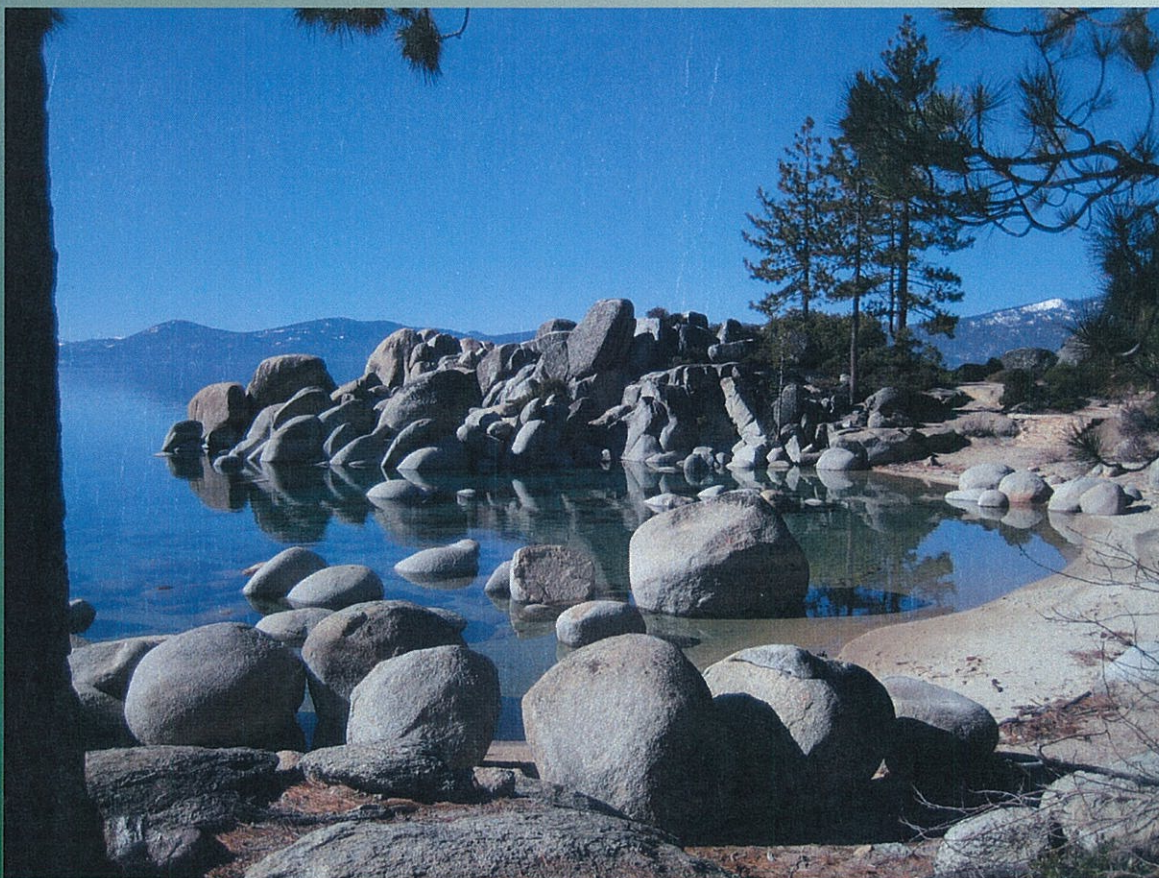




Report to Nevada State Legislature-AB75

Fire-Fuels-Forest Restoration Activities and Accomplishment at Lake Tahoe, NV.



**TAHOE
REGIONAL
PLANNING
AGENCY**



**Compiled and Prepared by
Nevada Division of Forestry
2009**

**Exhibit F-2 - LANDS
Document consists of 28 pages.
Entire Exhibit provided.
Meeting Date: 03-18-10**

Summary

This report is in accordance with Assembly Bill 75 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) 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. Availability of federal funds through direct Forest Service Grants, the California Grant Clearing house, and the Southern Nevada Public Land Management Act (SNPLMA) since has lead to increases in annual accomplishments in wildfire hazard reduction/prevention by responsible agencies. Accomplishments by the agencies and non-profits include coordinated planning for wildfire hazard reduction/prevention, fuel reduction on thousands of acres since 2004, coordinated public information campaigns, electronic tracking of progress, and modifying and streamlining the regulatory environment.

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 forestry 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.

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.

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

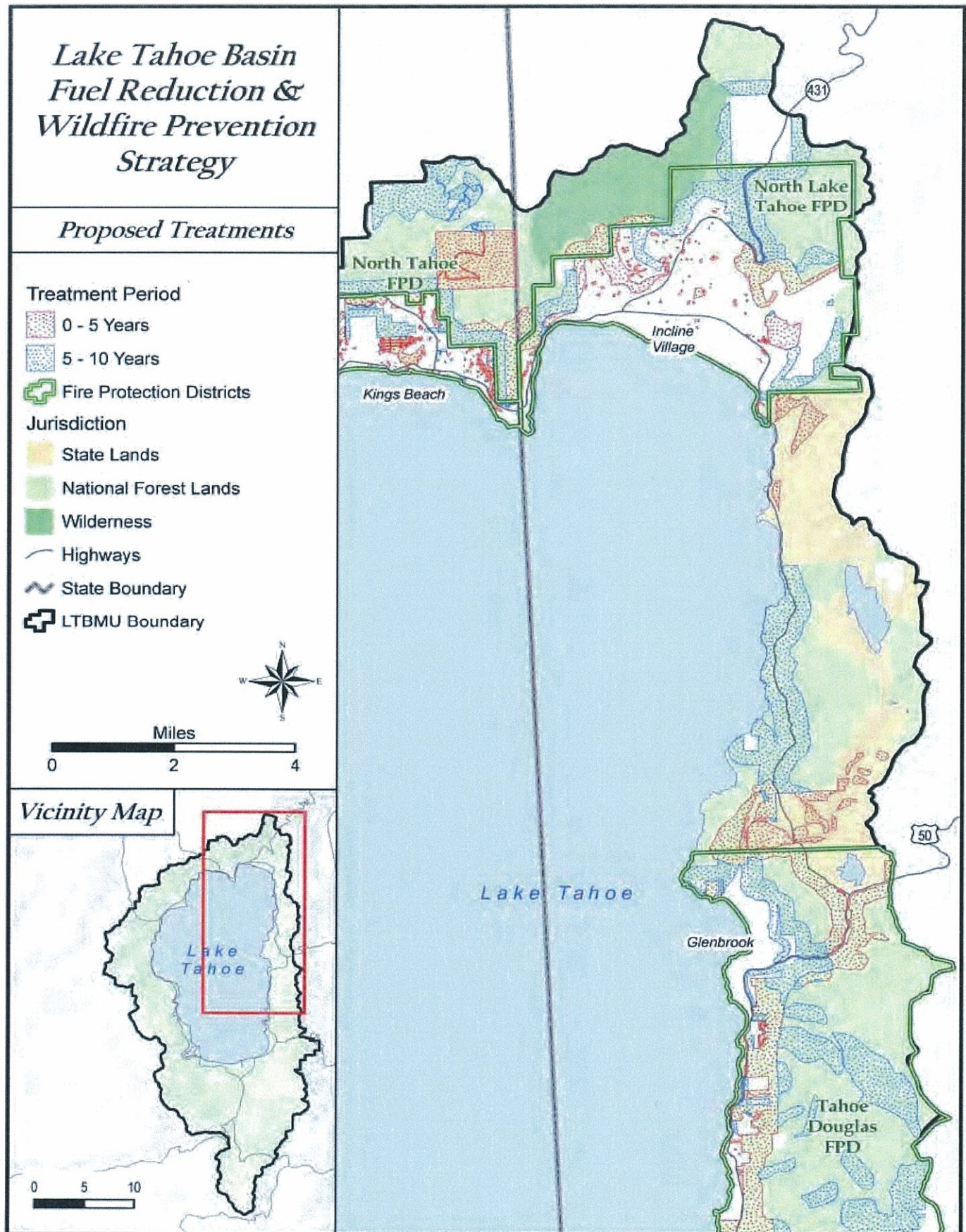


Figure 1. Proposed Treatment Areas for the North East Part of the Lake Tahoe Basin.

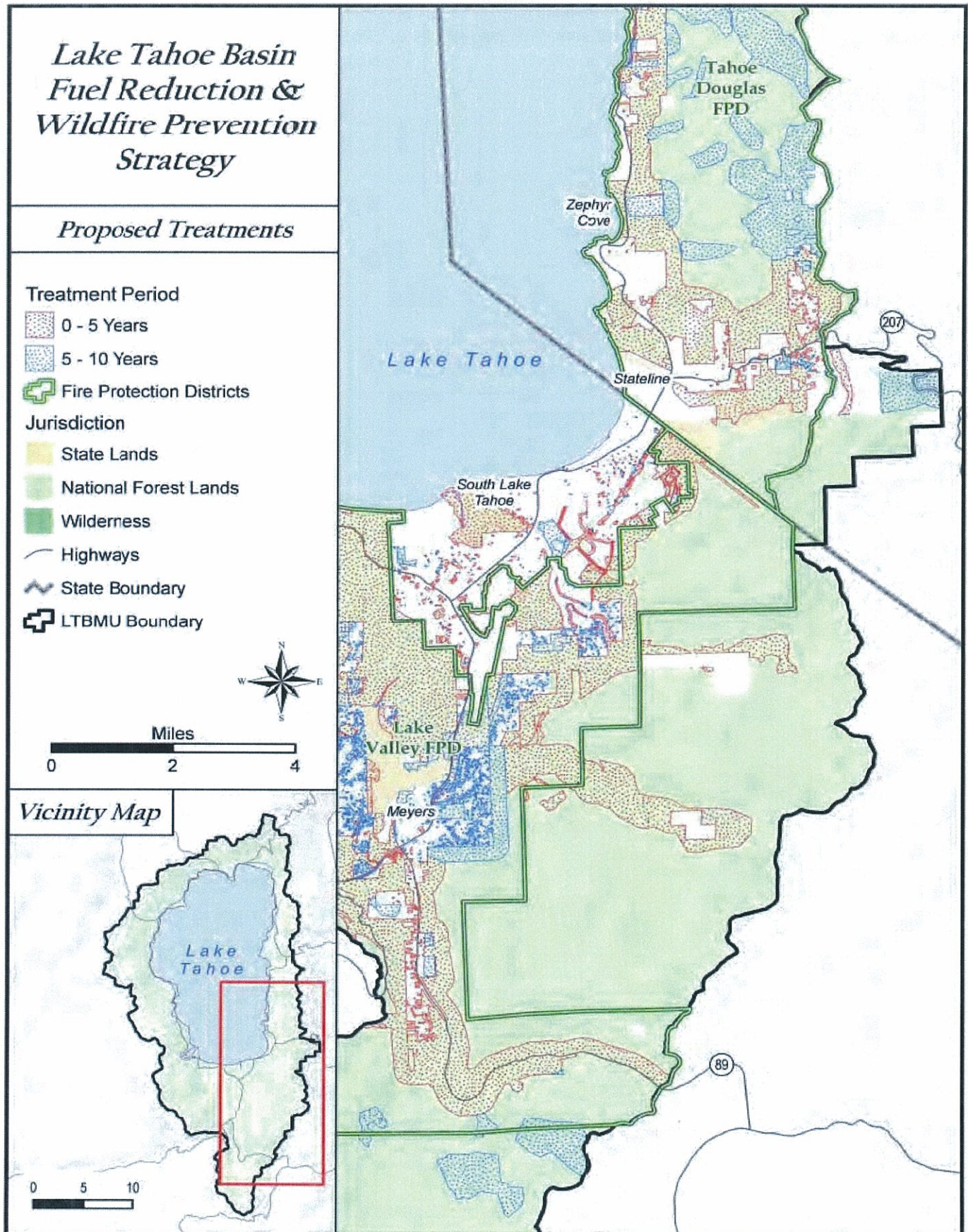


Figure 2. Proposed Treatment Areas for the South East Part of the Lake Tahoe Basin.

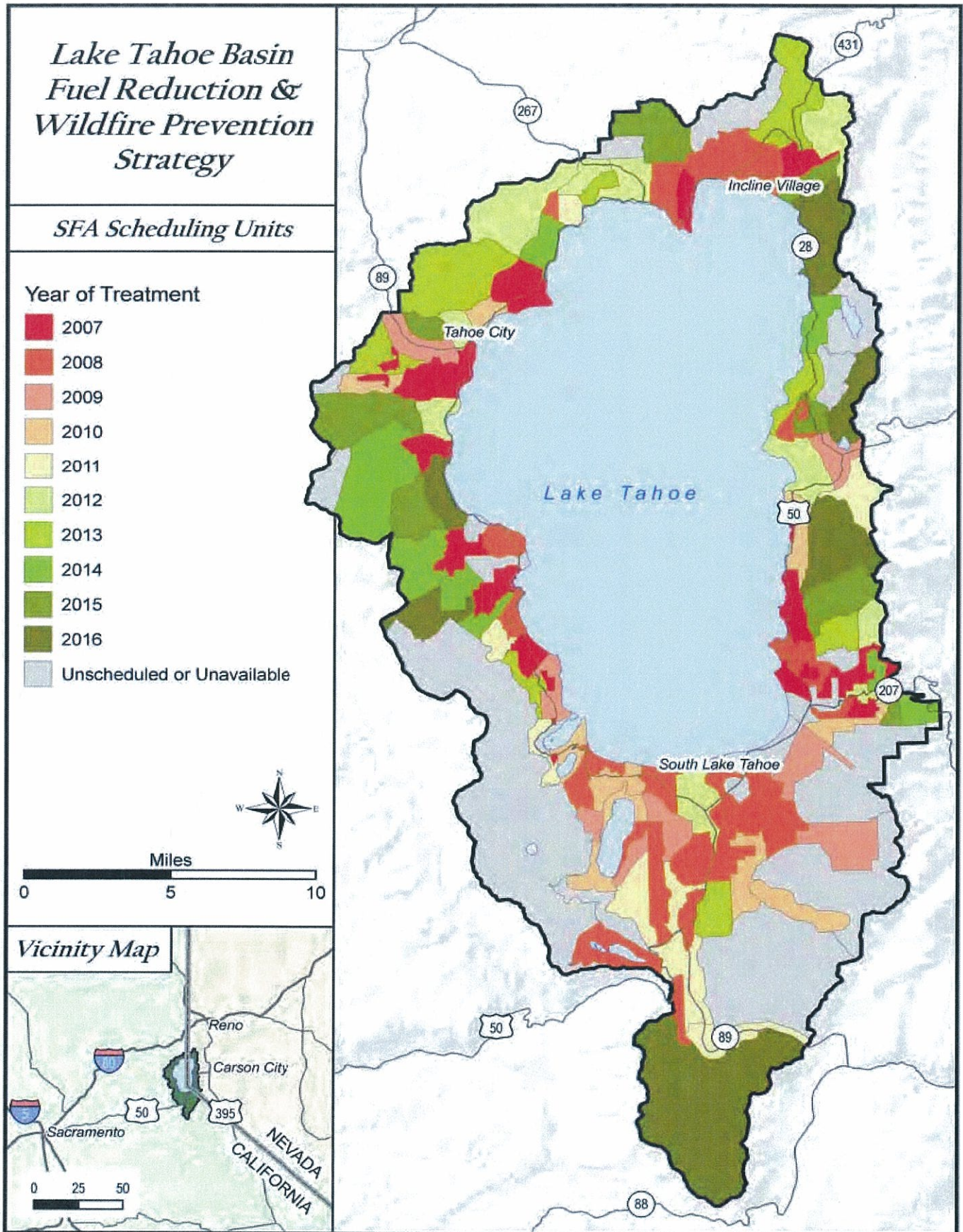


Figure 3. Proposed Schedule for Treatment Areas

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 2. 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. 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 powerplant 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



Before Treatment



After Treatment

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

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.

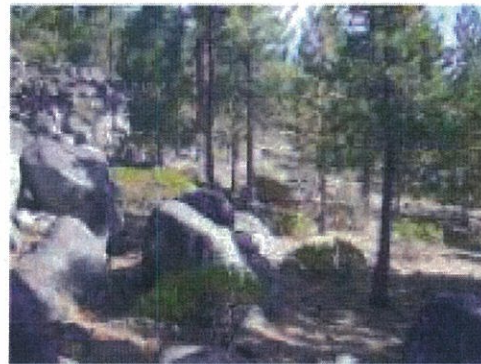
Tahoe Douglas Fire Protection District

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.

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.



Before Treatment



After Treatment

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

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 overstory 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.

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

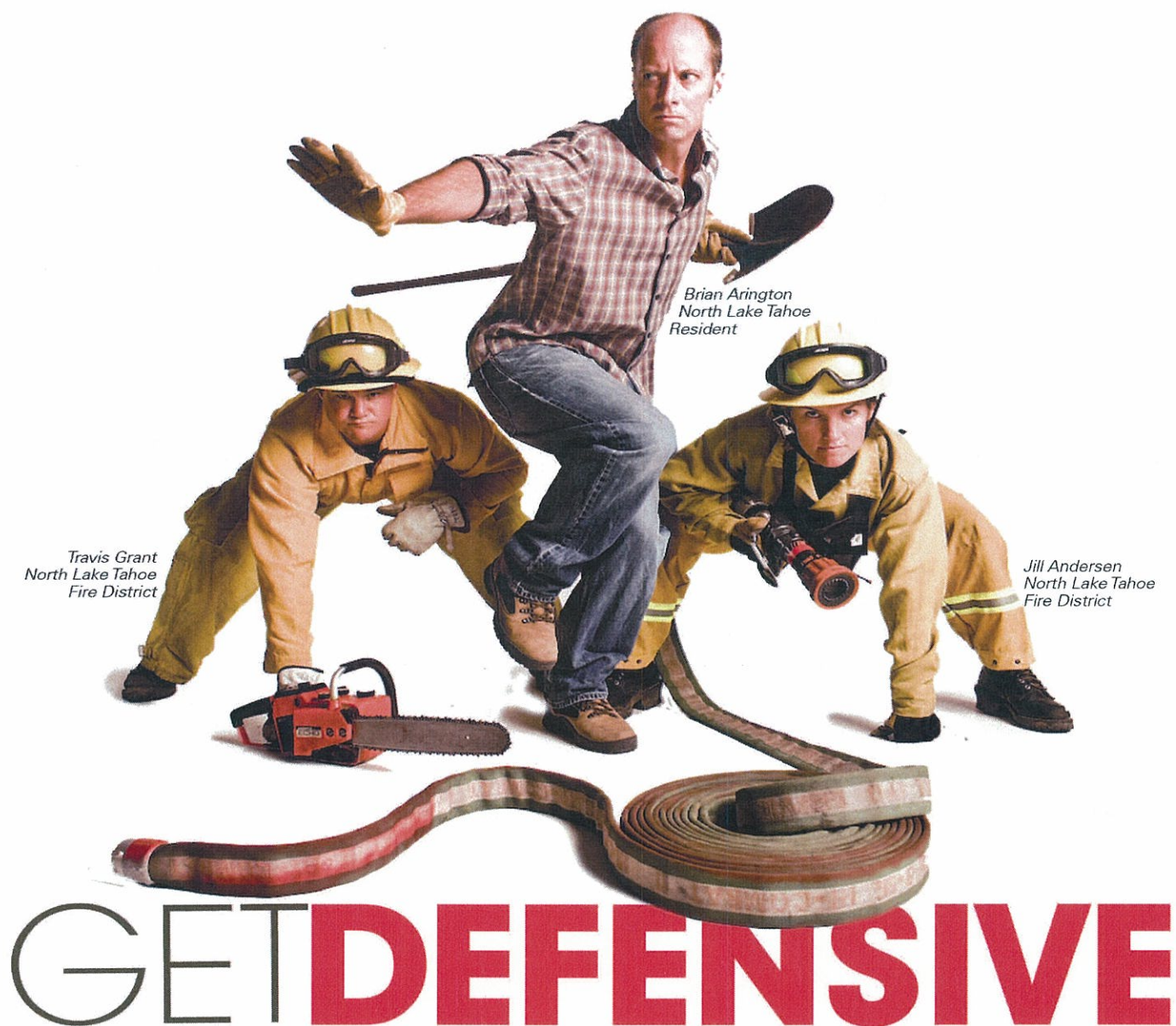


Figure 6. Defensible Space Public Education Program Flyer.

TRPA specific. Of the 55 actions 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

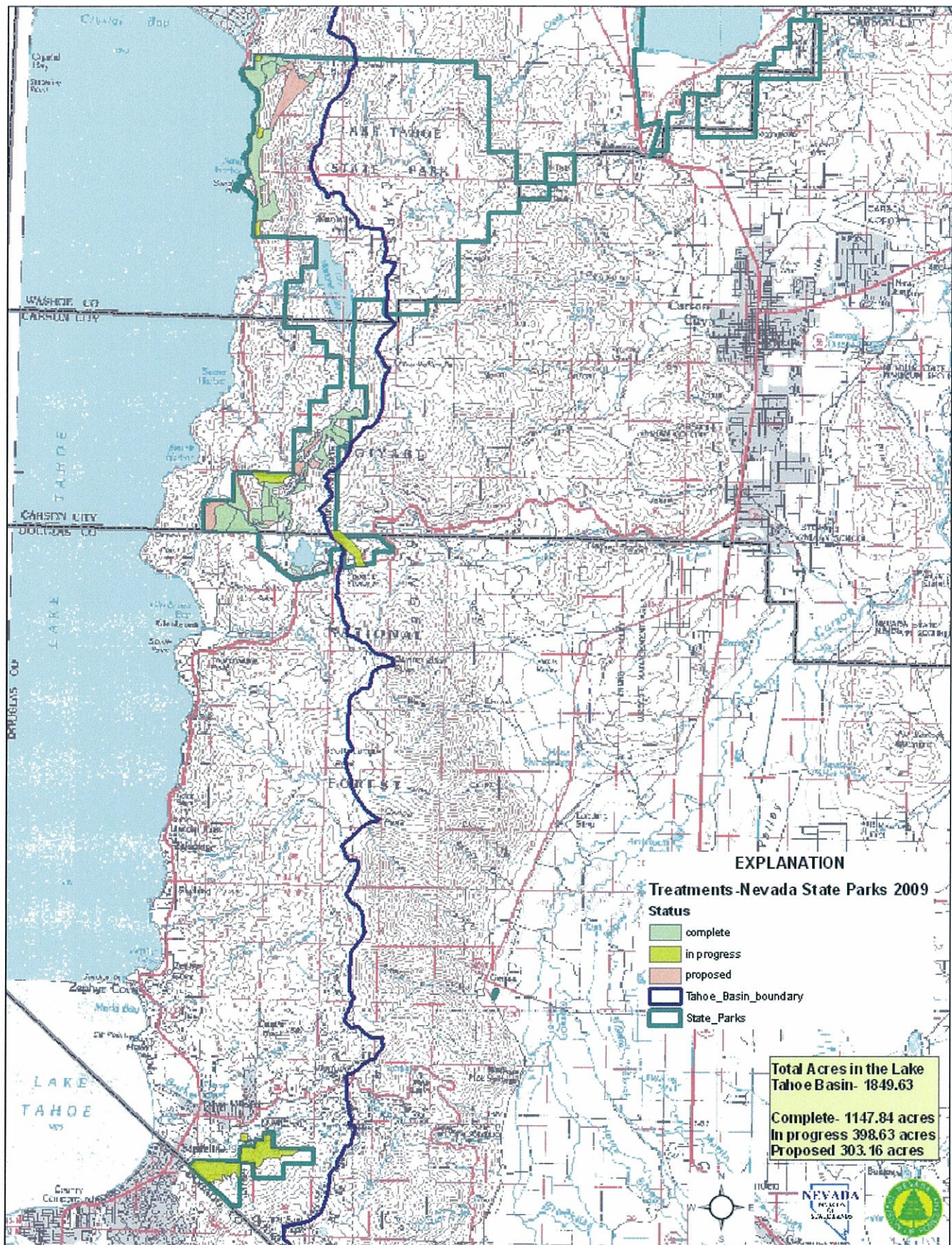
There is no up to date or comprehensive information source which can provide the cumulative actions of Lake Tahoe landowners have taken to provide wildfire protection on their properties. The Defensible Space database under development by the TRPA will be a useful tool for tracking the percent of properties 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.

Utilization

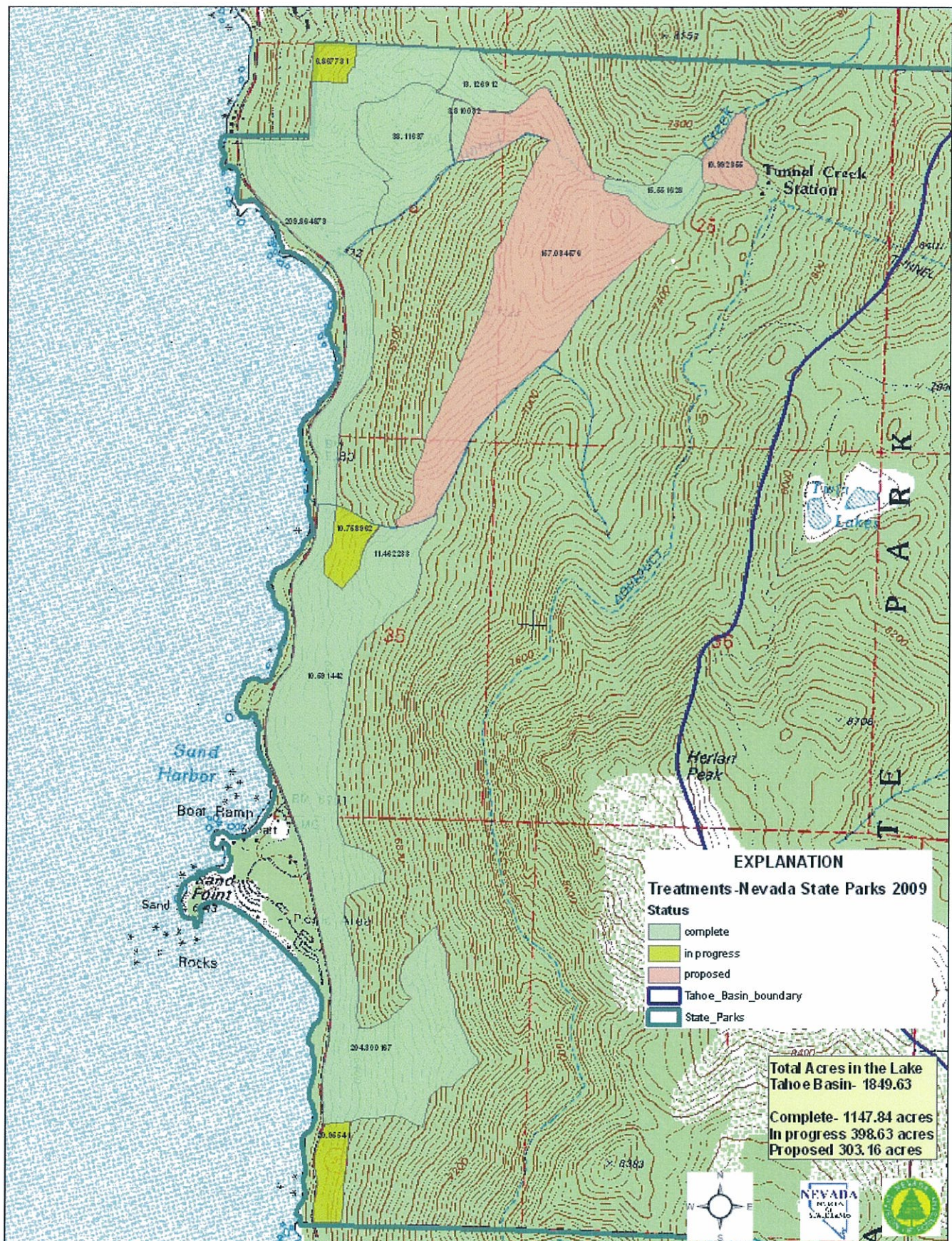
While much of the raw material resulting from fuel reduction and forest restoration treatments is broadcast on the forest floor or piled for burning, when it is feasible, the material is removed and transported to an end user. The nearest end user to the Lake Tahoe Basin is the co-generation facility 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

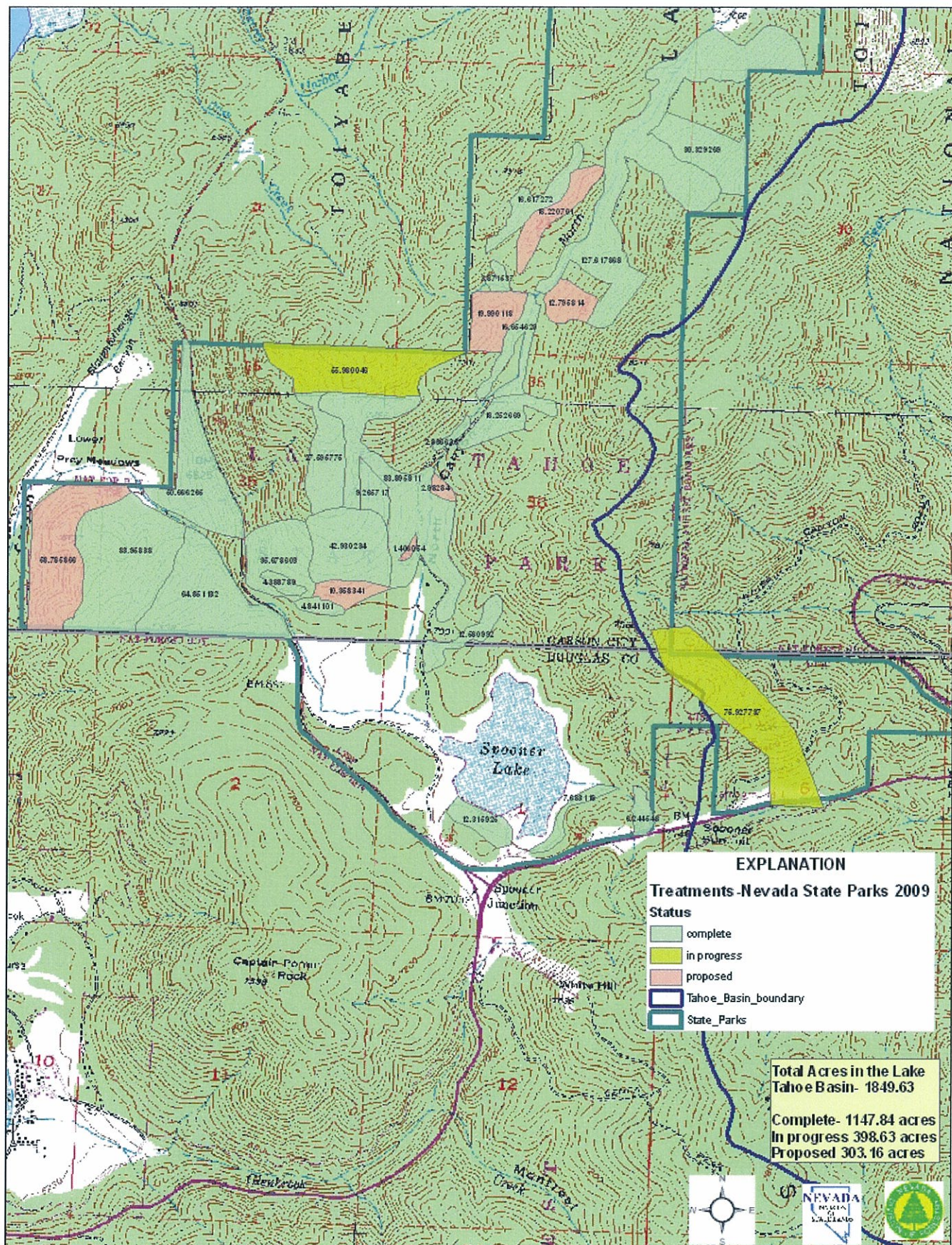
Appendix



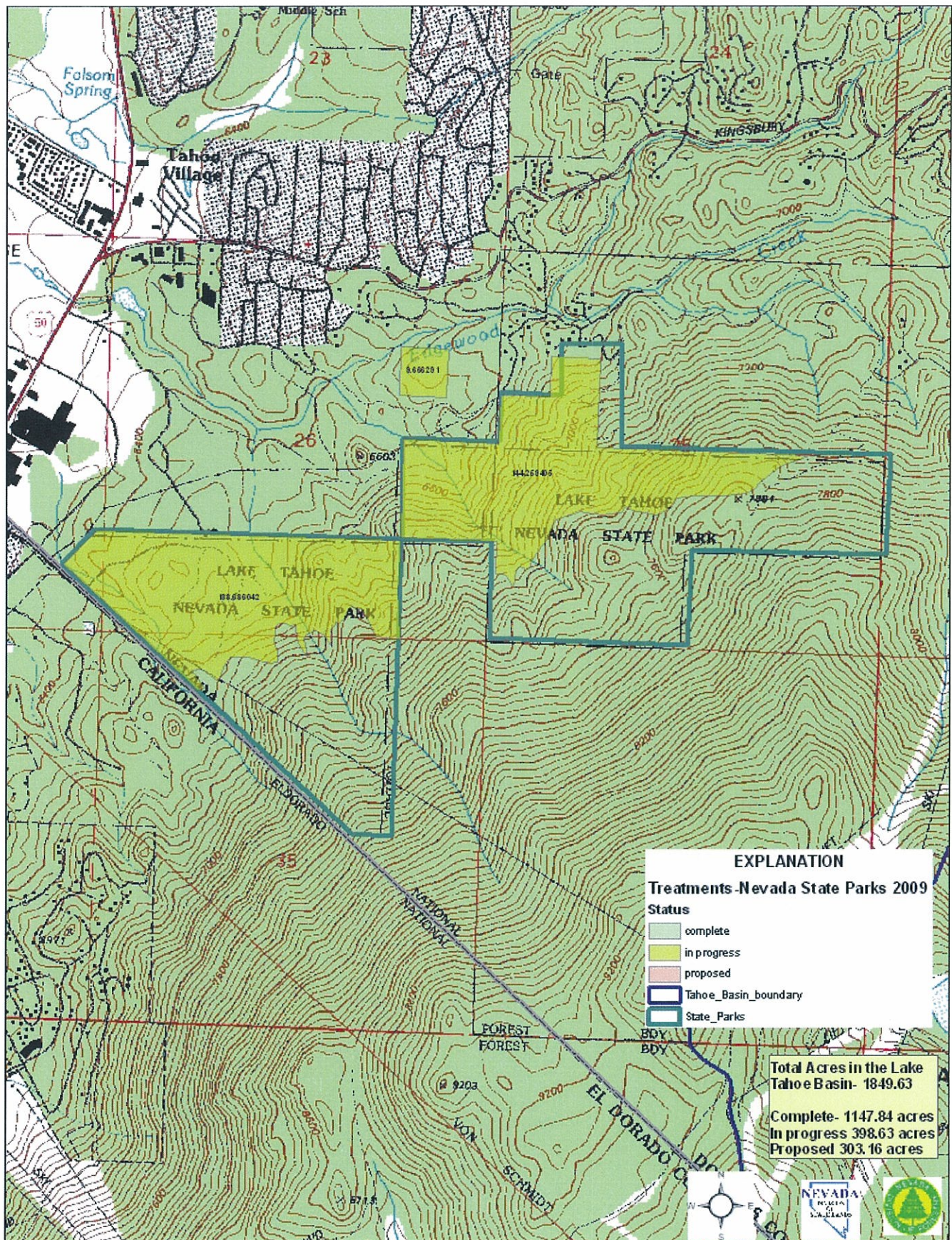
Map 1. Overview Map of Treatment Areas Done by the NTRT and NDF at Lake Tahoe State Park



Map 2. Sand Harbor/Tunnel Creek Treatment Areas.

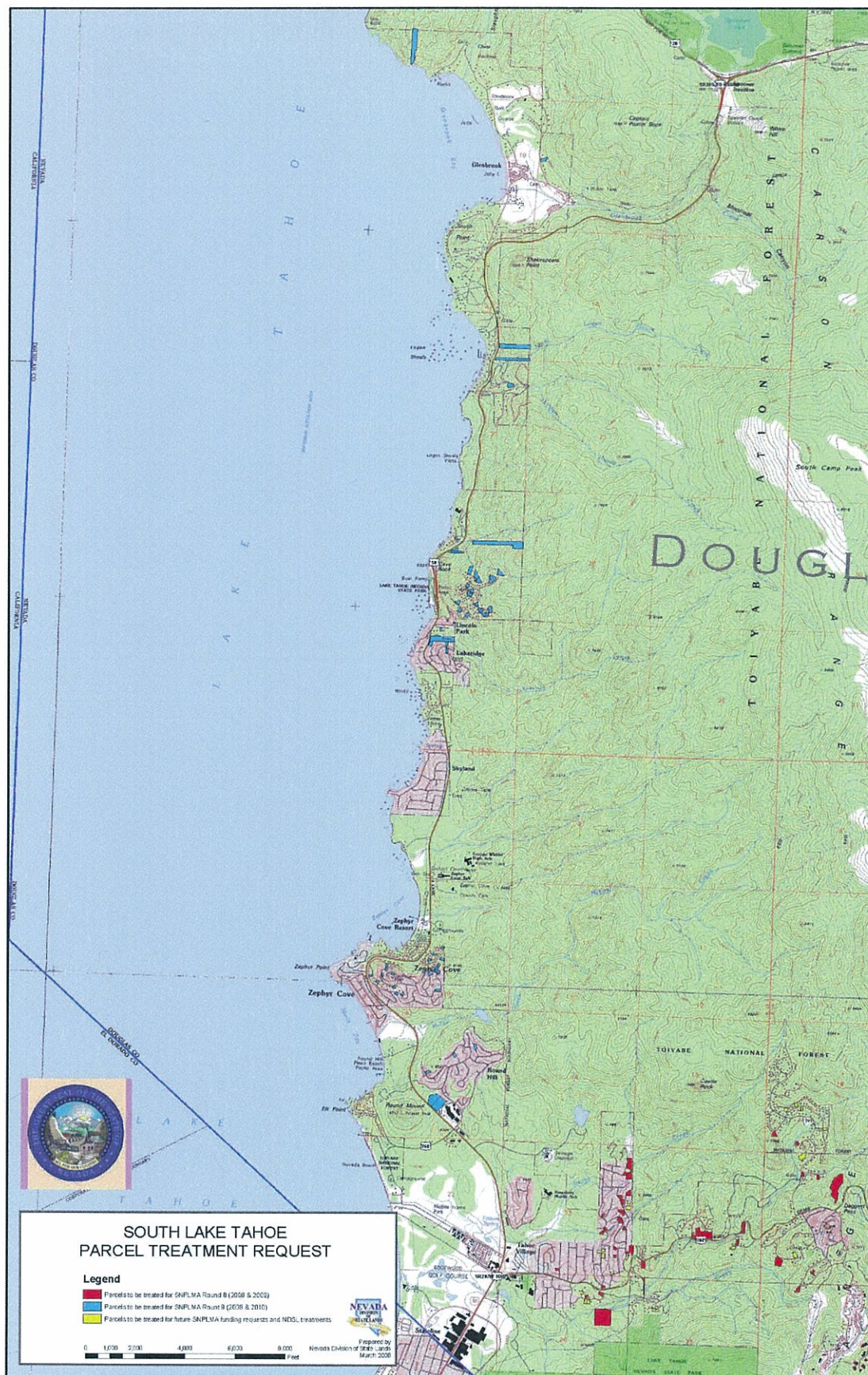


Map 3. Spooner Lake Treatment Areas



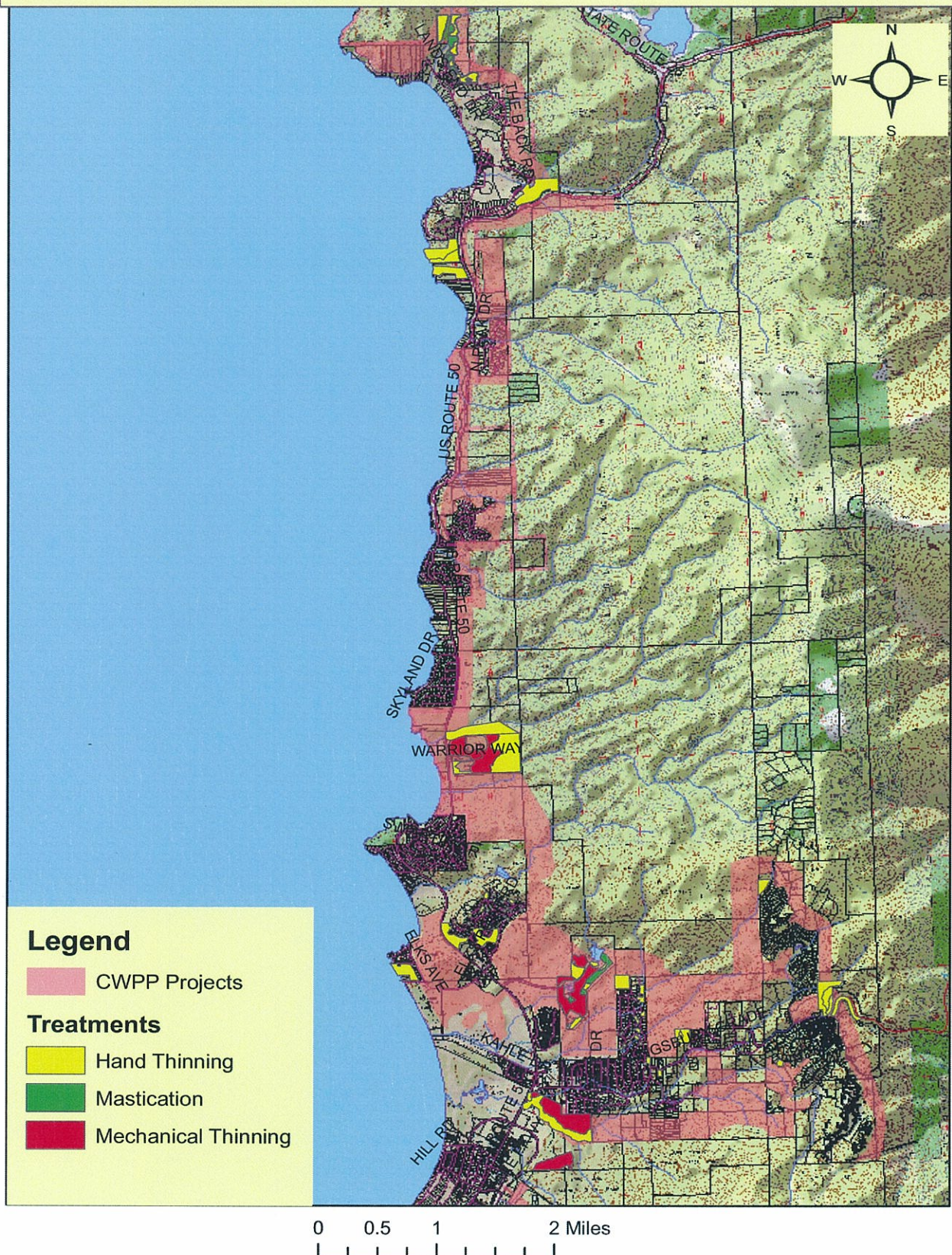
Map 4. Van Sickle Treatment Areas.

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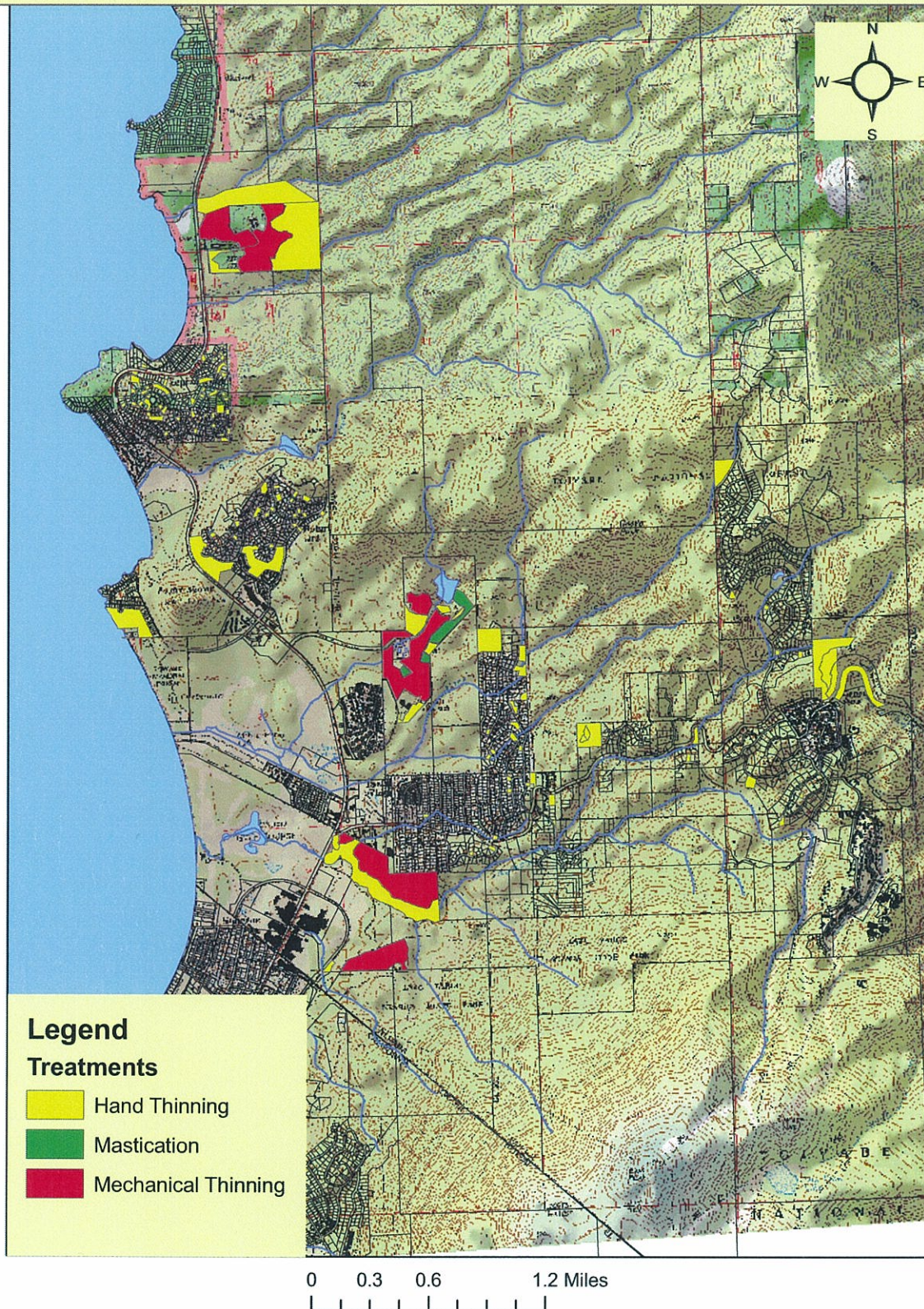


Map 6. Treatment Areas Tahoe Bond Act Parcels-South Lake Tahoe.

TDFPD CWPP Projects and 2008 and 2009 Field Season Accomplishments

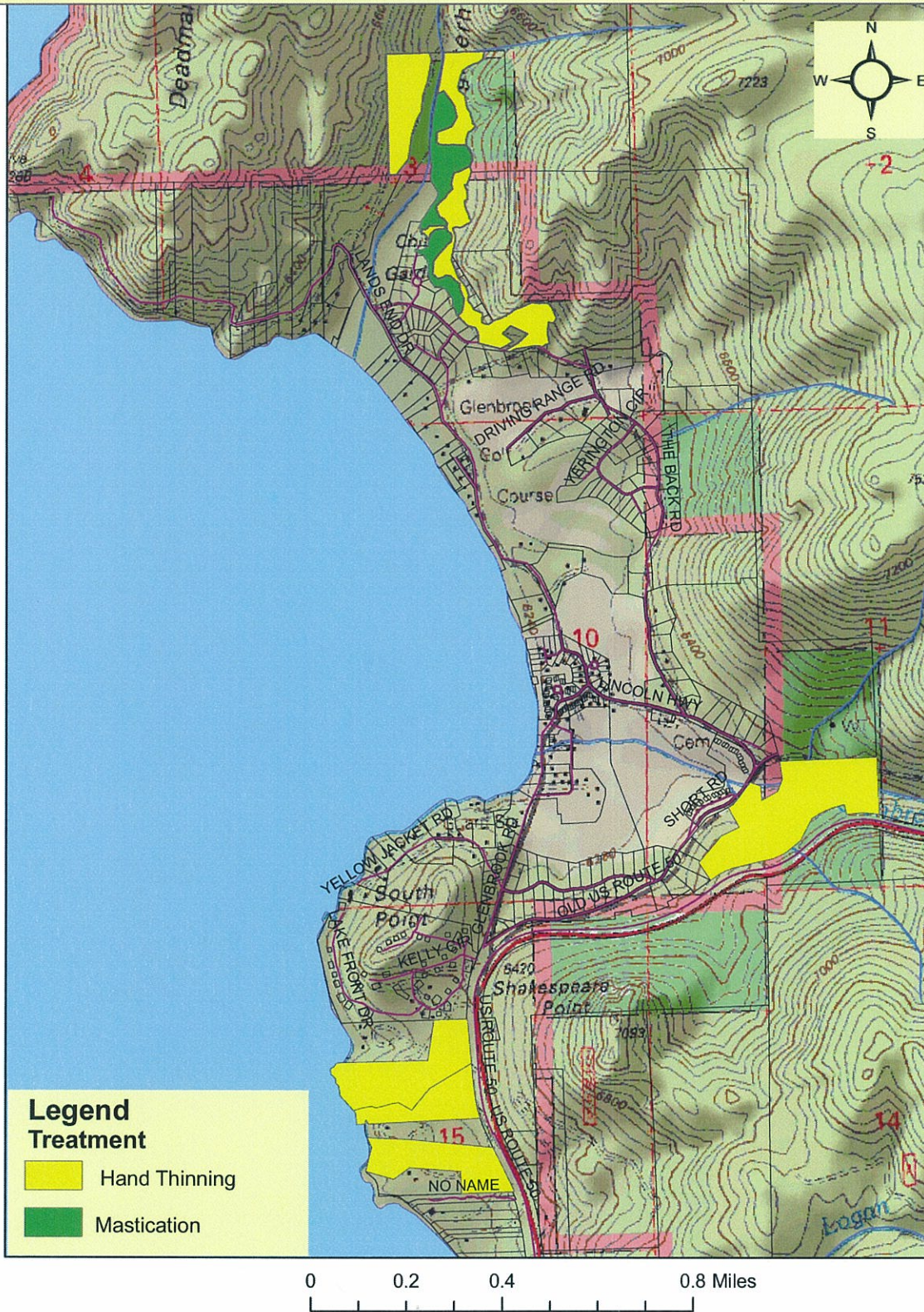


TDFPD Kingsbury Region Fuels Reduction Projects 2008 and 2009 Field Season

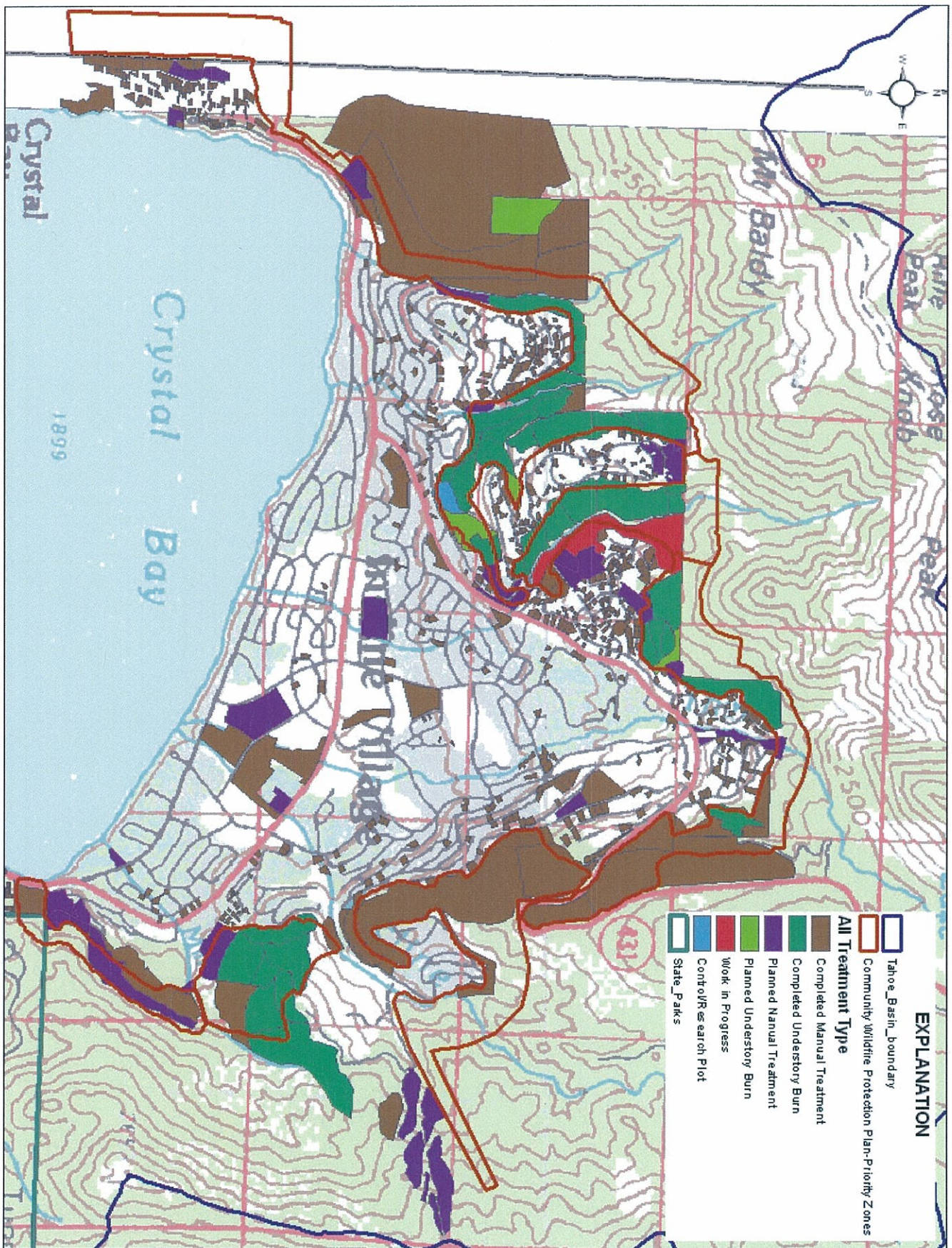


Map 8. TDFPD Projects-Kingsbury.

TDFPD Glenbrook Region Fuels Reduction Projects 2008 and 2009 Field Season

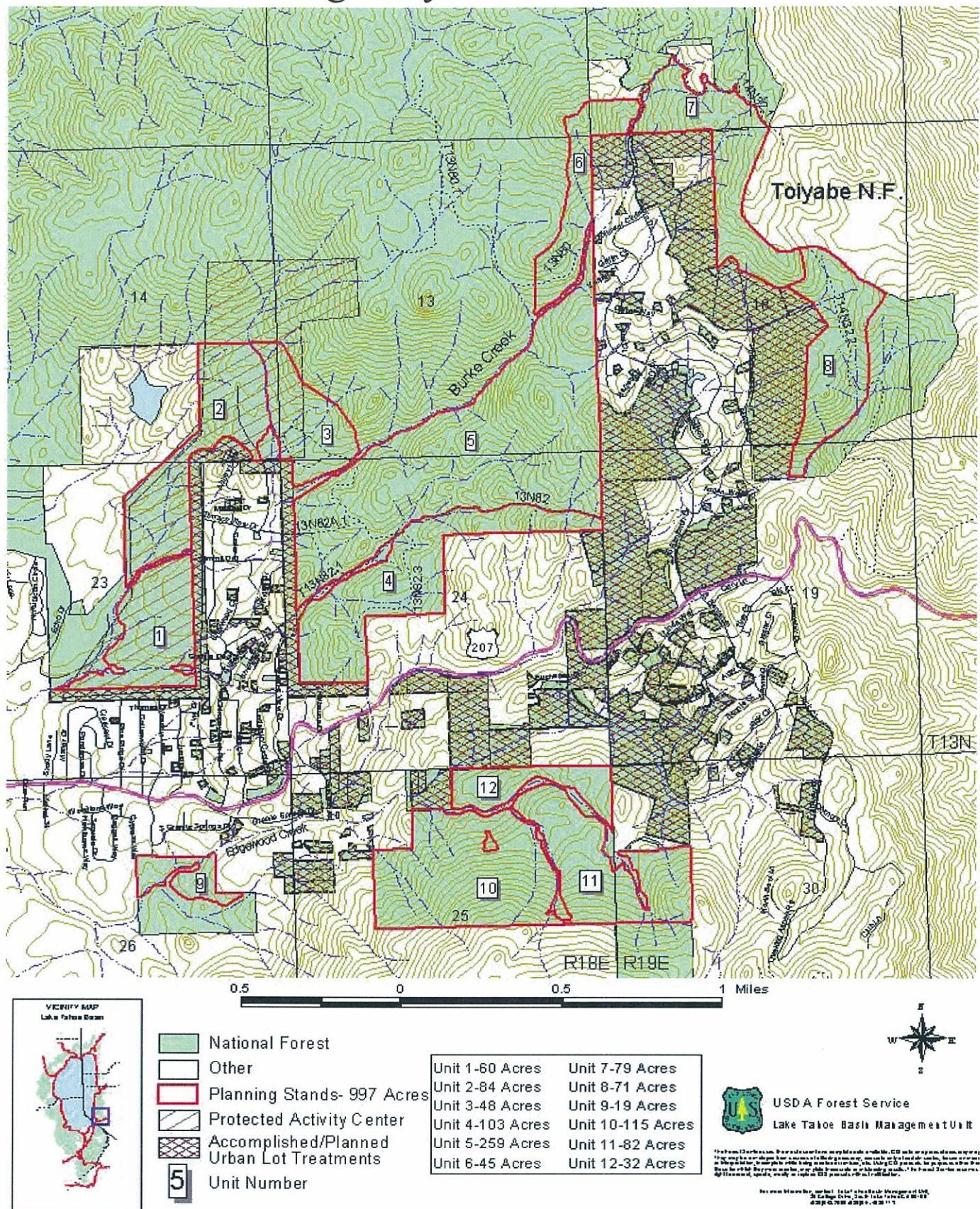


Map 9. TDFPD Projects-Glenbrook.



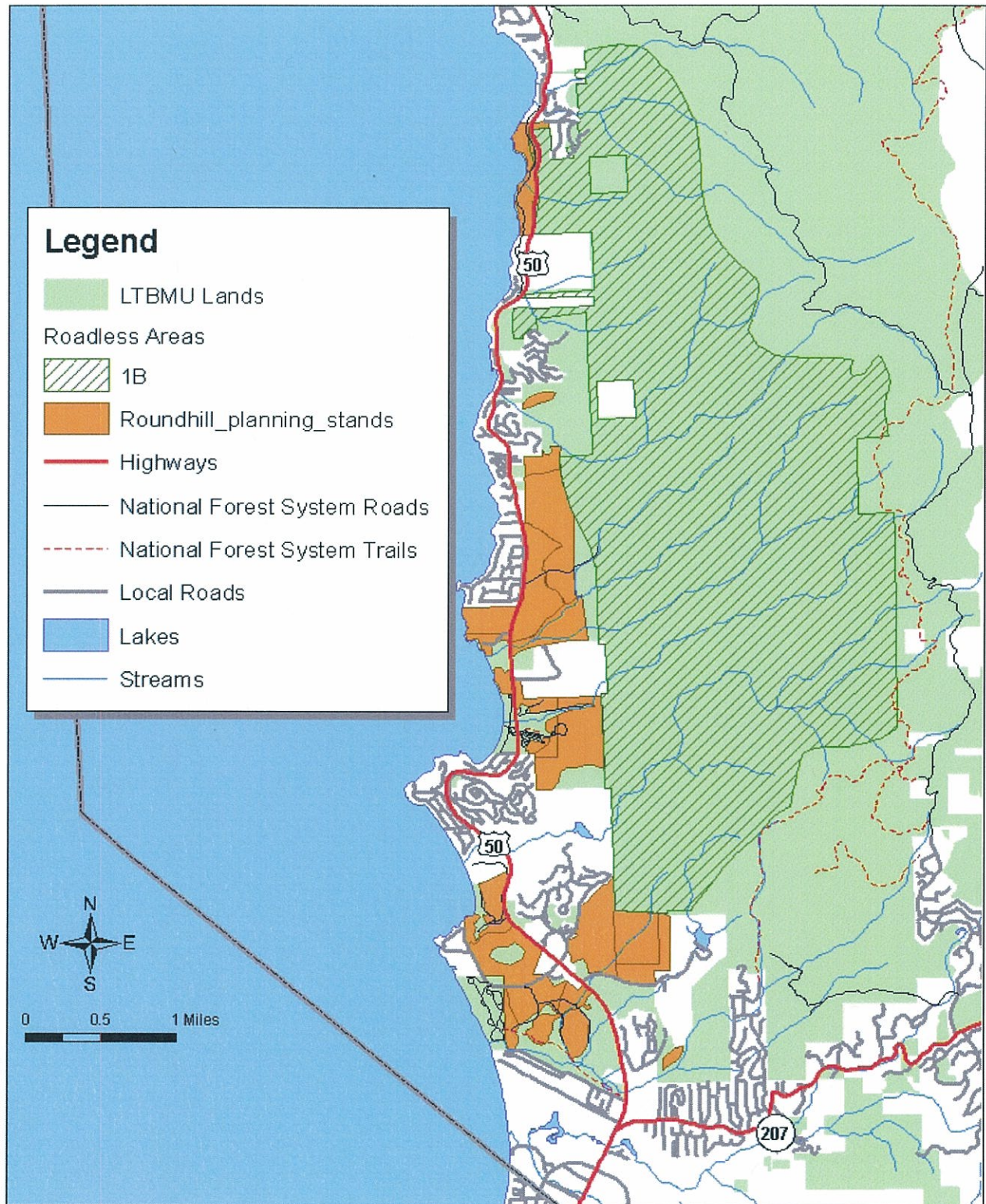
Map 10. NLTFPD Projects- All years.

Kingsbury Treatment Units



Map 11. USFS/LTBMU Projects- Kingsbury.

Roundhill Fuels Reduction Project



Map 12. USFS/LTBMU Projects- Roundhill.

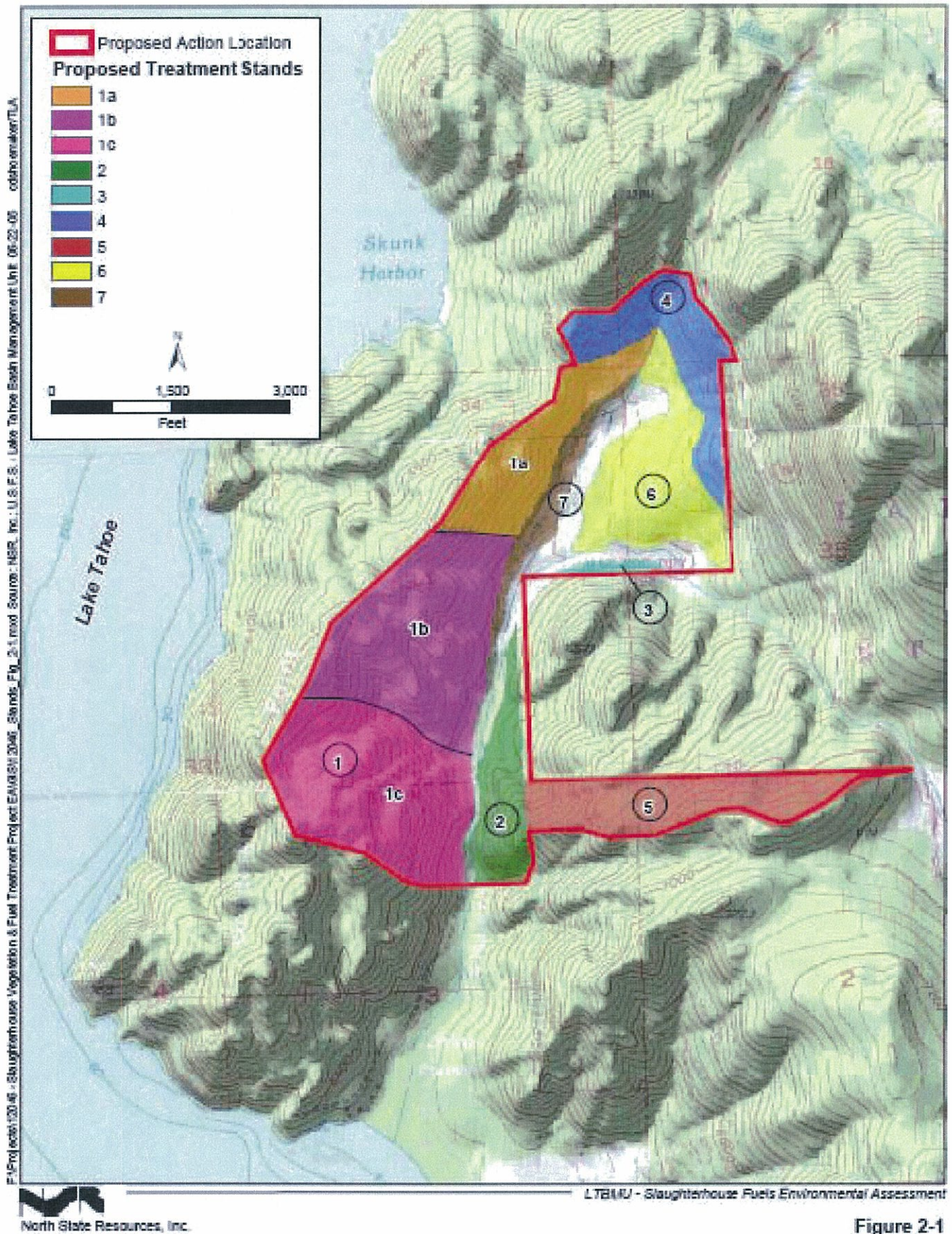


Figure 2-1
Proposed Treatment Stands