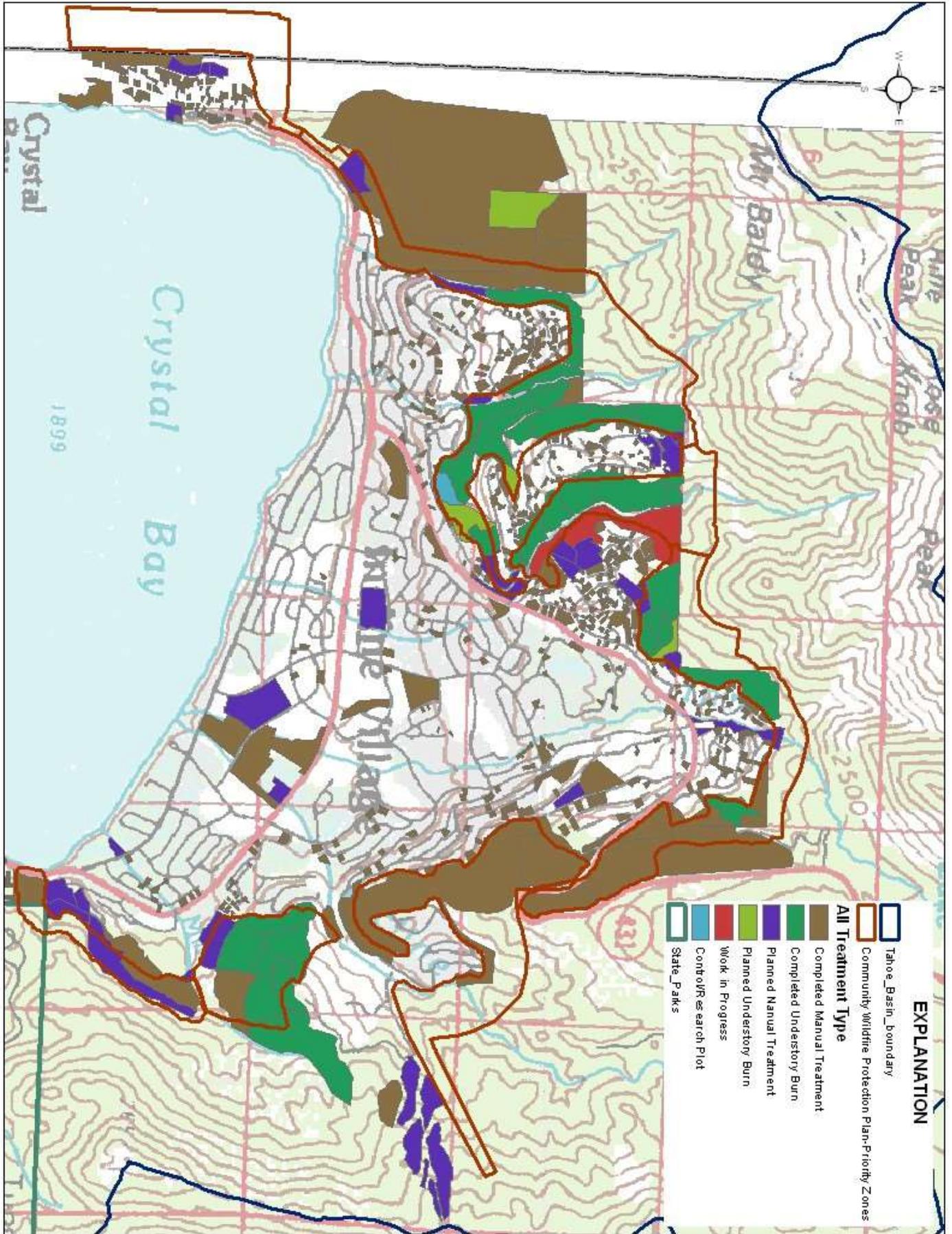


Map 8. TDFPD Projects-Kingsbury.

TDFPD Glenbrook Region Fuels Reduction Projects 2008 and 2009 Field Season

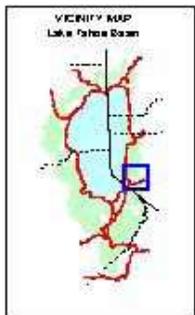
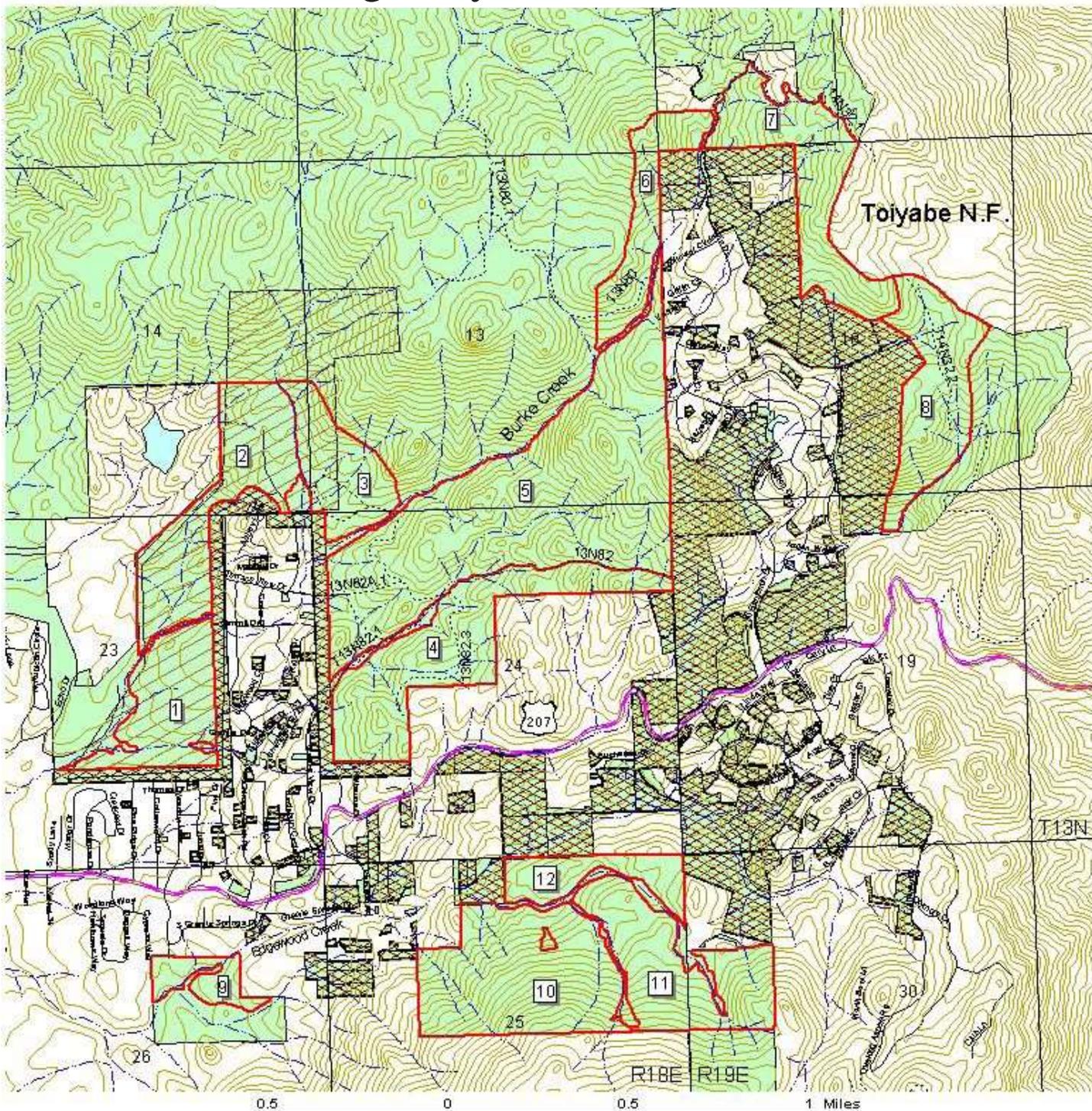


Map 10. NLTFPD Projects- All years.



Map 9. TDFPD Projects-Glenbrook.

Kingsbury Treatment Units



- National Forest
- Other
- Planning Stands- 997 Acres
- Protected Activity Center
- Accomplished/Planned Urban Lot Treatments
- 5 Unit Number

| | |
|------------------|-------------------|
| Unit 1-60 Acres | Unit 7-79 Acres |
| Unit 2-84 Acres | Unit 8-71 Acres |
| Unit 3-48 Acres | Unit 9-19 Acres |
| Unit 4-103 Acres | Unit 10-115 Acres |
| Unit 5-259 Acres | Unit 11-82 Acres |
| Unit 6-45 Acres | Unit 12-32 Acres |



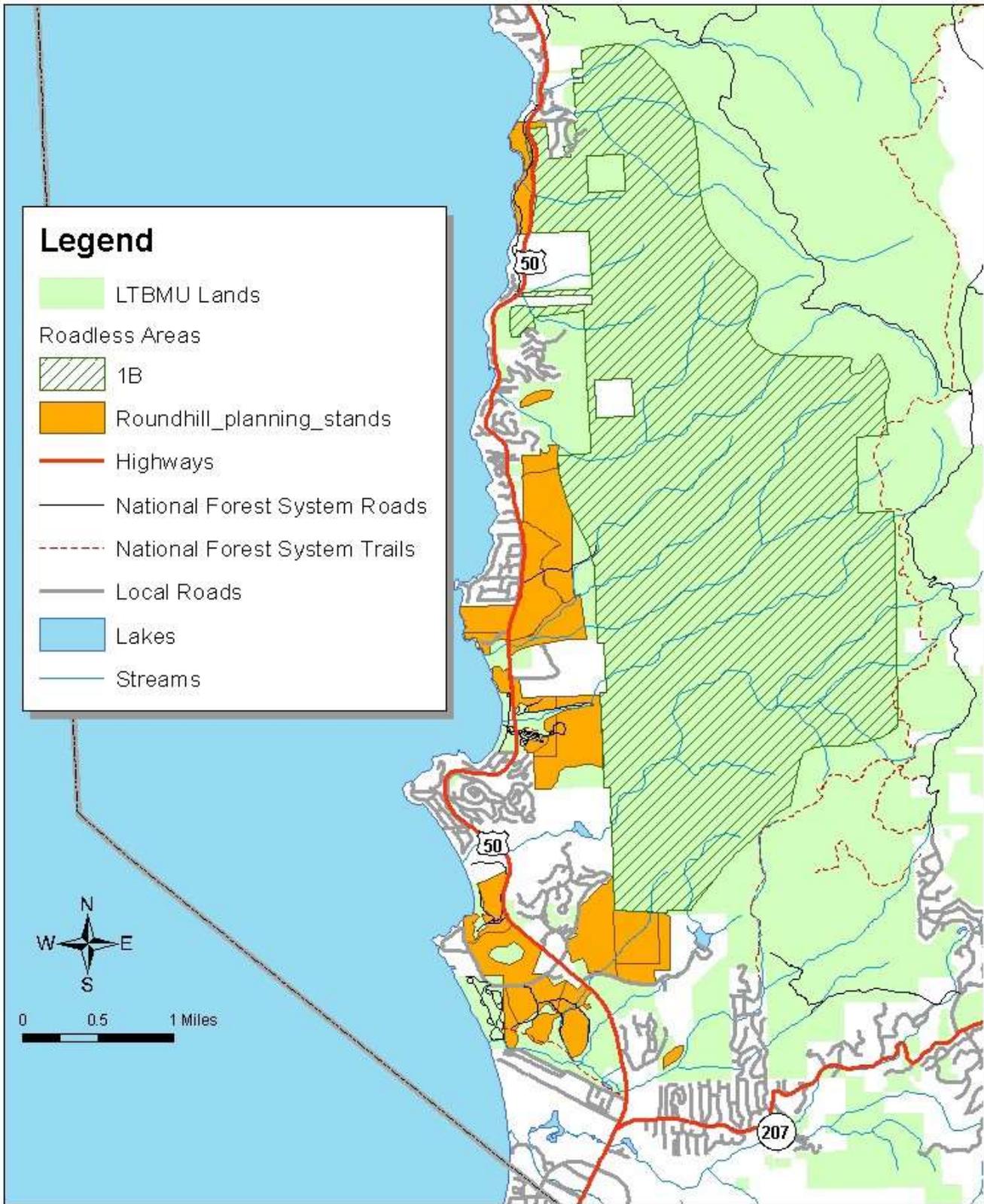


USDA Forest Service
Lake Tahoe Basin Management Unit

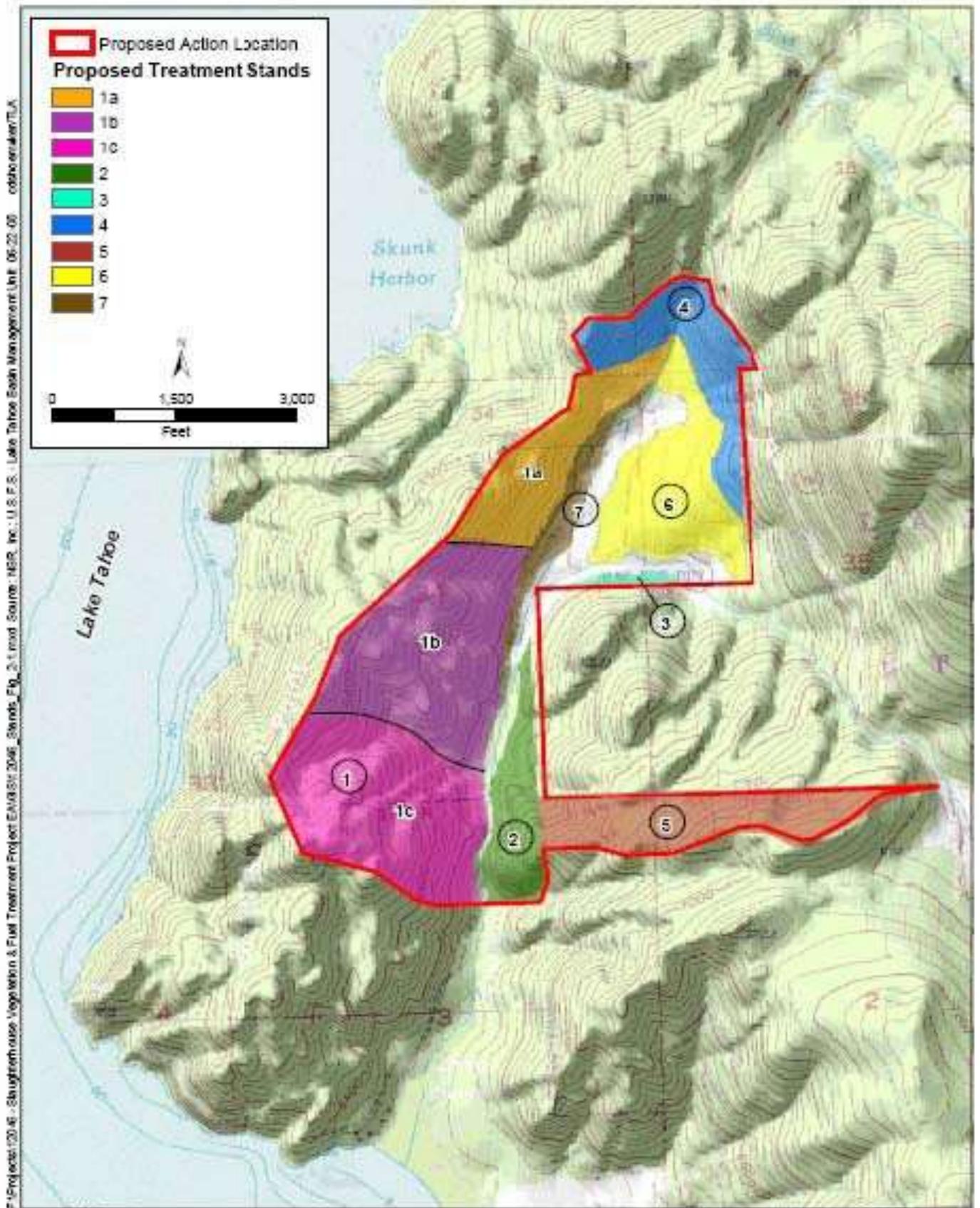
This map is a derivative work of the National Forest Inventory and Planning System (NFIPS) data. It is not a legal document and should not be used for legal purposes. The map is provided as a service to the public and is not intended to be used for any other purpose. The map is not a substitute for a site visit or other field data. The map is not a substitute for a professional survey or other professional services. The map is not a substitute for a professional engineering or other professional services. The map is not a substitute for a professional geologist or other professional services. The map is not a substitute for a professional biologist or other professional services. The map is not a substitute for a professional ecologist or other professional services. The map is not a substitute for a professional environmental scientist or other professional services. The map is not a substitute for a professional environmental engineer or other professional services. The map is not a substitute for a professional environmental planner or other professional services. The map is not a substitute for a professional environmental manager or other professional services. The map is not a substitute for a professional environmental analyst or other professional services. The map is not a substitute for a professional environmental consultant or other professional services. The map is not a substitute for a professional environmental scientist or other professional services. The map is not a substitute for a professional environmental engineer or other professional services. The map is not a substitute for a professional environmental planner or other professional services. The map is not a substitute for a professional environmental manager or other professional services. The map is not a substitute for a professional environmental analyst or other professional services. The map is not a substitute for a professional environmental consultant or other professional services.

Map 11. USFS/LTBMU Projects- Kingsbury.

Roundhill Fuels Reduction Project



Map 12. USFS/LTBMU Projects- Roundhill.



North State Resources, Inc.

LTBMU - Slaughterhouse Fuels Environmental Assessment

Figure 2-1
Proposed Treatment Stands

Map 13. USFS/LTBMU- Slaughterhouse Treatment Units.

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Addendum

2010 Accomplishments

2010 Accomplishments

This report is an addendum to the original “Report to Nevada State Legislature-AB75: Fire-Fuels-Forest Restoration Activities and Accomplishments at Lake Tahoe, NV”, and covers activities on the Nevada side of the Lake Tahoe Basin during calendar year 2010. The reader is referred to the original report for background and previous years’ activities and accomplishments dating to 2007 rather than repeating the information here.

The land management agencies, fire protection districts and NGOs involved in fire prevention and fire hazard reduction had another successful year. In total, approximately 900 acres were treated for fuel reduction. Treatments included thinning, slash chipping and burning.

Planning for future fuel reduction projects has been completed for large acreages of private, state and federal lands.

Both of the fire protection districts on Lake Tahoe’s east shore are using a Basin-wide data base developed by TFFT to input and track defensible space evaluations and compliance. This data-base is currently being populated by input from the fire district staff and will be ready for trials next spring.

Fuel reduction work since the Blue Ribbon Commission has focused on areas identified in the Multi-jurisdictional 10-year plan. These areas are primarily close to urbanized development and on relatively easily accessible ground, commonly referred to as the “low hanging fruit”. As this “low hanging fruit” is picked, the remaining terrain needing treatment is less accessible and consequently more expensive to treat. Cost per acre to treat the remaining areas will increase and funding will not go as far. Coupled with anticipated decreases in one of the primary funding sources, SNPLMA, annual accomplishments will likely begin to decrease in the near future.

The loss of the co-generation power plant at the Northern Nevada Correctional Center in Carson City removed the primary repository for chipped material from fuel reduction treatments on the east shore of Lake Tahoe. This has reduced the amount of slash treatment using chippers and increased the reliance on burning.

The increasing difficulty with site access combined with the loss of an end user for chipped material makes the ability to use fire in accomplishing wildfire hazard reduction goals increasingly important. A concern of forest managers at Lake Tahoe, and indeed across the western U.S., is the anticipated restriction on the use of fire as a management tool due to concerns about its impact on air quality. It is critical that this important tool is not removed from land manager’s tool kit.

Nevada Tahoe Resource Team - Lake Tahoe State Park

The NDF forester assigned to the NTRT is responsible for hazard reduction in Lake Tahoe State Park. This past year he focused on the Van Sickle property in Stateline, North Canyon at Spooner Lake, and Tunnel Creek and Sand Harbor on the north end of the park.

Funding for the work conducted in 2010 came from both the Tahoe Bond Act and the Southern Nevada Public Land Management Act (SNPLMA). Bond act funds were used to complete 165 acres of thinning and brush removal and 45 acres of pile burning. Fuel treatment is in progress on an additional 223 acres.

The focus of work funded by rounds 8, 9, 10 and 11 of SNPLMA has been in the wildland/urban interface. Three hundred forty five acres are being treated in the Van Sickle property, 100 acres and 80 acres are planned

for burning in Tunnel Creek and Slaughterhouse canyon respectively. Additionally, 100 acres of fuel treatment has been planned and approved for Sand Harbor.

Nevada Tahoe Resource Team - Tahoe Bond Act Urban Parcels

The State Lands forester assigned to the NTRT is responsible for managing the vegetation and fuel on sensitive urban parcels purchased through the Tahoe Bond Act. Left unmanaged, these parcels represent a significant hazard to adjacent privately owned lands in urban areas. The important fuel reduction work conducted on 108 acres of urban parcels in 2010 was funded with SNPLMA rounds 8 and 9. It is important to note that many of these parcels being treated tie in with other agency work such as NDF, USFS and the fire protection districts adding to the eventual impact of treated area.

Round eight funding was used to complete the vegetation/fuel treatment on 28 parcels located in Incline Village/Crystal Bay and Upper Kingsbury at Dagget summit, and along Burke creek in Douglas County. Fuel reduction work using round nine funds focused on urban lots located along Highway 50, between Glenbrook and Round Hill. Fifty-seven parcels were treated during the 2010 field season. Lots were located in Round Hill Zephyr Heights, Cave Rock Estates, Logan Creek Estates and Lake Ridge Estates. Additionally, work began on five acres in Glenbrook which will be completed in 2011.

Tahoe Douglas Fire Protection District

The TDFPD has been aggressively pursuing funding for its fire prevention and fuel reduction programs. Funding sources have come from special taxes on residents in the district, as well as grant funding from SN-PLMA, and the FEMA pre-disaster mitigation program.

The district conducted over 200 free defensible space evaluations in 2010. The district is applying for funding to support a district-wide defensible inspection program. If successful, the program would employ two to three defensible space inspectors to blanket the entire district.

In 2010 the TDFPD implemented fuel reduction treatments on federal and state owned lands as well as on privately owned properties. This year all fuel reduction was conducted by hand and amounted to 163.5 acres of thinning on private, 28.5 acres of thinning on state and 2 acres of thinning on federally owned lands.

North Lake Tahoe Fire Protection District

The NLTFPD is responsible for implementing fuel reduction and forest restoration projects within the communities of Incline Village and Crystal Bay. Funding for this work comes from several sources including local property taxes, State Fire Assistance Grants and SNPLMA.

In 2010 the district hand-thinned 165 acres and conducted pile burning on 110 acres within the district. Additionally, 30 acres of understory, controlled burning was completed. Ninety one additional acres were thinned in preparation for understory burning next season.

The district provides defensible space evaluation and curbside chipping services to district residents on request. In 2010 district staff performed 191 evaluations, issued 103 tree removal permits and chipped 142 curbside piles.

Prevention education programs in the district included a Fire Adapted Community workshop, an annual pancake breakfast and presentation to local associations and volunteer groups. The district also publicizes their fuel reduction programs through their website, an information board in a local market, mailbox stuffing campaigns and through frequent press releases. The district collaborated with the Nevada Fire Safe Council and the Nevada Tahoe Conservation District to host a Tahoe Wildfire Awareness Week event. Planning is in progress to install an interpretive trail along a popular walking trail in a local drainage that highlights hand thinning and understory burning. Funding is provided by NDF and USFS.

USDA-Forest Service, Lake Tahoe Basin Management Unit

The Forest Service focused on work in the Round Hill and Slaughterhouse Canyon areas, in addition to the urban lots they manage. They finished work on 10 acres of mechanical thinning in Round Hill and 15 acres of hand thinning in Slaughterhouse Canyon. Additionally, they completed three acres of initial thinning on urban lots and 45 acres of second entry thinning.

These figures represent what the Forest Service calls “foot print” acres. Although footprint acres report only an acre of treatment, several various treatments often occur on any given acre before it has been completed. This can lead to some confusion regarding reported numbers.

The Forest Service awarded two contracts for work on their “Spooner project” in 2011. One contract is for 95 acres of hand thinning and the other is for 164 acres of mechanical thinning.

Planning is ongoing for 3,500 acres of treatment on the “Incline project” which includes the pertinent areas around Incline Lake. Planning for this project should be completed in 2011. Planning for Aspen restoration has been completed. Aspen restoration projects are included in the Spooner and Incline projects. Others will be scheduled under the Aspen Restoration Categorical Exclusion.

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Addendum

2011 Accomplishments

2011 Accomplishments

This report is an addendum to the original “Report to Nevada State Legislature-AB75: Fire-Fuels-Forest Restoration Activities and Accomplishments at Lake Tahoe, NV”, and covers activities on the Nevada side of the Lake Tahoe Basin during calendar year 2011. The reader is referred to the original report for background and previous years’ activities and accomplishments dating to 2007 rather than repeating the information here.

The land management agencies, fire protection districts and Non-Governmental Organizations (NGO) involved in fire prevention and fire hazard reduction had another successful year. In total, approximately 2,360 acres were treated for fuel reduction. Treatments included thinning, slash chipping and both pile and broadcast burning.

Planning for future fuel reduction projects is underway or has been completed for large acreages of private, state and federal lands.

Fuel reduction work since the Blue Ribbon Commission has focused on areas identified in the Lake Tahoe Multi-jurisdictional 10-year plan. These areas are primarily located within the Wildland-Urban Interface and on relatively easily accessible ground, commonly referred to as the “low hanging fruit”. As this “low hanging fruit” is picked, the remaining terrain needing treatment is less accessible and consequently more expensive to treat. Cost per acre to treat the remaining areas will increase and funding will not go as far. Coupled with anticipated decreases in one of the primary funding sources, Southern Nevada Public Land Management Act (SNPLMA), annual accomplishments will likely begin to decrease in the near future.

The loss of the biomass co-generation power plant at the Northern Nevada Correctional Center in Carson City removed the primary repository for chipped material from fuel reduction treatments on the east shore of Lake Tahoe. This has reduced the amount of slash treatment using chippers and increased the reliance on burning. As the fuel treatment areas move further from easy access points and opportunities for utilization of the biomass remain minimal, the ability to use fire in accomplishing wildfire hazard reduction goals becomes increasingly important. A concern of forest managers at Lake Tahoe, and indeed across the western U.S., is the anticipated restriction on the use of fire as a management tool due to concerns about its impact on air quality. It is critical that this important tool is not removed from land manager’s treatment alternatives.

The Nevada Division of Forestry’s Biomass Utilization Program continues to work towards finding utilization opportunities for biomass generated from fuel reduction projects. Biomass (chips and cord wood) generated from several agency fuel reduction efforts has been used by the agency’s nursery program as mulch. Cord wood has been stored at agency property for sale to fire wood vendors. An experimental project is underway to produce biochar with some of the biomass; biochar is a fine-grained, highly porous charcoal that helps soils retain nutrients and water.

Nevada Division of Forestry

The Nevada Division of Forestry partnered with Nevada Tahoe Conservation District (NTCD), Tahoe Regional Planning Agency (TRPA), CAL-FIRE and the University of Nevada Cooperative Extension (Extension) to acquire a \$290,00 grant through the USFS State and Private Forestry Redesign Program to create and implement a Living with Fire (LWF) educational campaign with a uniform, consistent message on the wildfire hazard and water quality issues in the Lake Tahoe Basin (Basin) for delivery to homeowners by the land use and natural resource planning agencies. The project has been managed by the Division of Forestry's Urban and Community Forestry Program Manager.

The educational campaign complements the numerous fuel reduction and water quality education projects taking place in the Basin. Over a 3-year period, activities have included:

- Two week-long Basin Wildland Fire Awareness Week events to disseminate Basin specific information and showcase past, present and future interagency efforts.
- Two Basin-wide Lake Tahoe Basin Wildfire Summits to gather community leaders, public officials, fire professionals, regulatory agencies and other stakeholders to discuss strategies for reducing fire risk and improving water quality, forest health and livability.
- Five Community Conservation seminars at various locations around the lake customized for the audience and presented by resource managers, agency professionals who issue permits for tree removal and defensible space prescriptions, foresters, tree care workers, homeowners, construction and development professionals.
- Seminars for private landowners to offer technical assistance and education on managing vegetation to reduce the risk of storm water runoff, improving forest health and reducing fire hazards, and
- Two self-guided demonstration projects and signage related to fuels reduction and fire-safe landscaping.

All projects have promoted Best Management Practices (BMPs) developed by the land use agencies for reducing water runoff, improving water quality and implementing defensible space practices. Outreach utilized media such as newspaper, TV, radio, handouts, informational packages, direct mailings and a LWF website.

Nevada Tahoe Resource Team - Lake Tahoe State Park

The NDF forester assigned to the Nevada Tahoe Resource Team (NTRT) is responsible for wildfire hazard reduction and forest restoration in Lake Tahoe State Park (LTSP). This past year he focused on the Van Sickle property in Stateline, Slaughterhouse Canyon just north of Glenbrook, and Tunnel Creek and Sand Harbor on the north end of the park. Accomplishments include 247 acres of thinning and 113 acres of burning. For the first time NDF conducted 23 acres of broadcast burning on LTSP lands in the Tunnel Creek drainage. Plans are in place to burn an additional 77 acres over the next two seasons. Figures A-1, 2 and 3 show completed and planned work areas.

Projects in North Canyon, Slaughterhouse Canyon and the Sand Harbor area are restoring stream environment zones, aspen trees and other forest community types across the park landscape to create a sustainable vegetation pattern on a large scale that will be more resilient to wildland fire and the effects of changing climate. In addition to affording more protection to natural resources and LTSP infrastructure, treatments are improving wildlife habitat and establishing a new age class of trees.

The primary source of funding for the work conducted in 2011 came from the Tahoe Bond Act, with supplemental funding from the Southern Nevada Public Land Management Act (SNPLMA).

Nevada Tahoe Resource Team - Tahoe Bond Act Urban Parcels

The State Lands forester assigned to the NTRT is responsible for managing the vegetation and fuel on sensitive State-owned urban parcels purchased through the Tahoe Bond Act. Left unmanaged, these parcels represent a significant hazard to adjacent privately owned lands in urban areas. The important fuel reduction work conducted on 77 acres of urban parcels in 2011 was funded with SNPLMA rounds 8, 9 and 10. It is important to note that many of these parcels being treated tie in with other agency work such as NDF, USFS and the fire protection districts leading to greater cumulative impacts of treated area.

SNPLMA round eight funding was used to complete the pile burning on 21 acres in Kingsbury in Douglas County. Fuel reduction work using round nine funds focused on urban lots located along Highway 50, between Glenbrook and Round Hill. Sixteen acres were thinned and an additional 14 acres of piles were burned. Lots were located in Round Hill, Zephyr Heights, Cave Rock Estates, Logan Creek Estates and Lake Ridge Estates. Round 10 funds were used to begin work in Incline Village/Crystal Bay. Seven acres were thinned and piled for burning next year.

A Western States Fire grant from the USFS-State and Private Forestry provided supplemental funding that was used to treat 19 acres in Incline Village by thinning dense stands of trees. Figures A-4 and 5 show treatment areas on Tahoe Bond Act parcels

Tahoe Douglas Fire Protection District

Funding for the Tahoe Douglas Fire Protection District (TDFPD) fuel reduction program has come from special taxes on residents in the district, as well as grant funding from SNPLMA, and the Federal Emergency Management Agency (FEMA) pre-disaster mitigation program.

During 2011 the District began inspecting every residential property in the District using fire engine companies to complete the inspections. Homeowners were then mailed the results of the blanket inspections. All inspections, blanket or special request, are tracked in a defensible space database for data tracking. The District completed almost 450 blanket inspections in 2011. The District staff also issues TRPA tree removal permits to homeowners who need to remove trees larger than 14 inches in diameter in order to create defensible space.

In 2010 the TDFPD implemented fuel reduction treatments on privately owned properties as well as state owned lands. This year all fuel reduction was conducted by hand and totaled 112 acres of thinning, 97 acres on private lands and 15 acres on state owned lands. Figure A-6 shows areas of work in 2011

The District's Zephyr Fire Crew responded to wildland fires in Arizona, New Mexico and Nevada in 2011. A tactical decision was made in 2011 to increase the number of fire assignments the crew responded to in order to preserve grant funding for the years when the fire hazard would be higher and there is a greater likelihood of fire in the Lake Tahoe Basin

North Lake Tahoe Fire Protection District

The North Lake Tahoe Fire Protection District (NLTFPD) is responsible for implementing fuel reduction and forest restoration projects within the communities of Incline Village and Crystal Bay. Funding for this work in 2011 came from an NDF State Fire Assistance Grant, USFS grant through the Nevada Fire Safe Council, and SNPLMA.

The District attends several community events annually to provide information on its fuels reduction, curbside chipping, and defensible space programs. Defensible Space evaluations are provided free of charge on a voluntarily basis, but are required for new construction and major remodels. TRPA Tree Removal Permits were provided to remove fire hazard trees over 14” in diameter. The District completed 219 evaluations in 2011.

The curbside chipping service is also provided free of charge to all Incline Village/Crystal Bay residents. Crews serviced 191 chipping requests in 2011, creating about 200 cubic yards/50 dry tons of woodchip. About 1/3 of the chipped material was left on site and the remainder was hauled and dumped at a transfer facility.

NDF worked with the Nevada Tahoe Conservation District in 2011 to develop and install a post-and-pamphlet interpretive trail in the Wood Creek drainage (see figure A-7a and A-7b). The pamphlet discusses the effects of fuels treatments and why they are implemented.

In 2011 the district hand-thinned 194 acres in preparation for pile and/or broadcast burning completed treatments on 119 acres of private and general improvement district lands. Additionally, 54 acres of understory, controlled burning was completed. Figure A-8 shows an overview of work in the District.

USDA-Forest Service, Lake Tahoe Basin Management Unit

The US Forest Service’s fuel reduction and forest restoration work in 2011 was located along the Highway 50 corridor from Logan Shoals to the junction with Highway 28, and north along Highway 28 to the Thunderbird Lodge. The project area, called the Spooner Project, totals 3,560 acres. A total of 1,074 acres were thinned in 2011, including 155 of mechanical thinning. Thinning on urban lots totaled 3 acres, and burning was completed on 495 acres in the Roundhill and Kingsbury project areas, of which 186 acres were urban lots. Figures A-9 and A-10 show the locations of this year’s burning and the completed and planned work on the Spooner project respectively.

Approximately 2,240 acres of hand thinning treatment is left to do in the Spooner Project area. Seven hundred of those acres are scheduled to be thinned in 2012. The acreage treated in 2011 is planned to be burned in approximately two years.

Planning continues for 3,900 acres of treatment on the Incline Fuels Reduction Project, located on USFS lands surrounding Incline Village (see figure A-11). Treatments will include thinning, biomass removal, and prescribed burning with the wildland-urban interface. The NEPA planning should be completed in 2012.

Table 1. Acres of Fuel Reduction Completed Since the Bi-State Fire Commission in 2007

| | 2007 thru | 2010 | 2011 | TOTAL |
|----------------------------|------------------|-------------|-------------|--------------|
| NDF for State Parks | 1,362 | 210 | 247 | 1,819 |
| NV State Lands | 149 | 108 | 77 | 334 |
| NLTFPD | 591 | 305 | 367 | 973 |
| TDFPD | 432 | 164 | 97 | 693 |
| USFS-LTBMU | 3,031 | 108 | 1572 | 4,711 |
| TOTAL | 5,565 | 895 | 2,360 | 8,820 |

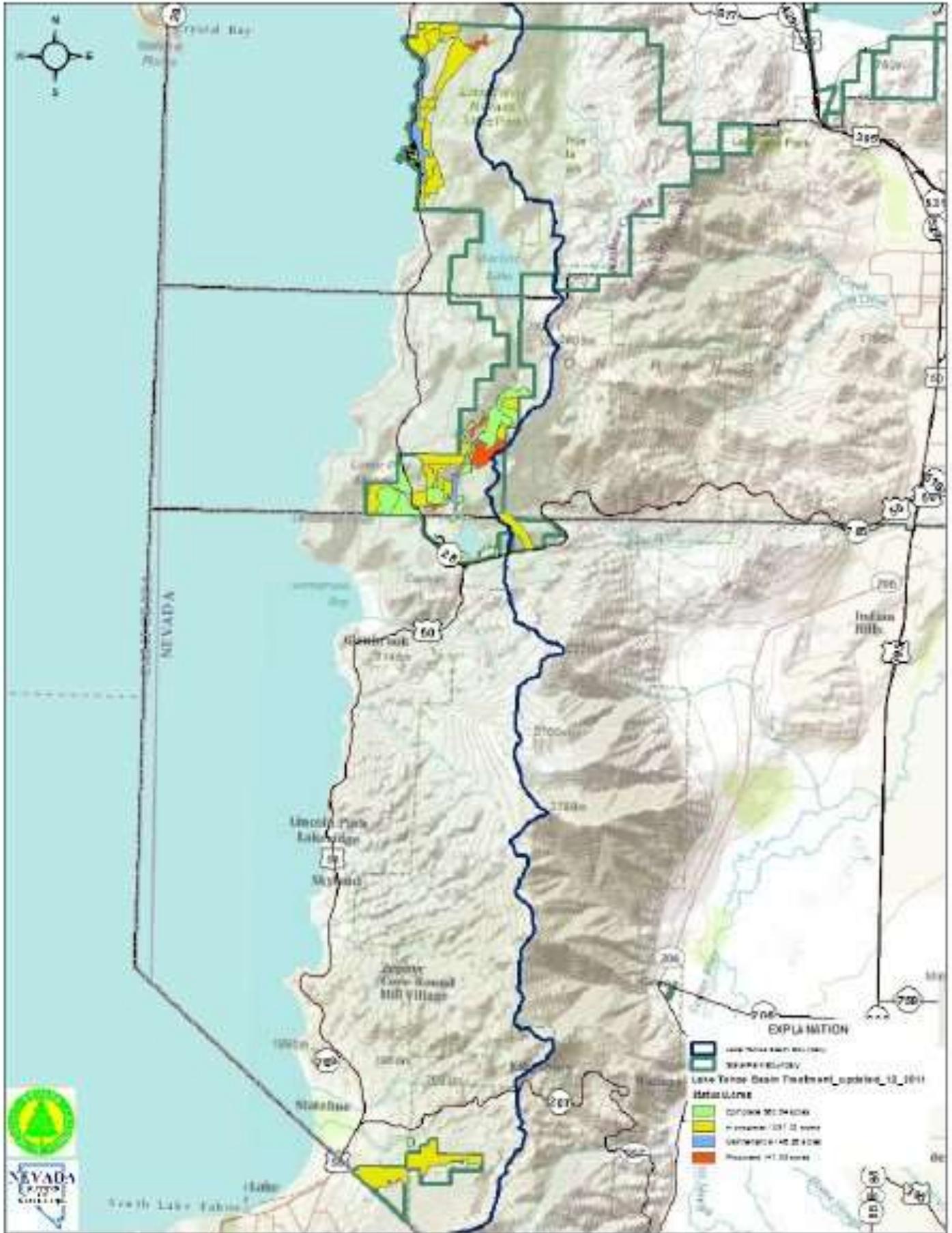


Figure A-1. Overview of work being done by the NDF Forester on the Tahoe Resource Team

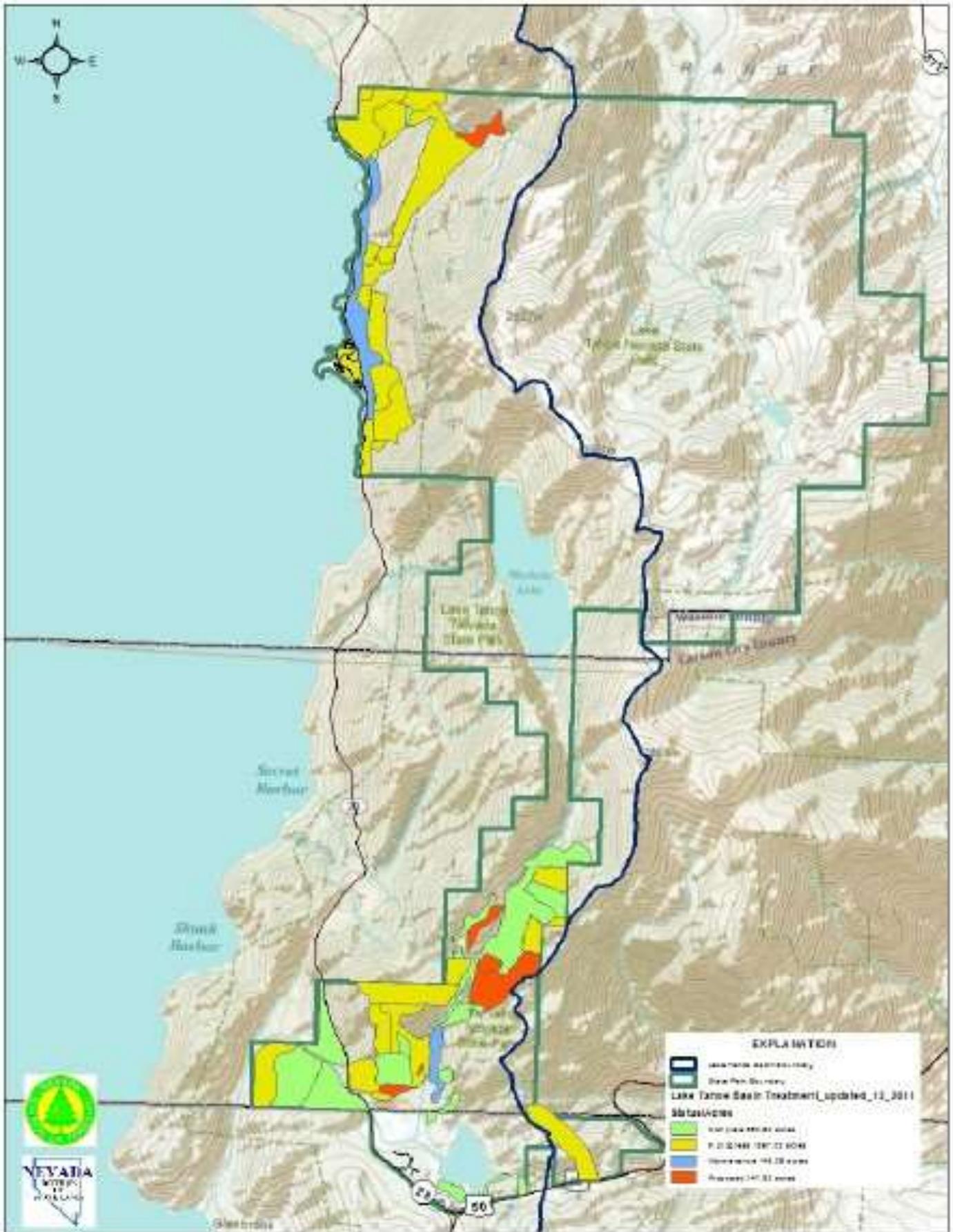


Figure A-2. Work being done by the NDF Forester on the Tahoe Resource Team in Lake Tahoe Nevada State Park

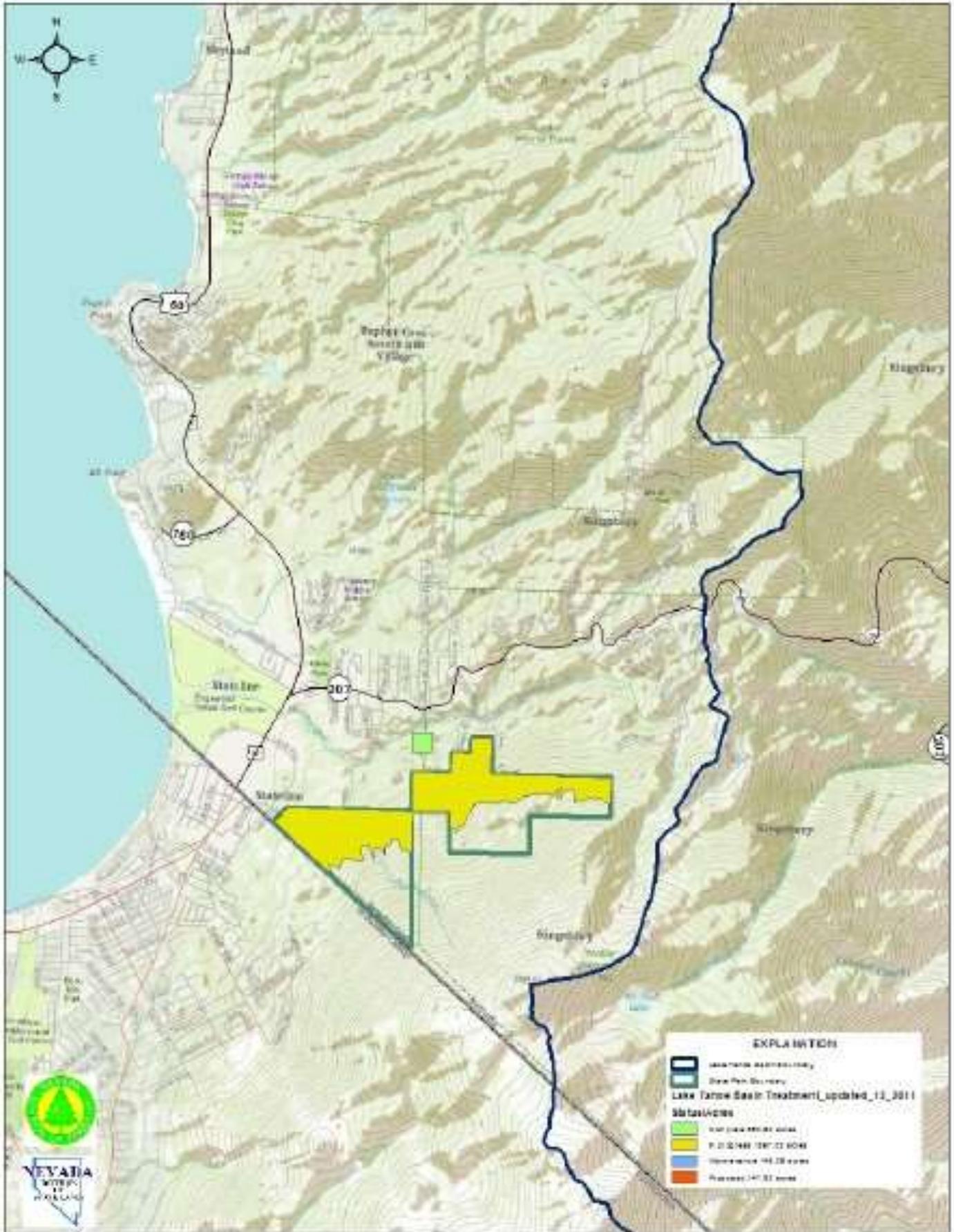


Figure A-3. Work being done by the NDF Forester on the Tahoe Resource Team at Van Sickle Bi-State Park

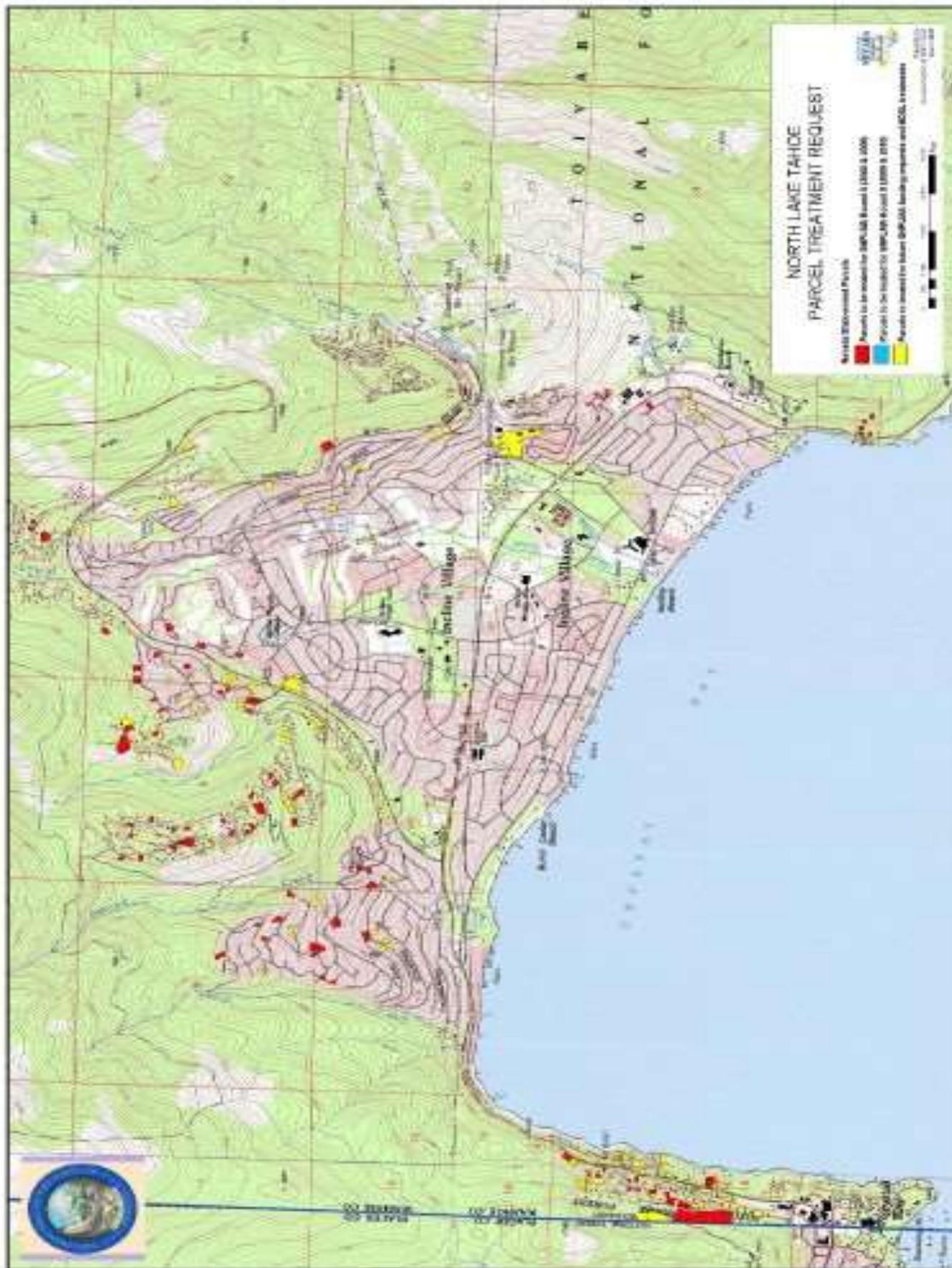


Figure A-4. Work being done on Tahoe Bond Act parcels, around Incline, Nevada.



Figure A-5. Work being done on Tahoe Bond Act parcels, from Glenbrook to Stateline, Nevada.

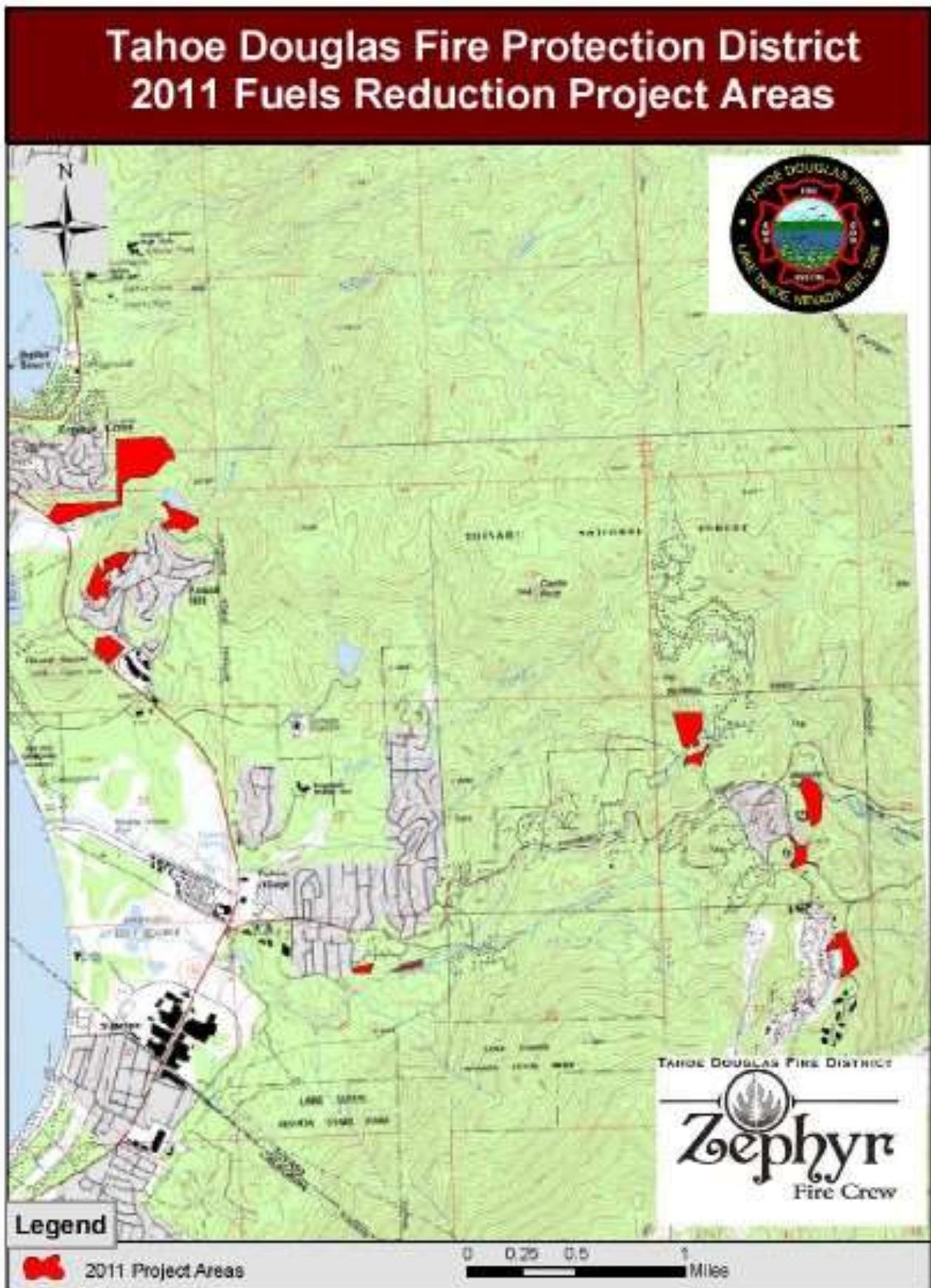


Figure A-6. Overview of work being done by the Tahoe Douglas Fire Protection District

Interpretive Trail Stations

The trail consists of numbered markers indicating stations of interest. This pamphlet provides information on each station, highlighting specific treatment areas (burn units), untreated areas, specific plants species, and various forest practices.

These ongoing treatments manage the fuel loads over time, while attempting to recreate a more natural forest.

1. Burn Unit A

The understory here was last burned in 2004. The low growing brushy fuels, pine needle layer, and lower tree limbs were greatly reduced. These prescribed fires are done in the fall, with the help of the North Lake Tahoe Fire Protection District hand crews, by limiting the low-growing vegetation and letting the fire slowly burn down the slope.



2. Stream Zone

Protection of riparian areas is important for maintaining water quality and preventing erosion. Deciduous riparian vegetation such as alders and willows serve to anchor the soil and hold stream banks in place. These areas are also important wildlife habitat.



3. Burn Unit A and B Comparison

This area was treated with understory burns in 2004 (on the left) and in 1998 (on the right). You can see more understory vegetation in the older burn area. Fire-adapted Tobacco brush is one of the first evergreen plant species to re-sprout after a fire, and the new leaves are an important food source for deer.



4. Pre-treatment Control—Ladder Fuels

This "control" area shows what the forest looked like before treatment. Some untreated areas are being retained for comparison and wildlife habitat, and to illustrate ladder fuel hazards and competition pressure on desired species. These trees could be thinned with a cable yarder, which can minimize disturbance by lifting vegetation out of the stream zone.



5. Burn Unit C

Prior to understory burning in 2002, there were many dead and dying trees. Many have fallen since then, and they fill an important ecological function. By providing habitat for microbes, fungi, and insects, the trees are recycled back into humus and nutrients that feed the forest soil so more trees can grow.

6. Burn Unit C and D

The evergreen Chinquapin at the post is another fire-adapted native shrub that readily re-sprouts after a fire.



The Mahala mat that carpets the hillside nearby produces seeds that require fire to germinate, like other *Cespedium* plants such as tobacco brush.

7. Pre-treatment Control—Insect Effects

Overcrowding of trees can lead to insect problems. Look around to find white fir with dead tops—this indicates stress due to competition for light, water, and nutrients, which reduces the trees defenses to insect attack.



8. Cornstock Stump

The Tahoe Basin was logged during the late 1800's, with most of the trees used in the silver mines in Virginia City. The subsequent re-growth of the forest has produced many even-aged stands that do not represent what the original forest looked like. This stump is one of the few remaining relics of that era.

Figure A-7b. Page 2 of the brochure from the Woods Creek Interpretive Trail.

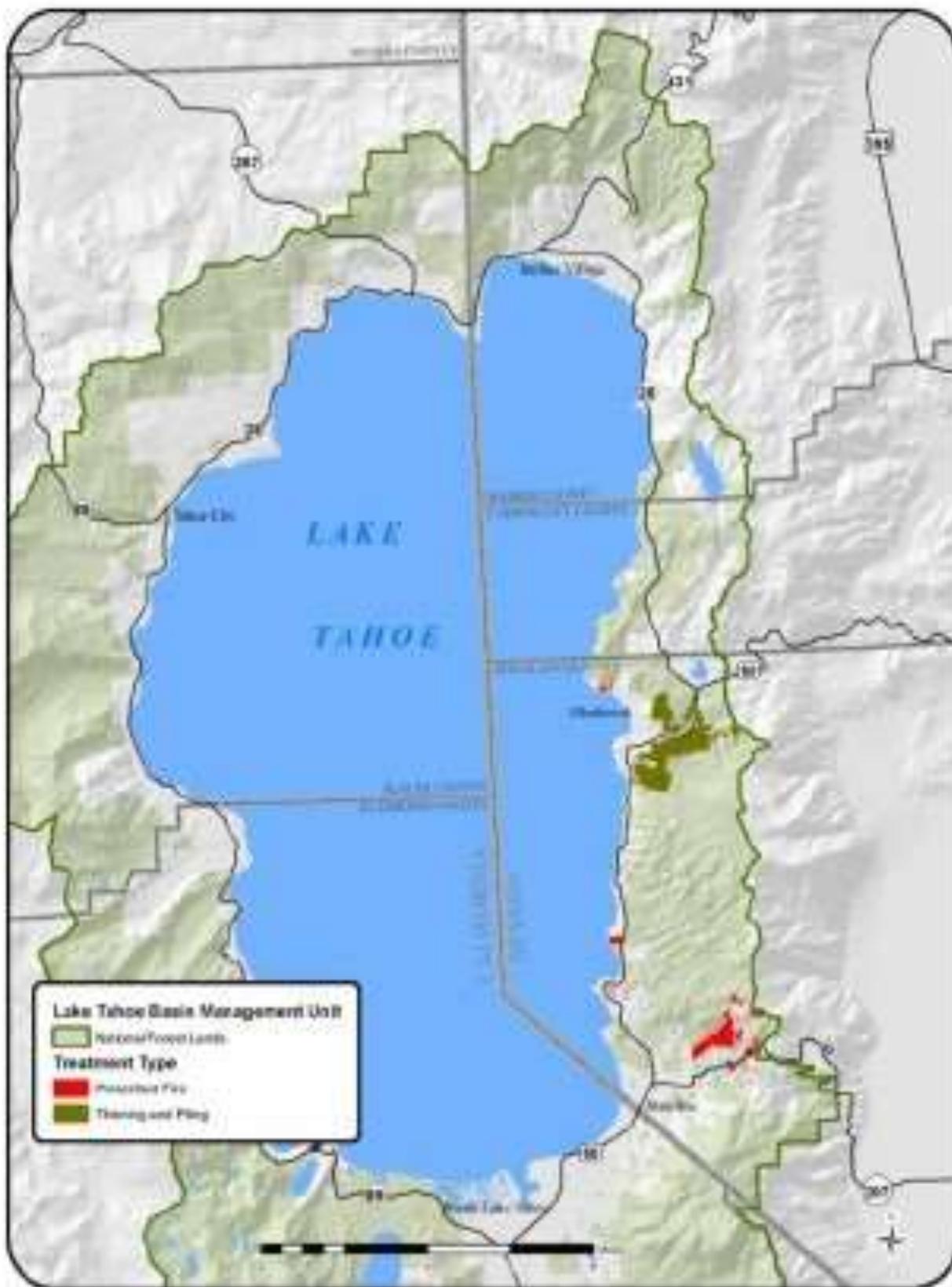


Figure A-9. Overview of work being done by the U.S. Forest Service-Lake Tahoe Basin Management Unit.

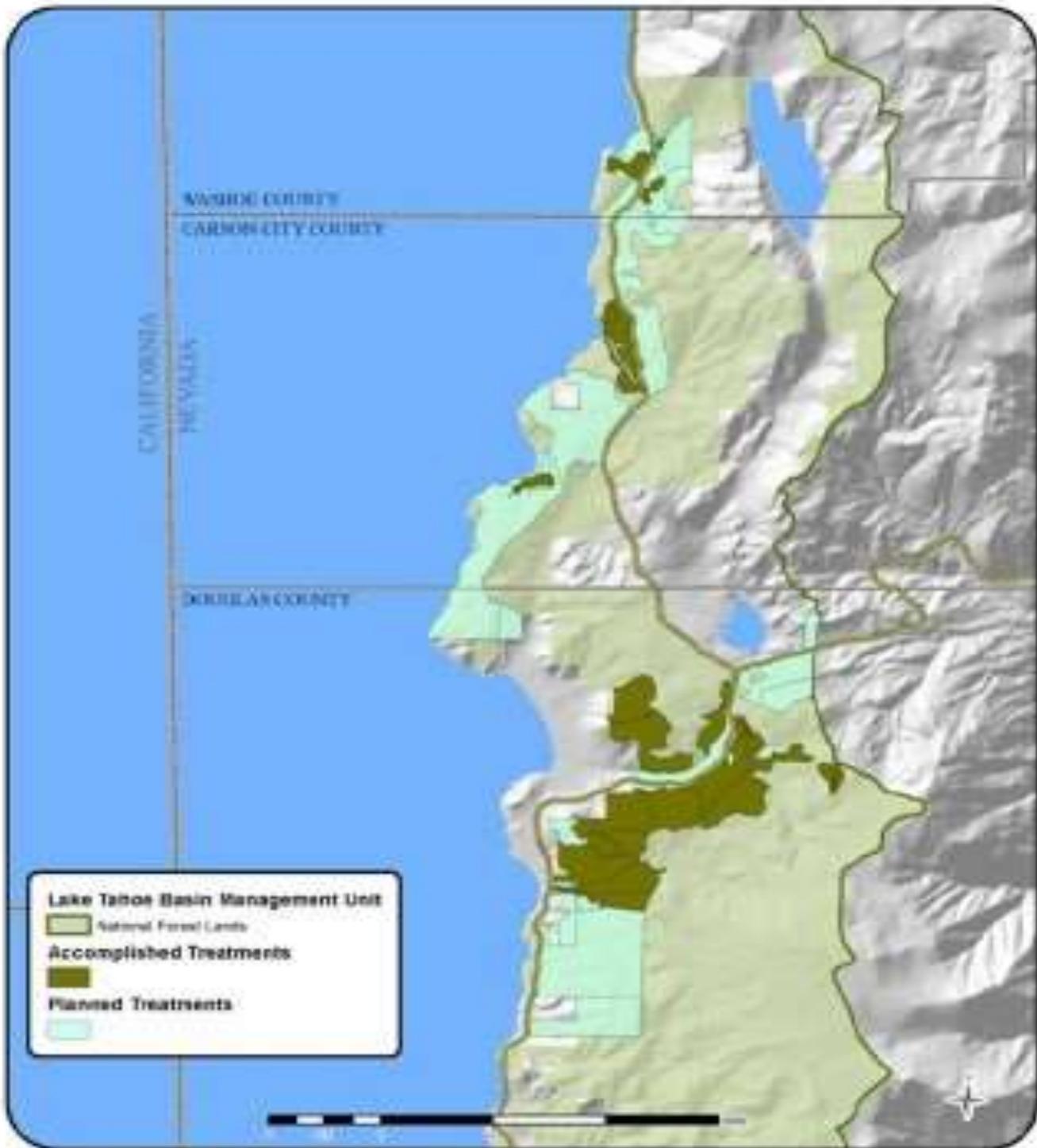


Figure A-10. Overview of completed and proposed work by the LTBMU's Spooner Project.

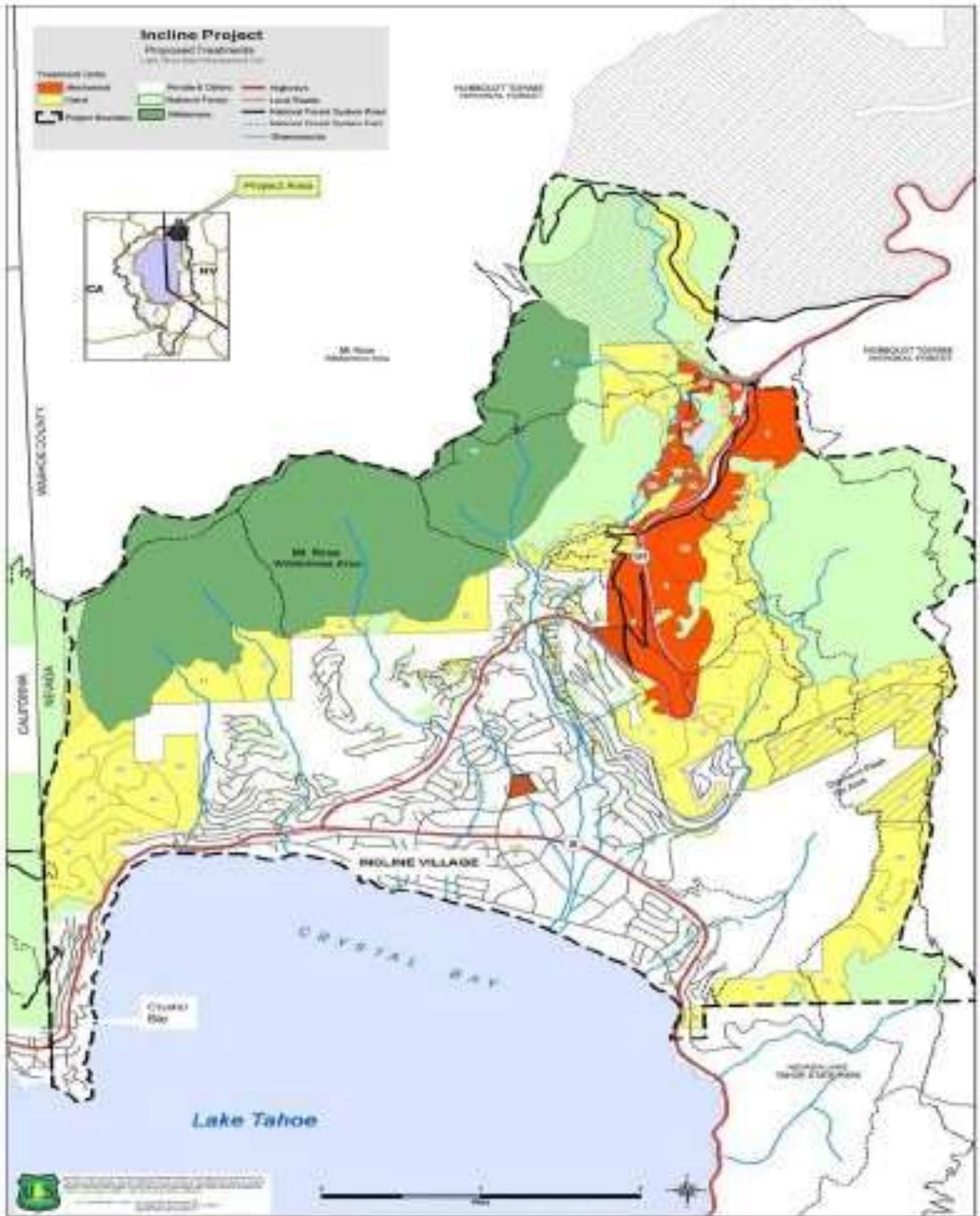


Figure A-11. Overview of planned work by the U.S. Forest Service-Lake Tahoe Basin Management Unit around Incline, NV.

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Addendum

2012-13 Accomplishments

2012-2013 Accomplishments

This report is the third addendum to the original “Report to Nevada State Legislature-AB 75: Fire-Fuels-Forest Restoration Activities and Accomplishments at Lake Tahoe, NV. It covers the significant, though not all, activities/accomplishments by the land management agencies and fire protection districts on the Nevada side of the Lake Tahoe basin during the calendar years of 2012 and 2013. The reader is referred to the original report for background and previous years’ activities and accomplishment dating to 2007 rather than repeating the information here.

Nevada Division of Forestry

The Division’s State Fire Assistance/Hazardous Fuel Reduction program comes to the Nevada Division of Forestry (NDF) through the US Forest Service’s State and Private Forestry Program. The intent of the program is to provide funding to reduce the risk and moderate the threat of catastrophic fire, predominately in the Wildland Urban Interface (WUI) areas of Nevada. The four areas of emphasis are: Improving wildland fire prevention and education; reducing hazardous fuel; restoring fire adapted ecosystems; and promoting community assistance and planning. This program provides funding to all of Nevada’s seventeen counties and is awarded on a competitive basis.

The projects/programs NDF has funded in the Lake Tahoe Basin in 2012-2013 are as follows:

- Great Basin Outdoor School, “Fire-Smart Kids, Fire Safe Forests” - \$24,033
This program is for student education and stewardship projects to address the high priority wildfire risk level identified in Tahoe Basin landscapes. “Fire-Smart Kids, Fire Safe Forests” immerses fifth and sixth grade classes and teachers in educational activities and projects to teach restoration, fire prevention, healthy forest ecosystems, and defensible space.
- North Lake Tahoe Fire Protection District, Fire Adapted Communities Lake Tahoe Basin - \$6,680
Creates a standard publication for residents specific to the Tahoe Basin that integrates wildland fire prevention in the WUI, defensible space protocols, and best management practices (BMP’s) across jurisdictional borders.
- North Lake Tahoe Fire Protection District, Tunnel Creek Fuel Reduction - \$66,000
A 33 acre fuel reduction project on 6 private parcels directly adjacent to lands being treated by the US Forest Service and the Division of Forestry (Tahoe EIP team). Work on this project is done by North Lake Tahoe’s fire/fuel crews.
- Tahoe Douglas Fire Protection District, Kingsbury Grade Fuel Reduction - \$79,067
A 23 acre project doing forest thinning on three privately owned lots in Edgewood Canyon, widely recognized as being one of the highest fire hazard areas in the district, and defensible space treatments on private parcels on a first come first serve basis. All work on this project will be done by Tahoe Douglas’s fire/fuel crew.
- University of Nevada Cooperative Extension, Living with Fire Program - \$242,293
Statewide project to educate, motivate, and organize residents of Nevada’s WUI to take action in reducing the wildfire threat to their homes and communities by: 1) continuing and enhancing the existing Living with Fire campaign and 2) establishing a new organization Nevada Fire Adapted Communities Network (NFACN).

- North Lake Tahoe Fire Protection District, Community Chipping/Priority Assessment Framework - \$77,000
This project has two main concepts: 1) Implementation of defensible space in communities that the fire district's employees will then come to chip and haul the product away. This will be offered to homeowners in Incline Village and Crystal Bay. 2) Creation of the Nevada Tahoe Priority Assessment Framework that will be a digital computer based program that utilizes fire behavior models and other geospatial data to update Community Wildfire Protection Plans on the Nevada side of the Tahoe Basin as projects are completed and vegetation densities change.

- North Lake Tahoe Fire Protection District, Fire Adapted Community Regional PSA - \$27,500
An inter-agency (North Lake Tahoe Fire Protection District, Truckee Meadows Fire Protection District, Reno Fire Department, Tahoe Douglas Fire Protection District, East Fork Fire and Paramedic District, Carson City Fire Department, Sparks Fire Department, US Forest Service, and Nevada Division of Forestry) collaborative public service announcement that will air 5 PSA's showing a unified message to becoming a fire adapted community and the dire need for homeowners and communities to take action in the prevention process.

- Tahoe Douglas Fire Protection District, Palisades Fuel Reduction and Defensible Space, \$111,667
Forest thinning on two privately owned lots in Edgewood Canyon treating 38 acres and defensible space in the District on a first come first serve basis.

- Tahoe Douglas Fire Protection District, Kingsbury Village Fire Adapted Community Program \$121,667
Forest thinning on three HOA owned lots in Kingsbury Village area, a high priority protection area, treating 33 acres and defensible space in the district on a first come first serve basis.

Nevada Tahoe Resource Team (NTRT) – Lake Tahoe State Park

NDF's forester on the NTRT is responsible for developing and implementing plans to improve forest health and reduce wildfire hazard on lands managed by the Division of State Parks. NV State Park lands extend from the southern boundary of Incline Village south to Spooner summit, as well as a more recent acquisition to the park, Van Sickle, located at south Stateline.

The forest management work conducted over the past two years lead to 384 acres of thinning and burn pile construction, as well as 510 acres of burning. Forest thinning is an important step in controlling the density and structure of the forest and preparing for the application of controlled burning. Burning piles that result from thinning activities is the most effective method of disposal. However, it's important to note that 41 acres of reported burning was broadcast burning. This type of burning is critical to returning the historic role of fire back into the forest ecosystem.

Thinning projects were located on the Van Sickle property, Slaughterhouse Canyon, Spooner State Park, and Sand Harbor. The largest of the projects was 186 acres conducted at Van Sickle (fig. A-12). Other significant thinning projects were 60 acres and 63 acres conducted in Slaughterhouse Canyon (fig. A-13) and the Ridgetop project located north of Spooner meadow (fig. A-14).

Slash pile burning took place at several locations in 2012 and 2013. The largest burn acreages occurred in Slaughterhouse Canyon, North Canyon at Spooner Lake, Sand Harbor and Van Sickle. The total acreage of piles burned was 470 acres.

The Tunnel Creek broadcast burn project began in the spring of 2012. This long planned project is the first of its kind in Lake Tahoe State Park. The goals are to return fire and the important ecological role it's played to carefully selected areas of the park. Forty-one acres of the Tunnel Creek project have been broadcast burned since the project began (fig. A-15).

Nevada Tahoe Resource Team – Tahoe Bond Act Urban Parcels

The State Lands forester assigned to the NTRT is responsible for managing the vegetation and fuel on sensitive State-owned urban parcels purchased through the Tahoe Bond Act. There are 490 parcels, ranging in size from 0.1 to 14 acres, which were purchased to retire their potential for urban development and associated impacts to Lake Tahoe's water quality. Being located within urban zones, they can contribute significantly to the wildfire hazard faced by community residents if they are not actively managed.

Over the 2012 and 2013 field seasons 91 acres of thinning and slash pile construction was accomplished and 101 acres of slash piles were burned. The fire hazard reduction and forest health improvement work occurred along Highway 50, from Glenbrook to Roundhill in Douglas County. Bond act parcels treated were located in Glenbrook, Round Hill, Zephyr Heights, Cave Rock Estates, Logan Creek Estates, and Lake Ridge Estates. Additionally, fuel reduction and reforestation work was accomplished in the Washoe county communities of Crystal Bay and Incline Village. This work was funded through grants secured from Southern Nevada Public Land Management Act (SNPLMA).

State Bond Act funding was used to perform additional cleanup of trees that sustained winter damage on several parcels located in Washoe County.

North Lake Tahoe Fire Protection District

The North Lake Tahoe Fire Protection District (NLTFPD) is responsible for all aspects of fire suppression and prevention within the north shore communities of Crystal Bay and Incline Village. Included in the prevention work is an active fuel management program that includes defensible space evaluations, curbside chipping and fuel reduction projects.

Fuel reduction projects are located primarily in the open space owned by Incline Village General Improvement District within the communities. Much of the open space is located in the steep drainages surrounding community subdivisions; critical wildland-urban interface areas. Fire crews from NLTFPD completed thinning projects on 137 acres of IVGID and miscellaneous private ownerships during 2012 and 2013. The district broadcast burned 70 acres during this same period (fig. A-16).

Additionally, district staff conducted 429 defensible space evaluations and responded to 320 requests for curbside chipping.

Funding for work conducted by NLTFPD Fuel Management program in 2012/2013 came from varied sources including community residents, IVGID, State Fire Assistance grants from Nevada Division of Forestry and SNPLMA.

Tahoe Douglas Fire Protection District

The Tahoe Douglas Fire Protection District (TDFPD) is an all risk fire protection district that delivers fire suppression, prevention and education services to all Lake Tahoe communities within Douglas County, NV. The District actively implements large scale forest fuel reduction projects on private and local government-owned lands within their district while maintaining a traditional defensible space program. The District also contracts to provide fuel reduction services to state-owned lands.

Over the 2012-13 period the District fire crew completed 287 acres of thinning on private land within their fire district (fig. A-17). Additionally, fire district staff conducts 450 defensible space evaluations annually.

Defensible space evaluations can lead to homeowner action. The District has funded a rebate program that provides up to 50% of the cost to homeowners for implementing defensible space work on their property. Funding for the rebate program was secured through grant acquisitions.

The District assists residents with defensible space work through its Community Work Days program. One Saturday in each of 8 major neighborhoods district staff assists homeowners that need help implementing defensible space work. The program provided assistance to 15 private landowners and treated 31 urban lots.

Funding for the District's fuel reduction and defensible space programs comes from a variety of sources. Grant funding from Nevada Division of Forestry, US Forest Service, California Fire Safe Council and SNPLMA provides a large share of necessary money. The community also funds programs through a value-added tax, as well as landowner's voluntary contributions.

USDA-Forest Service, Lake Tahoe Basin Management Unit

The US Forest Service (USFS) completed over 1,371 acres of thinning on their Spooner project, located along Highway 50 between Logan Shoals and the junction with Highway 28, and along Highway 28 north to Thunderbird lodge. An additional 39 acres of urban lot thinning was completed leading to increased safety within the communities where these lots are located.

The USFS carried out 63 acres of prescribed burning on urban lots and an additional 295 acres on other Forest Service lands.

The Incline Hazardous Fuels Reduction and Forest Health Restoration Project (3,917 ac.) planning is completed and signed. With this planning completed, the all wildland-urban interface acres managed by the USFS on the Nevada side of the basin have completed plans for treatment.

The USFS provided 3 pass through grants to Tahoe Douglas Fire Protection District and Clearinghouse grants to both fire protection districts in Nevada. Additionally, the USFS contracted with Tahoe Douglas and North Lake Tahoe FPDs to treat hazardous fuels on 144 acres.

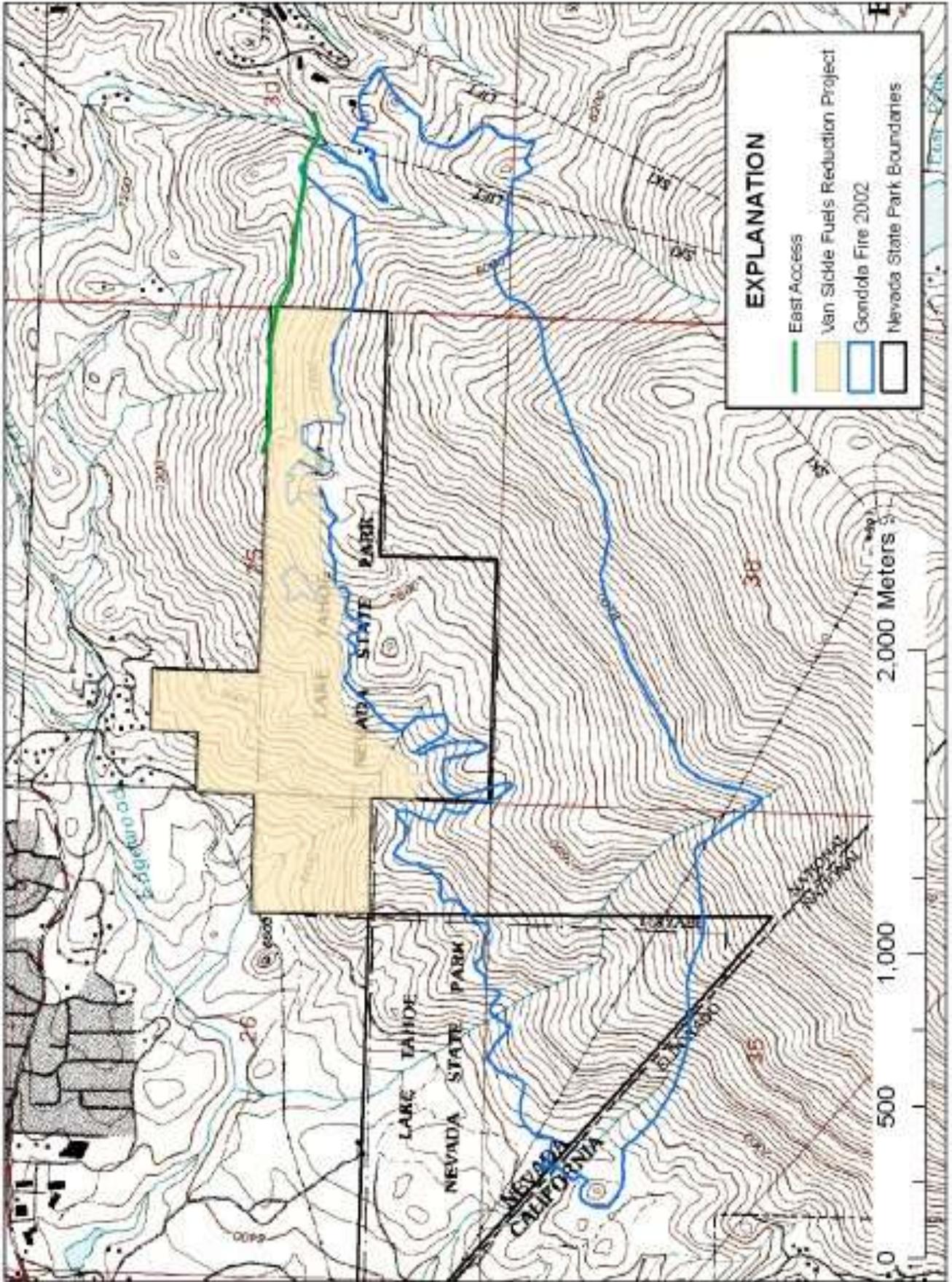


Figure A-12. Work being done by the NDF Forester on the Tahoe Resource Team at Van Sickle Bi-State Park

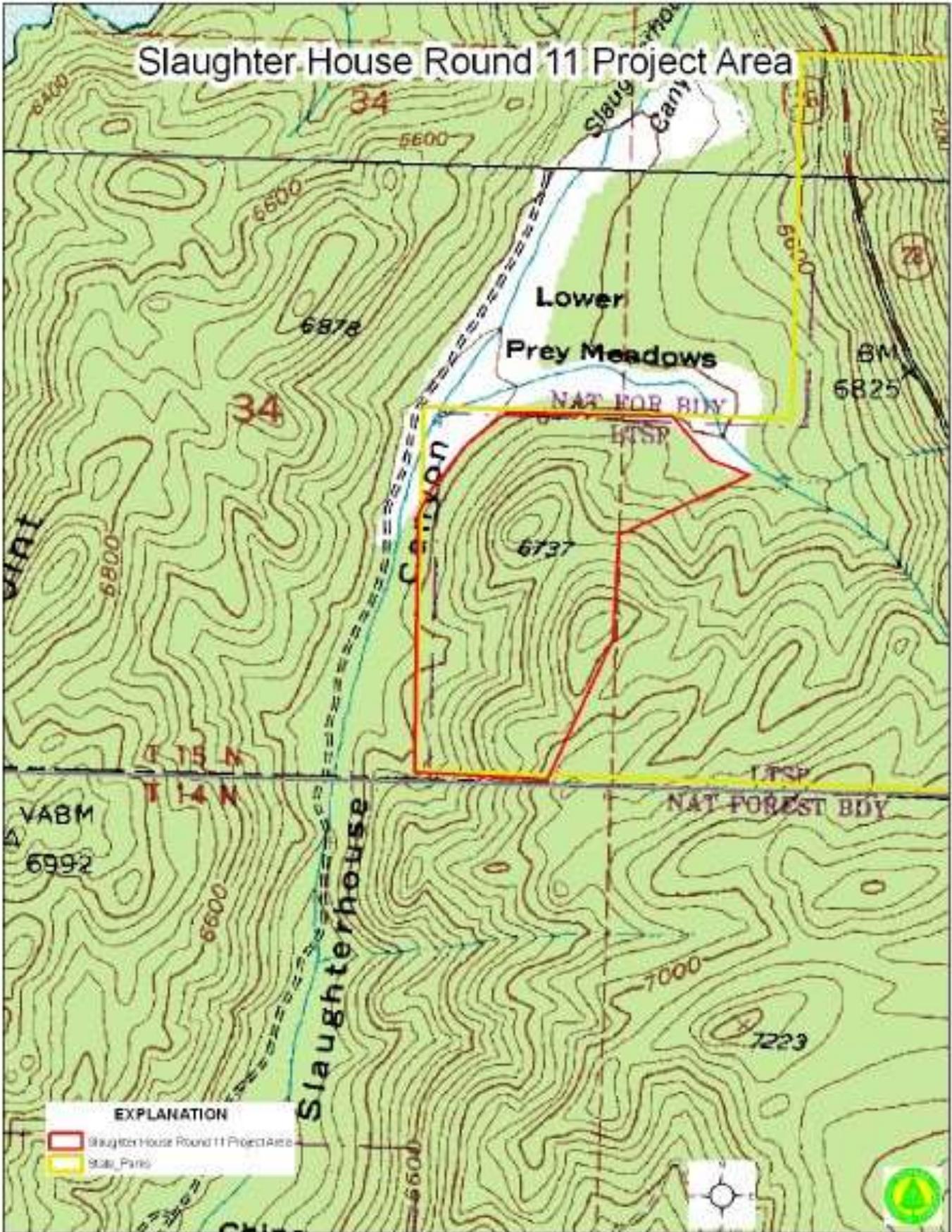


Figure A-13. Work being done by the NDF Forester on the Tahoe Resource Team in Slaughterhouse Canyon, Lake Tahoe Nevada State Park

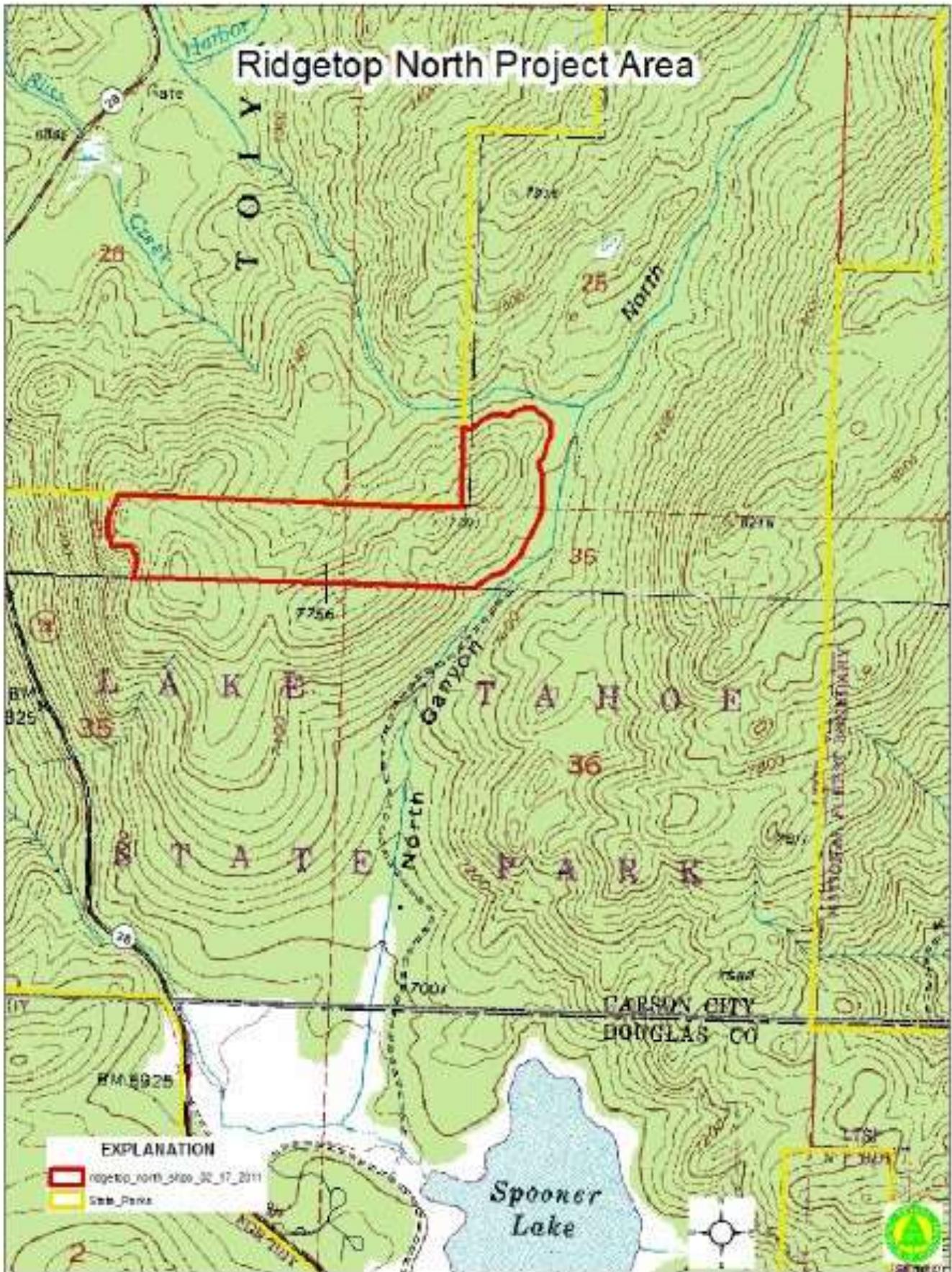


Figure A-14. Work being done by the NDF Forester on the Tahoe Resource Team in Lake Tahoe Nevada State Park at the Ridgetop North Project.



Lake Tahoe Nevada State Park-Broadcast Burn Units



Figure A-15. Status of work being done by the NDF Forester on the Tahoe Resource Team in Lake Tahoe Nevada State Park on the Tunnel Creek Broadcast Burn Project.

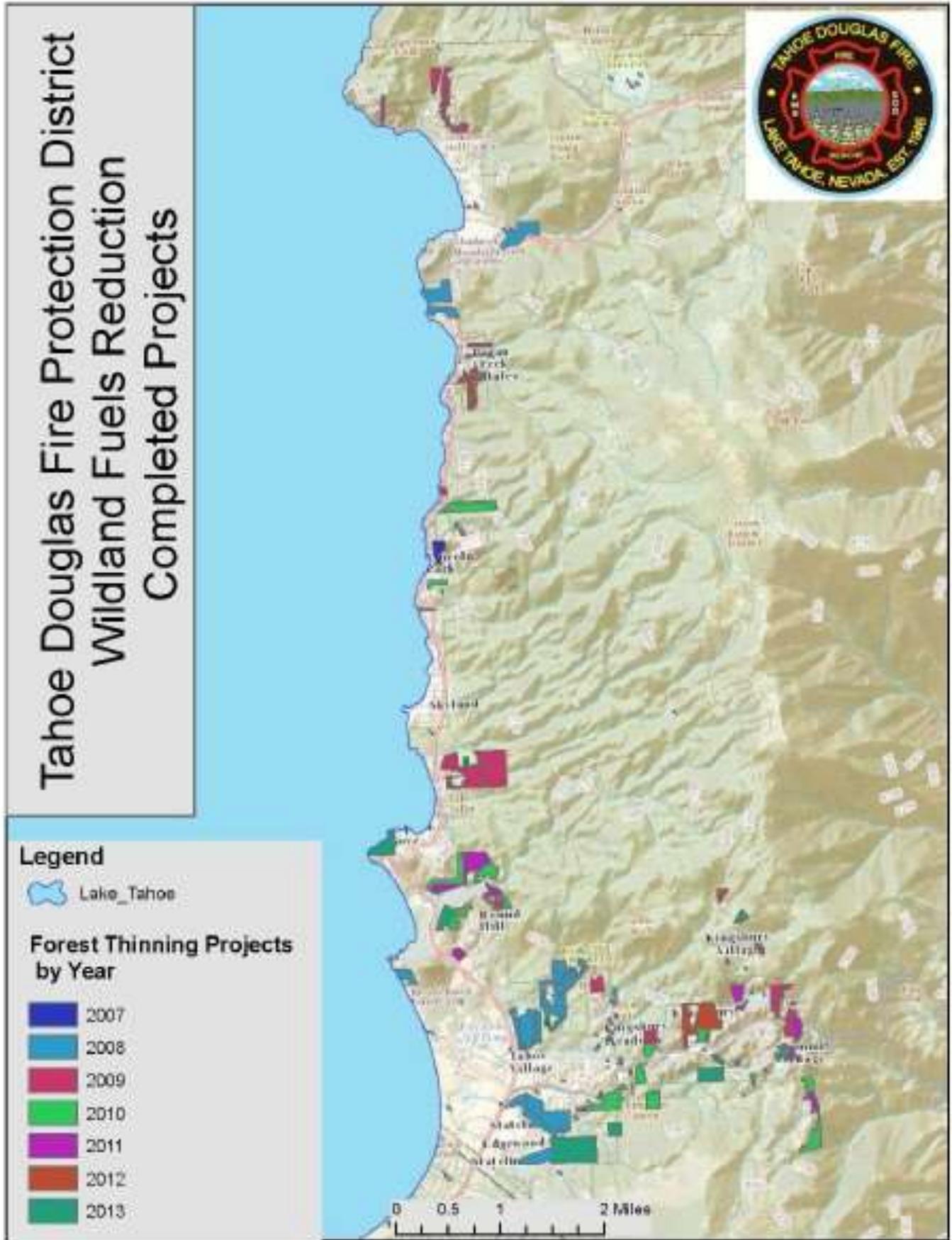


Figure A-17. Overview of completed work by the Tahoe-Douglas Fire Protection District.

Addendum

2014 Accomplishments

2014 Accomplishments

This report is the fourth addendum to the original “Report to Nevada State Legislature-AB75: Fire-Fuels-Forest Restoration Activities and Accomplishments at Lake Tahoe, NV”. The report provides a listing of listing of the most significant activity and accomplishments of the State and Federal land management agencies and the two fire protection districts on the Nevada side of the Lake Tahoe Basin. The reader is referred to the original report and the subsequent addendums for documentation of activities and accomplishments dating from 2007 to 2013.

In August of 2014, an update was completed of the Lake Tahoe Basin Multi-Jurisdictional Fuels Reduction and Fire Prevention Strategy. The Strategy will direct fuel reduction planning and implementation over the next 10 years. This effort involved all Lake Tahoe Basin fire protection districts/departments and land management agencies, including Nevada Division of Forestry, Nevada Division of State Lands, Nevada Tahoe Resource Team, North Lake Tahoe Fire Protection District, Tahoe Douglas Fire Protection District, and the USFS-Lake Tahoe Basin Management Unit.

Nevada Division of Forestry

The Division’s State Fire Assistance/Hazardous Fuel Reduction program comes to the Nevada Division of Forestry (NDF) through the US Forest Service’s State and Private Forestry Program. The intent of the program is to provide funding to reduce the risk and moderate the threat of catastrophic fire, predominately in the Wild-land Urban Interface (WUI) areas of Nevada. The four areas of emphasis are: Improving wildland fire prevention and education; reducing hazardous fuel; restoring fire adapted ecosystems; and promoting community assistance and planning. This program provides funding to all of Nevada’s seventeen counties and is awarded on a competitive basis

The projects/programs NDF has funded in the Lake Tahoe Basin in 2014 are as follows:

- Great Basin Outdoor School, “Fire-Smart Kids, Fire Safe Forests” - \$24,033 (continued from 2013)
This program is for student education and stewardship projects to address the high priority wildfire risk level identified in Tahoe Basin landscapes. “Fire-Smart Kids, Fire Safe Forests” immerses fifth and sixth grade classes and teachers in educational activities and projects to teach restoration, fire prevention, healthy forest ecosystems, and defensible space.
- North Lake Tahoe Fire Protection District, Fire Adapted Communities Lake Tahoe Basin - \$6,680 (continued from 2013)
This funding helped create a standard publication for residents specific to the Tahoe Basin that integrates wildland fire prevention in the WUI, defensible space protocols, and best management practices (BMP’s) across jurisdictional borders.
- Tahoe Douglas Fire Protection District, Kingsbury Grade Fuel Reduction - \$79,067 (continued from 2013)
A 23 acre project doing forest thinning on three privately owned lots in Edgewood Canyon, widely recognized as being one of the highest fire hazard areas in the district, and defensible space treatments on private parcels on a first come first serve basis. All work on this project will be done by Tahoe Douglas’s fire/fuel crew.

- University of Nevada Cooperative Extension, Living with Fire Program - \$242,293 (continued from 2013)
A Statewide project to educate, motivate, and organize residents of Nevada’s WUI to take action in reducing the wildfire threat to their homes and communities by: 1) continuing and enhancing the existing Living with Fire campaign and 2) establishing a new organization Nevada Fire Adapted Communities Network (NFACN).

- North Lake Tahoe Fire Protection District, Community Chipping/Priority Assessment Framework - \$77,000 (continued from 2013)

This project has two main concepts: 1) Implementation of defensible space in communities that the fire district’s employees will then come to chip and haul the product away. This will be offered to homeowners in Incline Village and Crystal Bay. 2) Creation of the Nevada Tahoe Priority Assessment Framework that will be a digital computer based program that utilizes fire behavior models and other geospatial data to update Community Wildfire Protection Plans on the Nevada side of the Tahoe Basin as projects are completed and vegetation densities change.

- North Lake Tahoe Fire Protection District, Fire Adapted Community Regional PSA - \$27,500 (continued from 2013)

An inter-agency (North Lake Tahoe Fire Protection District, Truckee Meadows Fire Protection District, Reno Fire Department, Tahoe Douglas Fire Protection District, East Fork Fire and Paramedic District, Carson City Fire Department, Sparks Fire Department, US Forest Service, and Nevada Division of Forestry) collaborative public service announcement that will air 5 PSA’s showing a unified message to becoming a fire adapted community and the dire need for homeowners and communities to take action in the prevention process.

- Tahoe Douglas Fire Protection District, Palisades Fuel Reduction and Defensible Space, \$111,667 (continued from 2013)

Forest thinning on two privately owned lots in Edgewood Canyon treating 38 acres and defensible space in the District on a first come first serve basis.

- Tahoe Douglas Fire Protection District, Kingsbury Village Fire Adapted Community Program \$121,667 (continued from 2013)

Forest thinning on three HOA owned lots in Kingsbury Village area, a high priority protection area, treating 33 acres and defensible space in the district on a first come first serve basis.

Table 1. Acres of Fuel Reduction Completed Since the Bi-State Fire Commission in 2007

| | 2007-2009 | 2010 | 2011 | 2012-13 | 2014 | Total |
|----------------------------|------------------|-------------|-------------|----------------|-------------|--------------|
| NDF for State Parks | 1,362 | 210 | 247 | 894 | 407 | 3,120 |
| NV State Lands | 149 | 108 | 77 | 91 | 26 | 451 |
| NLTFPD | 591 | 305 | 367 | 207 | 136 | 1,606 |
| TDFPD | 432 | 164 | 97 | 287 | 204 | 1,184 |
| USFS-LTBMU | 3,031 | 108 | 1,572 | 1,714 | 594 | 7,019 |

Nevada Tahoe Resource Team (NTRT) – Lake Tahoe State Park

The Division of Forestry, through its forester on the NTRT, is responsible for forest management work on Lake Tahoe State Park lands. Lake Tahoe State Park extends from immediately south of Incline Village to Spooner Summit, and the Van Sickle property located in Stateline, totally approximately 7,000 acres.

Over the course of 2014, the NTRT forester worked on all areas of Lake Tahoe State Park. In total, 112 acres of trees and brush was thinned and piled for burning. Additionally, 295 acres of pile and understory burning was accomplished.

Thinning projects were located at Spooner Lake along North Canyon road (79 ac.) and Spooner Meadow (5 ac.) and at Sand Harbor (26 ac.) and Tunnel Creek (2 ac.).

Pile burning included 5 ac. in Tunnel Creek, 24 acres at Sand Harbor, 9 acres in Slaughterhouse canyon, 64 acres at Spooner Lake and 170 acres at Van Sickle. In addition to the pile burning for slash disposal, 23 acres of Tunnel Creek drainage was understory burned in order reduce fuel loads and restore the influence of fire to forest.

Nevada Tahoe Resource Team (NTRT) – Tahoe Bond Act Urban Parcels

The State Lands forester assigned to the NTRT is responsible for managing the vegetation and fuel on sensitive State-owned urban parcels purchased through the Tahoe Bond Act. There are 490 parcels, ranging in size from 0.1 to 14 acres, which were purchased to retire their potential for development and associated impacts to Lake Tahoe's water quality. These parcels are located within urban areas and can create a significant wildfire hazard to adjacent landowners if they are not actively managed.

In 2014 work focused on treating parcels located in Washoe County with tree and brush thinning, followed by chipping and hauling, or piling for subsequent burning. Thinning (tree and brush) was accomplished on 117 parcels for a total of 26 acres. Material was piled for burning on 15 of these acres, and was chipped and hauled off on the other 11 acres.

In addition to addressing the fuel hazard on the State-owned Tahoe Bond Act parcels, maintenance for forest health improvement is an ongoing effort. The State Lands forester and his seasonal assistant were busy removing single insect-killed trees, and wind and snow damaged trees. Prompt action to remove this material is important in preventing buildup of bark beetle populations that could spread to non-infested areas.

North Lake Tahoe Fire Protection District

The North Lake Tahoe Fire Protection District encompasses the communities of Incline Village and Crystal Bay, located in Washoe County on the north shore of Lake Tahoe. The fire department staff conduct hazardous fuel treatment on privately-owned and general improvement district lands located within their district. They also contract with the USFS and State of Nevada to provide fuel reduction services when needed.

The NLTFPD hand crew and fuels module accomplished 119 acres of forest and brush thinning on both IVGID and private property in 2014. District staff conducted prescribed understory burns on 17 acres.

NLTFPD began an update of their Community Wildfire Protection Plan in 2014. The District held scoping meetings with the community to gather input. Other neighborhood outreach efforts included community work days and defensible space block parties. All of these effort helped identify community leaders and resulted in citizens taking action in high-risk neighborhoods.

The District conducted 369 defensible space evaluations and serviced 190 curbside chipping requests in 2014.

Funding for 2014 fuels reduction projects was provided by landowners and various grant sources. IVGID continued its commitment to reducing wildfire risk by providing \$200,000 for fuels reduction projects, leveraging a Southern Nevada Public Lands Management Act grant through the Bureau of Land Management.

The District's community curbside chipping program is funded by a State Fire Assistance grant through the Nevada Division of Forestry (NDF SFA). Funding for defensible space inspections is funded by the district and a State Fire Assistance grant through the California Fire Safe Council. Outreach and education efforts are supported by NDF SFA grants and a grant from the Fire Adapted Communities Learning Network.

Tahoe Douglas Fire Protection District

The Tahoe Douglas Fire Protection District provides fire protection service to the Lake Tahoe communities in Nevada located within Douglas County. The District employs a forester and funds a 20-person hand crew to conduct fuel management work in the district. This past year the fuel management program was responsible for thinning 204 acres of private forest land within the TDFPD.

The District continued its defensible space inspection program and completed over 450 inspections. All residential properties within the district have now been inspected at least one time.

The Districts Community Work Days program continued in 2014. Through the program, which operates for one day in each of the eight major neighborhoods located within the district, the Zephyr Crew was able to assist 15 private landowners and treat 31 urban lots for defensible space.

Funding for the District's fuel reduction and defensible space programs comes from a variety of sources. Grant funding from Nevada Division of Forestry, US Forest Service, California Fire Safe Council and SNPLMA provides a large share of necessary money. The community also funds programs through a value-added tax, as well as landowner's voluntary contributions.

Tahoe Douglas staff also began updating the CWPP that will be completed in 2015.

US Forest Service-Lake Tahoe Basin Management Unit

The Forest Service accomplished 71 acres of fuel treatments on their urban lots (Santini-Burton lots) on the Nevada side of the Basin. These lots, located in the wildland-urban intermix, contain wildland fire fuel that, if left unmanaged, poses a significant hazard to adjacent properties and the larger community.

Additionally, the Forest Service accomplished prescribed fire treatments on 523 acres of forest land on the Nevada side of the Basin.

Two USFS Fire Prevention Technicians patrol the Nevada portion of the Basin. These employees provided education programs in schools, and public meetings and coordinate with fire protection districts. The LTBMU continued their participation in the Tahoe Fire and Fuels Team's Fire Public Information Team (Fire PIT). This group coordinates and communicates prescribed fire activity for all Nevada agencies and delivers public service announcements on the radio and print media addressing fire prevention and public safety.

The LTBMU staff worked with several different partners to deliver conservation education to school students and adults. These efforts included Project Learning Tree (PLT) presentations at schools in Incline Village and Zephyr Cove, and the Outdoor Explore program which reached 2,500 students. Two groups the Forest Service works with to deliver conservation education are the South Tahoe Environmental Education Coalition and North Tahoe Environmental Education Coalition. Funding for these education efforts comes from a \$41,489 SNPLMA grant.

5th Addendum
2015 Accomplishments

5th Addendum - 2015 Accomplishments

This report is the fifth addendum to the original “Report to Nevada State Legislature-AB75: Fire-Fuels- Forest Restoration Activities and Accomplishments at Lake Tahoe, NV”. The report provides a listing of the most significant activity and accomplishments of the State and Federal land management agencies and the two fire protection districts on the Nevada side of the Lake Tahoe Basin. The reader is referred to the original report and the subsequent addendums for documentation of activities and accomplishments dating from 2007 to 2014.

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 2015. This addendum is organized into two sections; 1) interagency initiatives and accomplishments, and 2) individual agency initiatives and accomplishments.

Interagency Initiatives and Accomplishments

Public Education and Communication

Public education is a critical component of the effort to reduce the threat of catastrophic wildfire at Lake Tahoe. Because public information is a distinct function in the incident command system, the Tahoe Fire and Fuels Team formed a sub-committee to address this important issue. This sub-committee, the Fire Public Information Team (Fire PIT), is comprised of public education and communications professionals who implemented a comprehensive outreach strategy to raise awareness of wildfire issues at Tahoe and to increase defensible space practices on private properties. 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 fuels reduction projects at Lake Tahoe. Highlights of the Fire PIT’s work in 2015 include:

- Wrote and distributed monthly press releases and opinion columns to help ensure people have accurate, up-to-date information about ways to reduce wildfire risk and improve public preparedness.
- Continued distribution of the Living with Fire publication to the public.
- Helped organize and staff community wildfire awareness events, including Wildfire Awareness Month, Wildfire Safety Expo, and Fire Fest.
- Helped secure and administer a \$29,000 micro-grant from the U.S. Forest Service Lake Tahoe Basin Management Unit for the 2015 Lake Tahoe Wildfire Awareness Campaign. The campaign focused on residents, visitors, and business and property owners in the Lake Tahoe Basin, raising awareness about Fire Adapted Community concepts and the importance of embracing them. Additional funding and in-kind staff contributions pushed the total value of this campaign to more than \$70,000. Fifty-six organizations collaborated on various events and activities for this campaign. The campaign reached an estimated 1,900 people directly, and indirectly impacted an estimated several hundred thousand people in the greater Northern California and Nevada geographic areas. One hundred and thirty thousand publications were

sent out; while television, movie theater, and Internet advertisements had an equal or greater potential reach.

- Secured \$77,250 in grant funding from CAL FIRE for a public outreach and education campaign at Lake Tahoe that will focus on raising awareness about wildfire risk, reducing the threat of catastrophic wildfire through Fire Adapted Community concepts, and improving public preparedness. Partner agencies on the Fire PIT are developing the campaign, which is anticipated to launch in April 2016 and run through October 2016.
- Launched a new online mapping tool to better show the public where prescribed fire operations are occurring. Updated maps are sent out with regular press releases about prescribed fire operations.

Community Wildfire Protection Planning

In August of 2015, the Lake Tahoe Basin Community Wildfire Protection Plan (CWPP) was finalized. The CWPP provides strategies that can be implemented by fire agencies, land managers, policy makers, community leaders, residents, visitors, and others that will make Lake Tahoe Basin communities better prepared for the next inevitable wildfire. The goals of the plan are to create fire-adapted communities, restore and maintain fire-resilient landscapes, and provide effective and efficient wildfire response in the Tahoe Basin. The CWPP is in compliance with the Healthy Forests Restoration Act because a collaborative approach was utilized to create the plan, prioritized fuel reduction treatments were prescribed, and treatment of structure ignitability was included. The CWPP was developed by the Tahoe Fire and Fuels Team (TFFT), an action-oriented forum of organizations involved in implementing the Lake Tahoe Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy. It builds on previous planning efforts, and covers the wildland-urban interface for all Lake Tahoe Basin fire protection districts and departments. The plan provides a common frame of reference for engaging in finding common solutions, implementing actions, and monitoring progress.

National Cohesive Strategy Implementation

In October of 2015, local, state, and federal natural resource and fire management agencies, as well as non-governmental organizations, community members, and citizens participated in Nevada's first National Cohesive Strategy Summit in Reno, Nevada. Participation at the summit reached available capacity at 90 attendees. At the summit, all attendees were introduced to the Cohesive Strategy and asked to work together to:

1. Develop, and prioritize, short-term, strategic actions for implementing the Cohesive Strategy in Nevada; including responsible parties and time frames.
2. Develop, and prioritize, long-term, strategic actions for implementing the Cohesive Strategy in Nevada; including responsible parties and time frames.
3. Establish, as necessary, a collaborative body to oversee, monitor, and guide implementation of the Cohesive Strategy in Nevada.

Following the Summit, the participant's input from collaborative working groups for each tenant were summarized in a post-summit report. The report will be used to drive action planning through a newly established Cohesive Strategy oversight Committee under the Nevada Fire Board. This committee is currently formulating Cohesive Strategy tenant planning team leaders to assemble the action plan which will be finalized and published in 2016.

Interagency and multi-jurisdictional cooperatives such as the Fire PIT and the TFFT create a common forum for all agencies, communities, and citizens involved in natural resource and fire management to create holistic initiatives such as wildfire awareness public education campaigns and the Tahoe Basin CWPP. Through these initiatives, additional public, financial, and technical assistance can be provided to achieve goals consistent with the National Cohesive Strategy. For example, the resilient landscapes tenant

of this Strategy, includes reducing wildfire fuel where they pose an imminent threat to life and/or property as well as to the resilience of the surrounding ecosystems. Although each agency is planning, scoping, prescribing, and implementing on their own jurisdictions, often times they are communicating throughout the process with adjacent jurisdictions to take advantage of efficiencies of scale or proximity to maximize the treatment effect and extent. Table 1 shows the cumulative effort of all major jurisdictions in the Tahoe Basin in addressing reduction of wildfire fuels. Additionally, the Tahoe Fire and Fuels Team has established a new workgroup dedicated to forming Fire Adapted Communities leadership councils and creating a Tahoe Basin-wide Fire Adapted Community Alliance. The work is guided by the results of a project that assessed the factors that lead to success in fire mitigation work for Tahoe communities, and identified organizational strategies to support future work.

Table 1. Acres of Fuel Reduction Completed Since the Bi-State Fire Commission in 2007.

| YEAR(S) | NDF for NV Parks | NV State Lands | NLTFPD | TDFPD | USFS-LTBMU | TOTAL |
|----------------|------------------|----------------|--------------|--------------|--------------|---------------|
| 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 |
| TOTAL | 3,251 | 493 | 1,696 | 1,341 | 7,584 | 14,365 |

Individual Agency Initiatives and Accomplishments

Nevada Division of Forestry

The Nevada Division of Forestry’s (NDF) State Fire Assistance/Hazardous Fuel Reduction program is funded through the US Forest Service’s State and Private Forestry Program. The intent of the program is to provide funding to reduce the risk and moderate the threat of catastrophic fire, predominately in the Wild-land Urban Interface (WUI) areas of Nevada. The four areas of emphasis are: Improving wildland fire prevention and education; reducing hazardous fuel; restoring fire adapted ecosystems; and promoting community assistance and planning. This program provides funding to all of Nevada’s seventeen counties and is awarded on a competitive basis. **The projects/programs NDF has funded in the Lake Tahoe Basin in 2015 are as follows:**

- Great Basin Outdoor School, “Fire-Smart Kids, Fire Safe Forests” - \$24,033 (continued from 2013) This program is for student education and stewardship projects to address the high priority wildfire risk level identified in Tahoe Basin landscapes. “Fire-Smart Kids, Fire Safe Forests” immerses fifth and sixth grade classes and teachers in educational activities and projects to teach restoration, fire prevention, healthy forest ecosystems, and defensible space. During the period of the grant, 1025 students attended the educational camp.

- North Lake Tahoe Fire Protection District, Fuel Reduction and Community Education/Outreach - \$130,435. This project combines elements of these programs to complete high-priority wildfire preparedness works in high-hazard neighborhoods within Incline Village and Crystal Bay. The components of the project include 20 acres of parcels targeted for defensible space inspections and implementation, 19 acres of slash removal through the community curbside chipping program, 45 acres of forest thinning to reduce fire hazards, 20 acres of fuel reduction treatments through the 50/50 defensible space treatment rebate program, and at least two community outreach events where citizens participate in wildfire risk mitigation education and implementation activities.

- Tahoe Douglas Fire Protection District, Fuel Reduction and Community Education/Outreach - \$130,435. The proposed project is to fund the defensible space component of Tahoe Douglas Fire Adapted Community program to assist homeowners with the heavy work necessary to clear defensible space. Citizens are encouraged to contact the Fire District to obtain a defensible space inspection. Inspectors will provide recommendations for defensible space fuel treatments. Fuel treatments are reimbursable up to 50% of \$2,500 spent per parcel. The Fire District will also conduct at least seven community work day events, one in each high risk community that will be used to educate community inhabitants on the latest best practices in wildfire risk mitigation techniques to implement on their residences. The Zephyr Fire Crew will treat two acres of forests with excess wildfire fuel per day, totaling 16 acres of total fuels reduction. Additionally the Zephyr Crew chips any slash piles that residents leave roadside. An additional 104 acres of fuel reduction treatments will be documented from the Fire District's defensible space inspection program that encourages citizens to implement effective defensible space on their parcels. Each year Fire District Engine Companies inspect $\frac{1}{4}$ of the residential properties in the District for defensible space compliance.

- University of Nevada Cooperative Extension, Living with Fire Program - \$199,610 (continued from 2014) A Statewide project to educate, motivate, and organize residents of Nevada's WUI to take action in reducing the wildfire threat to their homes and communities by: 1) continuing and enhancing the existing Living with Fire campaign and 2) establishing a new organization Nevada Fire Adapted Communities Network (NFACN).

- North Lake Tahoe Fire Protection District, Community Chipping/Priority Assessment Framework - \$77,000 (continued from 2014). This project has two main concepts: 1) Implementation of defensible space in communities that the fire district's employees will then come to chip and haul the product away. This will be offered to homeowners in Incline Village and Crystal Bay. 2) Creation of the Nevada Tahoe Priority Assessment Framework that will be a digital computer based program that utilizes fire behavior models and other geospatial data to update Community Wildfire Protection Plans on the Nevada side of the Tahoe Basin as projects are completed and vegetation densities change.

- North Lake Tahoe Fire Protection District, Fire Adapted Community Regional PSA - \$27,500 (continued from 2013). An inter-agency (North Lake Tahoe Fire Protection District, Truckee Meadows Fire Protection District, Reno Fire Department, Tahoe Douglas Fire Protection District, East Fork Fire and Paramedic District, Carson City Fire Department, Sparks Fire Department, US Forest Service, and Nevada Division of Forestry) collaborative public service announcement aired 5 PSA's showing a unified message to becoming a fire adapted community and the dire need for homeowners and communities to take action in the prevention process.

Nevada Tahoe Resource Team (NTRT) – Lake Tahoe State Park

The Nevada Division of Forestry, through its forester on the NTRT, is responsible for forest management on the 7,500 acres of Nevada State Park land in the Lake Tahoe Basin. Lake Tahoe Nevada State Park extends from immediately south of Incline Village to Spooner Summit, and the Van Sickle property located in Stateline. In 2015, the SNPLMA Round 9 Tunnel Creek prescribed fire project and the Van Sickle Round-10 Hazardous Fuel Reduction (HFR) project were completed, audited by the BLM and closed out.

A total of 111 acres were thinned and brushed this year within the park lands. The thinning/hand piling was completed as follows: Sand Harbor Round-11, 43 acres; North Canyon Road fuel break 52 acres; and 16 acres in aspen. The Sand Harbor Round-11 project is 100 acres in size and 83 acres have been thinned and piled. The North Canyon Road fuel break is also 100 acres and 75 acres have been thinned and piled. Both projects are adjacent to previously treated areas and will enlarge and enhance the total treated area. The North Canyon Road fuel break project created defensible space around two rental cabins located in the park.



Piles in Wildcat Unit of North Canyon Road Fuel Break within defensible space zone of rental cabin.



Pile burning of slash and fuel wood production sale in Lake Tahoe Nevada State park.

burned near Sand Harbor and Memorial Point east of Highway 28 as part of the hazardous fuel reduction treatment in that area. Nineteen acres were burned along the northwest edge of Spooner Meadow to tie in adjacent treated areas. Twenty-seven acres were burned in aspen areas around Spooner Lake and the south end of North Canyon.

Additionally, 120 acres of piles were burned. The remaining 16 acres on the Van Sickle Round-10 project were burned and the remaining 8 acres were burned on the Slaughterhouse Round-11 project. Those two projects are now complete and complement adjacent treated acreage on other jurisdictions. The Slaughterhouse project completes treatment on State land north of the community of Glenbrook. Twenty acres were burned in the vicinity of the Spooner rental cabin. Sixteen acres were



Van sickle Round 10 SNPLMA project after piles were burned.

Nevada Tahoe Resource Team (NTRT) – Tahoe Bond Act Urban Parcels

The Nevada Division of State Lands (NDSL) forester assigned to the NTRT is responsible for

managing the vegetation and fuel on sensitive State-owned urban parcels purchased through the Tahoe Bond Act. There are 490 parcels, ranging in size from 0.1 to 14 acres, which were purchased to retire their potential for development and associated impacts to Lake Tahoe's water quality. These parcels are located within urban areas and can create a significant wildfire hazard to adjacent landowners if they are not actively managed.

The majority of treatment funding is and has been provided by SNPLMA grants. During 2015 the NTRT used SNPLMA Round-10 (\$100,374) funding to finish pile burning of accumulated wildfire fuel piles on 88 parcels consisting of 37 acres. SNPLMA Round-11 funding was used to implement 13 acres of understory prescribed burns located in Incline Village (Rocky Point and Crystal Bay). The prescribed burn projects have been postponed to spring 2016 due to historical drought conditions and the short burn window that was available in 2015. The Rocky Point prescribed burn unit is located adjacent to State Parks lands. Additionally, 27 parcels (10 acres) were treated in 2015 by either stand thinning, brush reduction, or pile burning. SNPLMA Round-12 funding was used to reduce brush fuels in the Tyrolean Village subdivisions located in Incline Village. Both upper and lower units were treated by North Lake Tahoe Fire Protection District hand crews. Seventeen parcels (3 acres) were treated and pile burned in 2015 to complete the project. This project will be closed out spring 2016. Throughout the project's history, 125 parcels (14 acres) were treated, by expending approximately \$25,000. The Tahoe Bond Act funded the treatment of 31 parcels (26 acres) by the NDSL forester. Recent drought-induced tree mortality, wind-throw, and snow load damaged trees were removed from urban lots. Parcels identified with high course woody fuel loadings and forest stands that contained groups of trees which required light thinning were treated. Parcels with emerging brush were treated as well. Eight parcels (3 acres) were pile burned. The extent of pile burning was reduced due to historical drought conditions.

In summary, NDSL treated 84 parcels (42 acres) through stand thinning, brush reduction, and pile burning in 2015. Total expenditures combined, Tahoe Bond Act and SNPLMA, were approximately \$26,000. In the period 2011-2015 NDSL expended approximately \$290,000 to treat urban parcels in the Lake Tahoe Basin with 99% of the work funded by SNPLMA. Work in 2016 will continue progress with SNPLMA Round 11 and removal of drought-induced tree mortality.

North Lake Tahoe Fire Protection District

Fuel Reduction

In 2015, North Lake Tahoe Fire Protection District (NLTFPD) staffed one 20-person Type 2-IA hand crew and one 16-person fuel crew. Annual staffing is dependent on available grants and contracts for fuel reduction. NLTFPD contracts with other agencies needing hand thinning and prescribed fire services, and are the lead agency when implementing projects on private and local government owned land within Incline Village and Crystal Bay.

The Incline Village General Improvement District (IVGID) owns over 1,400 acres in Incline Village and Crystal Bay, and most of their property is located in steep drainages surrounding subdivisions. NLTFPD's partnership with IVGID facilitated the implementation fuel reduction in some of the most critical areas of the wildland-urban interface. The District completed hand-thinning projects on 82 acres of private and IVGID land. An additional 8 acres were hand-thinned in preparation for pile burning.

The District continued work under cooperative agreements with the US Forest Service Lake Tahoe Basin Management Unit to continue implementation of the USFS Incline Project. Other cooperative agreements for fuel reduction include thinning and prescribed fire services for the Nevada Tahoe Resource Team in Nevada, and with the California Tahoe Conservancy, California State Parks, and North Tahoe Fire Protection District in California.

Funding for 2015 fuel reduction projects was provided by landowners and various grant sources. IVGID continued its commitment to reducing wildfire risk by providing \$200,000 for fuel reduction projects, leveraging a Southern Nevada Public Lands Management Act grant and Non-Federal Lands grants through the USFS Lake Tahoe Basin Management Unit.

The District's community curbside chipping program is funded by a State Fire Assistance grant through the Nevada Division of Forestry. Funding for defensible space inspections was funded by the District and a State Fire Assistance grant through the California Fire Safe Council. Outreach and education efforts were supported by the State Fire Assistance grants and a grant from the Fire Adapted Communities Learning Network.

Fire Prevention Education

The District is focused on rebuilding support functions for communities taking action to prepare for wildfire, and increasing public involvement in decision making processes. As such, the District continues to participate in all activities of the Tahoe Fire and Fuels Team.

The fire district provided assistance for creating defensible space in the form of defensible space evaluations and community curbside chipping. Evaluations provided valuable public contact and implementation guidance, and curbside chipping removes a common barrier to defensible space implementation. NLTFFPD completed 195 solicited inspections in 2015. An additional 164 blanket inspections were completed in a targeted high-risk neighborhood to ensure compliance with the International Wildland Urban-Interface Code of 2012 as adopted, and enforcement follow-up will continue in 2016. Sixty-two defensible space inspections were also completed for construction projects, for a total of 421 parcels inspected. Curbside chipping service was provided to 182 parcels.

Tahoe Douglas Fire Protection District

The Tahoe Douglas Fire Protection District provides all-risk fire protection services to the Tahoe Township portion Douglas County. The District employs a forester and a 30-person hand crew that conducts fuel management work on private, local government, state and federal owned lands. In 2015, the fuel management program was responsible for thinning 157 acres of private and federal forest land within the fire district.

The District continued its defensible space inspection program and completed over 450 curbside defensible space inspections representing $\frac{1}{4}$ of the single family homes in the District. All residential properties within the district have now been inspected at least one time. This blanket inspection program is the foundation of legal enforcement of defensible space regulations passed for high fire hazard regions of Douglas County in 2014.

The District also consulted with 195 homeowners about defensible space and provided defensible space assistance rebates to 68 homeowners totaling \$95,327.83 with a total of over \$195,233 being spent on defensible space treatments through the rebate program. The rebate program is being used with the enforcement program and in combination have lifted defensible space compliance to 68 percent in 2015.

The District's Community Work Days program was continued and expanded in 2015. The program provides labor from the Zephyr Fire Crew in each of the eight major communities located within the district. The Zephyr Crew assists homeowners with basic defensible space work such as tree cutting, brush cutting or hauling material. Many homeowners lack the tools to manage brush and small trees, but are willing to complete the raking and other aspects of a complete defensible space treatment. During the program the Zephyr Crew was able to assist over 50 private landowners and treat 8 publicly owned urban lots for defensible space.

Funding for the District's fuel reduction and defensible space programs comes from a variety of sources. Base funding for the program is provided by a local ad-valorem tax passed by taxpayers in 2008. Grant funding from Nevada Division of Forestry, US Forest Service, California Fire Safe Council and SNPLMA augments the funding necessary to implement the fuels reduction projects implemented throughout the district.

Tahoe Douglas staff completed a revision of its Community Wildfire Protection Plans in 2015. The new plans redefined the Wildland Urban Interface to include all lands within 1.5 miles of communities and includes a complete inventory of all lands in the district that need to be considered for fuel reduction. Additionally the CWPP update project included the development of a database that includes history of all past fuel reduction efforts and plans for future fuel reduction activity.

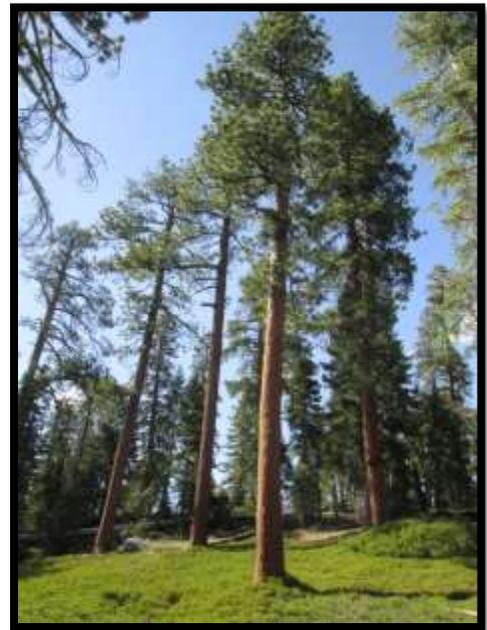
US Forest Service-Lake Tahoe Basin Management Unit

During 2015, the US Forest Service-Lake Tahoe Basin Management Unit (LTBMU) accomplished several initiatives including wildfire fuel reduction through forest thinning, prescribed burning to restore forested ecosystems, and public education to enhance wildfire prevention as well as natural resource conservation. Five hundred and sixty-five acres of fuel reduction through hand and mechanized thinning as well as use of prescribed fire was accomplished. Public education campaigns throughout the year were used to educate 2,395 members of the public, community volunteers, conservation corps, and others about conservation of natural resources and responsible fuel management and fire use.

Fuel Reduction

In 2015 LTMBU accomplished 27 acres of hand thinning in the Spooner Forest Health and Hazardous Fuels Reduction Project Area, and through a grant to the Washoe Tribe of California and Nevada, supported 25 acres of mechanized thinning in the Skunk Harbor area on Trust Lands. We also accomplished 125 acres of fuel reduction on the urban lots (Santini-Burton lots) on the Nevada side of the Basin. These lots, located in the wildland-urban intermix, contain fuel that if left untreated, poses a significant hazard to adjacent properties and the larger community.

The LTBMU sold 580 personal use firewood permits and 5,000 Christmas tree permits that allow private citizens an opportunity to use forest products, while reducing fuel on National Forest System lands and at the same time learn more about our fuel reduction program by engaging with Forest Service employees and reading posters and pamphlets.



Restored Jeffrey pine stand that meets desired conditions.

Veterans Green Corps

The LTBMU continues to host the Veterans Green Corps to work on fuel reduction projects in the 2015 season. The veterans perform fuel reduction and prescribed fire work on the LTBMU and on nonfederal lands. Veterans Green Corps is a partnership between the Forest Service and the California

Conservation Corps and veterans receive training and gain experience with the two agencies.

Prescribed Fire

There were 388 acres of prescribed fire treatments within the Nevada side of the Basin that were implemented as part of forest restoration and wildfire fuel management projects.

Public Education

Two USFS Fire Prevention Technicians patrol the Nevada portion of the Basin. These employees provided education programs in schools, at public meetings and coordinate with fire protection districts to increase awareness.



Veteran Green Corps crew burns piles during a fuel reduction project

The LTBMU continued their participation in the Tahoe Fire and Fuels Team’s Fire Public Information Team (Fire PIT). This group coordinates and communicates prescribed fire activity for all Nevada agencies on a weekly basis, and delivers public service announcements on the radio and print media addressing fire prevention and public safety. Staff also provided support to the 2015 updates to the Community Wildfire Prevention Plans. We recently brought on-line an interactive mapping tool that the public can use to see where prescribed fire is taking place.

The LTBMU staff worked with several different partners to deliver conservation education to school students and adults. Funding for these education efforts comes from SNPLMA grants. These efforts included:

- Winter Trek: a 5th grade snowshoe program aligning NV state core curriculum standards through forest health, watershed sustainability, and climate change education.
Program total: 321 students, 45 adults, 8 community volunteers contributing 131 hours
- Ski with a Ranger: offered to the general skiing and snowboarding public, supports and enhances public awareness of the Environmental Improvement Program (EIP) and Southern Nevada Public Lands Management Act (SNPLMA). Messaging includes forest health and fuel reduction, watershed restoration, habitat improvement, and water quality improvement themes.
Program total: 625 individuals, 11 community volunteers contributing 345 hours
- Heavenly Epic Mix: event offered to general public at Heavenly Mountain Resort in NV is an educational forum centered on environmental education, fuel reduction, forest health, and responsible recreation opportunities.
Program total: 90 visitors, 120 Forest Service LTBMU employees
- Tahoe Environmental Research Center (TERC)’s Science Expo and Community Event night. The Forest Service hosted a fire ecology and fuel reduction station offered to 1st – 5th grade students in Incline Village, NV.
Program total: 1,000 individuals
- Forest Service fire ecology and fuel reduction program for K, 3rd, 5th grade students in Incline Village, NV.
Program total: 108 students, 5 adults

- Conservation Education staff, along with South Tahoe Environmental Education Coalition (STEEC), hosted and educated an international group from New Zealand in model environmental education collaborative network.

Program total: 36 individuals

- Generation Green 2015: an eight-week summer work program that employs students 15-18 years old under Youth Conservation Corps (YCC) hiring authority. Work projects included trail building and maintenance, water quality improvements, fuel reduction and burn piling. All of these activities support SNPLMA messages, including forest health and fuel reduction, watershed restoration and habitat improvement theme, and water quality improvement.



Generation Green Crew reducing fuels as part of meadow restoration.

Program total: 2 crews employing 13 students – (1 crew of 7 students, 1 crew of 6 students)

- **water quality improvements, erosion control approximately less than 1 acre**
- **trail building and maintenance, erosion control approximately 1 acre**
- **invasive weed pulling, approximately less than 1 acre**
- **fuel reduction and burn piling, approximately 10 acres**

In 2016-2017, the LTBMU is planning to treat over 1,500 acres, 397 acres of mechanized and 340 acres of hand thinning, in the Incline Forest Health and Hazardous Fuels Reduction Project along with 805 acres of hand thinning in the Spooner Project. Prescribed fire will continue to be 400-500 acres per year.

