

TRUCHAS LAND GRANT FIRE PLAN



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TRUCHAS LAND GRANT FIRE PLAN

INTRODUCTION

The Forest Trust, in conjunction with the Truchas Land Grant (hereinafter "the Grant"), received funding from the USDA Forest Service Community Planning for Fire Protection to develop a plan for fire protection. Through this project the Forest Trust has assisted the Grant in (1) identifying specific areas for thinning and fuel reduction treatments; (2) evaluating existing roads for fire access; and (3) creating plans for long-term fuel management.

This fire plan identifies areas of high fire potential to the Grant community and its resources by focusing on the following areas:

1. Inventory of the forest condition
2. Fuel loads
3. Small diameter tree density and slope classes
4. Road systems
5. Private property on the Grant

The plan also addresses the fire history in the Grant and on adjacent forests and incorporates Grant administration expertise to aid in the development of the plan.

PURPOSE OF THE PLAN

This plan describes the timber stands and other resources that need to be addressed for fire planning. The report intends to provide information to the Grant administration for future fire and fuels reduction decisions. By identifying fuels reduction and thinning of stands will open up some opportunities for economic development on the Grant.

The plan will identify high fire potential areas to the Grant and its resources. The identified areas will be prioritized and earmarked by the Grant administration for future funding and project implementation with emphasis on economic development.

BACKGROUND

History

The Forest Trust has worked with board members of the Grant on a number of forestry projects over the past several years. For example, the Forest Trust and Truchas developed maps to evaluate management of forests on the Grant and surrounding areas to identify limitations and opportunities for future management plans. These maps and surveys were the starting point for developing a plan for restoration and other management prescriptions in this project.

Partners

The Forest Trust has served as the lead entity in partnership with the Grant and the Española District of the Santa Fe National Forest. The role of the Grant has been to generate ideas for community planning and to work with the Trust to identify priority ecosystem needs and road conditions. The Forest Service has been involved in discussing fuel management treatments on National Forest areas adjacent to the Grant.

Summary

This plan identifies fourteen units, encompassing 2,606 acres, considered high fire hazard and requiring treatment. One of the areas of primary concern to the Grant is the Borrego Mesa area on the Santa Fe National Forest, about one aerial mile from the village of Truchas. Prevailing winds often come from the Borrego Mesa area and could easily carry a fire onto the Grant. Firebreaks might not be sufficient to protect the community in the event a severe fire in this area. Thus, the community has identified this area, which includes both Santa Fe National Forest and Grant property, as a priority for fuels management in the next two years. Additional units are located to the east of the community and require treatment in order to protect residential homes in the Village of Truchas.

This plan was in development when the Borrego Fire occurred in June 2002—an event which realized a fear of the community by the fire that started on the Santa Fe National Forest and moved onto the Grant. The fire burned 1300 acres on the Grant, through four of the priority units logged in 2001.

The present concern is a fire start north of the Rio Quemado in Units 7-10 (presently being logged) that could burn onto private land in the Grant.

METHODS

All areas identified on the inventory will be GIS delineated on the plan for future use.

The roads not shown on most recent topographic maps will be located via GPS and added to the plan.

KEY CONTRIBUTORS

- ◆ Orlando Romero, Senior Forester at the Forest Trust; Retired Fire and Timber Staff for Santa Fe National Forest, Española Ranger District
- ◆ Perry Trujillo, President, Truchas Land Grant
- ◆ Adrian Martinez, Treasurer, Truchas Land Grant
- ◆ Leonard Romero, Secretary, Truchas Land Grant
- ◆ Jerry Fuentes, Vice President, Truchas Land Grant
- ◆ John Miera, District Ranger, Española Ranger District, Santa Fe National Forest

- ◆ Manuel Romero, Timber/Fire Staff, Camino Real Ranger District, Carson National Forest
- ◆ Ken Schien, District Ranger, State Forestry Division, New Mexico Energy and Natural Resources Department

CURRENT CONDITIONS OF THE GRANT



Photograph 1 - Town of Truchas, south end

The Grant comprises 14,800± acres and is owned by about 285 members who hold 316 shares. Approximately 210 families live on the Grant or in its direct vicinity. An area of 5,400± acres is covered by forests, of which about 2,300 acres are suitable for timber harvesting. Piñon-juniper woodland covers 4,200± acres and open meadows, fields, and built-up areas cover the remaining 5,200± acres. More than 2,100 acres are irrigated.

There are three forest types on the Grant (see Map 1 – Forest Types): (1) Engelmann spruce forest (less than 100 acres); (2) mixed conifer forest (more than 2,000 acres); and (3) ponderosa pine forest (about 3,300 acres). The major species include Engelmann spruce, Douglas fir, white fir, corkbark fir, ponderosa pine, limber pine and aspen (Janssens 1996).

Due to past and present logging activities the forest does not contain many large diameter trees. Most large trees are less than 60 feet tall and are 11 to 18 inches in diameter at breast height. Large sections of the forest are very dense, especially on the north-facing slopes. The density and steep slopes create a fire hazard. In many places, the forest floor is covered with large woody debris (20+ tons/acre). Some of the ponderosa pine stands are infested with dwarf mistletoe that has damaged the vigor of the trees.

The Grant provides free annual use permits to members for two cords of dead or downed firewood. However, due to a dearth of downed wood, Grant residents relied on firewood from the Santa Fe and Carson National Forests. Ponderosa pine is most often used as firewood with an average consumption of six cords per household per year. The Grant also provides vigas to its members, permitting up to 40 vigas over four years. Many people on the Grant collect small diameter pine and aspen for arts and crafts.

Several impediments to economic development need to be alleviated. Illegal dumpsites cause an environmental and safety hazard and decrease the visual attraction of the land. The many narrow, rural roads cause serious safety problems. Many roads are of poor quality and need major improvements.

The large number of small diameter trees on the Grant and the surrounding national forests offer interesting opportunities for forest-based business development. In addition, a few stands of mature Ponderosa pine trees offer possibilities for commercial timber harvesting. Training programs and the establishment of a local wood/lumber yard would be instrumental for the creation of jobs and the further development of forestry and business skills (Janssens 1996).

Water resources are sufficient for fire suppression but are limited for economic development. Fishponds could be constructed but would need further study. This could improve the fish resource for the Grant and could improve capacity for fire management.

Fire History

There has been low to moderate fire on the Grant since the late 1990s until the present, mostly because the area has been inaccessible and has had little harvest activity. The majority of fire starts have been from lightning with a few caused by human activity. The size of fires has not exceeded 20 acres.

Fire potential has increased due to a number of factors. From 1995 to the present, the Grant has not received its normal amount of moisture, part of drought condition in the entire southwest region. Downed fuels increased with the Los Bancos Timber Sale, which encompasses 1200± acres on the west end of the Grant, increasing susceptibility to lightning starts. Approximately 600 acres of the sale has been harvested, most of which was ponderosa pine. The remaining acres, all mixed conifer, will be harvested during the summer of 2002. The sale area borders private inholdings to the north that could be threatened by fire from the downed wood.

Fire potential on the sale area will also increase with greater access by grantees following the completion of logging in timber sale units. Timber sale roads have been upgraded for the removal of the timber. After timber sale units are completed, the Grant will allow grantees fuel wood permits to remove some of the larger downed slash. More people will visit the harvested area, increasing the fire potential. The fire potential existed on half of the timber logged in 2001, but the logger will have equipment in 2002 to quickly suppress fire starts. After 2002, the grant will be required to suppress the fires unless the fuel reduction has been done.

The Santa Fe National Forest, which borders the Grant to the south, has a history of large fires. Borrego Mesa (which is also a part of the Santa Fe National Forest), adjacent to the Grant, has a high fire potential due to very dense stands. In the right conditions, fire would spread rapidly to Grant land, destroying the stand improvements and forest health work that has been completed or will be completed on the Grant.

In June 2002 history was repeated when the Borrego Fire started and very quickly spread onto the south end of the Grant, burning approximately 1300 acres including the areas logged in 2001.

the ground with crown occasional flare-up. Fires can become large, 100+ acres. Initial attack, usually air attack, is crucial due to the steep slopes.

The moderate fuel classification is mostly in mixed conifer and some ponderosa pine on the north slopes, canyon bottoms and other steep slopes. Should a fire start under the right fire conditions, these areas have potential for resource damage because of the steep slopes. Some of the moderate fuel areas could become a part of catastrophic fire started on a high fuel hazard area. Fire starts on moderate areas have the potential to burn up to the ridges or creep downhill. Fires on this area do not usually exceed 25 to 50 acres. The areas are representative of mixed conifer size class 2 (NWCG pp 92-93) (Exhibit C). This means they have a mixed conifer needle depth up to 3" with light, old, broken down trees that are the fire carriers. The potential to ladder is light because lower branches have mostly shed their needles. These areas are steep at 40+%, shady and on the north slope where the moisture retention is greatest. Fires that start in these areas tend to smolder and creep, and fire size generally remains under 20 acres. An initial attack can usually contain the fire before it gets larger than 20 acres unless it is wind-driven.

The low fuel classification is mostly piñon-juniper stands with steep slopes, other forested areas, irrigated lands, and north slopes with mixed conifer. Downed fuels are usually large logs and low ground litter. Unless they are wind-driven, fires in these fuel types usually remain small. If wind-driven, there is usually enough fuel to carry a fire to the top of the ridges, where they then lay low. Most fires on these areas range from 5 to 10 acres in size.

Fuel Management Units & Prescriptions

The plan addresses fourteen units totaling 2606± acres that have been classified as high hazard and require thinning and some type of fuel treatment. The units are prioritized based on their importance in protecting the community and resources, with Unit 1 being the most critical and Unit 14 the least critical. Each unit is small enough to be managed in one season, depending on the resources of the Grant to carry out the treatment (see Map 3 – Priority Areas).

Units 1 through 6 are all adjacent to and north of the Santa Fe National Forest, Española Ranger District. The adjacent areas of the Santa Fe National Forest are rated as high hazard due to the dense stand and heavy litter on the ground. In the mid-1990s, a wilderness fire jumped Rio en Medio onto Borrego Mesa and quickly burned 250 acres outside the wilderness. Since then, there have been several fires close to the Grant boundary, causing anxiety among area residents.

Units 7 through 14 are all adjacent to the Carson National Forest, private inholdings in the Grant or the Pecos Wilderness in the Santa Fe National Forest. Any fire starts in those areas during critical fire season could pose a threat to the private properties and the Wilderness. Fire danger may increase during the summer due to heavy traffic on the Rio de la Cebolla road that is near or on the units and is used to access trails into the Wilderness.

Unit 1 – 226± acres.

Unit 1 is located on the edge of the ponderosa pine stand forest and adjacent to residential homes on the eastern portion of the Grant. The unit is located on the west and southern slopes and the unit is predominantly ponderosa pine with mixed piñon-juniper intermingled throughout.

For protection of the residential homes, the area should be thinned to create a fuel break, with trees up to 11" dbh removed and minimum basal area of 50 to 60.



Photograph 3 - Fuel breaks will be created 100-150' from clearing

Larger material could be utilized by the community for vigas, small sawlogs, poles or fuel wood. Unless the community creates a use for smaller material, it could be piled and burned or broadcast burned in the fall.

When the decision is made to perform the work, residents should be notified immediately regarding the work plan and time frame. The unit may require seeding after completion of the work to prevent erosion and to enhance wildlife habitat and/or cattle grazing.

Unit 2 – 120± acres

Unit 2 is a continuation of Unit 1 to the north. It is also on the edge of the ponderosa pine forest and adjacent to residential homes. The area is located on the western and northern slopes and is intermingled with piñon and juniper trees that may need to be thinned.

To protect residential areas, the unit requires thinning up to eleven inches dbh or a minimum spacing of 16' x 16.'

Larger material could be utilized by the community for vigas, small sawlogs, poles or fuel wood. Unless the community creates a use for smaller material, it could be piled and burned or broadcast burned in the fall.

When the decision is made to perform the work, residents should be notified immediately regarding the work plan and time frame. The unit may require seeding after completion of the work to prevent erosion and enhance wildlife habitat and/or cattle grazing.



Photograph 4 - Unit 2 residential areas are currently unprotected by fuel breaks

Unit 3 – 167± acres

Unit 3 is located adjacent to and north of the Santa Fe National Forest. It is predominantly ponderosa pine with pockets of pole-size fir that require thinning.



Photograph 5 - Timber sale slash burned hot in the Borrego Fire



Photograph 6 - Good understory burn, west side, Unit 3

The western two-thirds of this unit was harvested in 2001 by Rio Grande Forest Products and burned in the Borrego Fire. The harvest was a seed tree cut for the entire unit. A large portion of the overstory was removed except the seed trees. A pocket of pole-size timber remains that requires thinning. The fire was moderate: it cleaned out the existing and activity downed slash and reduced the high fire hazard for the area.

The eastern third of the unit is being logged in 2002 by Rio Grande Forest Products. The logging area is under 40% slope, mostly the ridge top although a large number of large trees are being removed. This will add an additional 15 to 20 tons of green slash to the existing slash that will be rated very high fire hazard for 2003.

This unit will need additional thinning in pockets of pole-size trees from 120 basal area to 80-90 basal area. The Grant should mark the trees so that woodcutters can remove them in 2003 before the roads are closed.

The Grant should plan to complete any unfinished thinning and dispose of downed slash. Disposal can be done by pile and burn, shredding, or broadcast burn. It would be advisable to complete the slash work prior to closing the roads.

After all activities are completed, the disturbed areas should be seeded to prevent erosion and to enhance wildlife habitat and/or cattle grazing.

Unit 4 – 98± acres

Unit 4 is located adjacent to and north of the Santa Fe National Forest. The timber is predominantly ponderosa pine with pockets of fir. It was harvested in 2001 as part of the Los Bancos Timber Sale. A large portion of the ponderosa pine and some fir overstory was

removed, but pole-size and smaller timber require thinning. The amount of red slash and dense thickets throughout the unit create a significant fire threat to the resource.



Photograph 7 - Slash in Unit 4 before the Borrego Fire in June 2002

The entire unit was heavily burned in the Borrego Fire in June 2002, leaving only a few scattered small pockets of green trees throughout the unit. The unit was salvage logged in July 2002. It was grass seeded after it burned but due to the grass has not responded very well. There is evidence of gambel oak sprouting. A good coverage of grass and gambel oak may pose a moderate problem for next summer if severe drought conditions still exist. There is a small green unit of 8-10 acres on the northeast corner of the unit that needs to be thinned.

The present plan for removing the burned standing pole-size trees is to allow woodcutters to remove dead down and standing burned pole-size trees and to lop the slash to prevent erosion and to provide shade for grass and natural or planted seedlings. The Grant also proposes to construct three diversion dams on this unit for erosion control use by cattle or wildlife. During the summer the dams can be utilized for fire suppression if enough water is collected. These dams are part of an approved EQUIP to rehabilitate and protect the area from grazing for a few years until seedlings and grass are well established.

Unit 5 – 200± acres



Photograph 8 - Burn in Unit 5

Unit 5 is located adjacent to and north of the Santa Fe National Forest. It contains mostly pole-size timber with some pockets of fir. It was also harvested in 2001 as part of the Los Bancos Timber Sale and had a light cut of the ponderosa pine overstory. Approximately 75% of this unit was heavily burned in the Borrego Fire. Two small, unburned pockets of approximately 10 acres each will need to be thinned.

The entire area was salvage logged in 2002 and all the salvageable material removed. A few scattered groups or individual trees remain, especially on the northwest end of the unit. The area was seeded after the Borrego Fire in late July.

The area is also a part of an ongoing EQUIP program to rehabilitate the area. Seedlings will be planted as well as reseeding if needed.



Photograph 9 - NE corner of Unit 4 and SE corner of Unit 5 that did not burn and requires thinning

The present plan to remove the burned standing pole-size trees is to allow woodcutters to take any dead down or standing burned pole-size trees and to lop the slash to prevent erosion and to shade the grass and natural or planted seedlings.

After all activities are completed, the unit should be seeded where needed to prevent erosion and to enhance wildlife habitat.

Unit 6 – 132± acres

Unit 6 is located adjacent to and north of the Santa Fe National Forest. It was also harvested in 2001 as part of the Los Bancos Timber Sale and had a light cut of the ponderosa pine overstory, leaving mostly pole-size ponderosa pine with small pockets of fir, several seed trees and downed red slash.

Approximately 50% of the unit was moderately burned and the other 50% was burned low during the Borrego Fire in June 2002. A small patch of approximately 10 acres in the southwest corner did not burn and requires thinning. The entire area was salvage logged in 2002 and all salvage material was logged. Leave live trees were left throughout the unit.



Photograph 10 Some trees survived the Borrego Fire in Unit 6

The unit was seeded after the Borrego Fire in late July. A large portion of this unit is in a canyon. The grass is responding and the gamble oak is heavily sprouting.

This area is also a part of an ongoing EQUIP program to rehabilitate the area. Spot planting, additional grass seeding, and one diversion dam and will be constructed on the unit that can be used for future fire suppression activities.

The present plan to remove the burned standing pole-size trees is to allow woodcutters to take any dead down or standing burned trees, and to lop the slash to prevent erosion and to shade the grass and natural or planted seedlings.

This unit had not been logged in 2001. It was proposed for 2002.

The plan to date is for the Truchas community to remove all the usable firewood. Small and fine materials will remain, which could cause a ladder fuel potential, especially if the areas are not thinned. It would be advisable for the Grant to mark the trees for the community to thin prior to road closure. Remaining slash can then be disposed of by piling and burning, shredding or broadcast burning.

Unit 7 – 208± acres

Unit 7 is located within the Truchas Grant on all sides and contains approximately two-thirds ponderosa pine and one-third mixed conifer. The unit will be harvested in 2002 as part of the Los Bancos Timber Sale. It will be cut as a diameter cut 10" dbh or larger, leaving a minimum of six to eight seed trees per acre. The timber sale will create downed slash. After the sale is completed, the remaining pole-size timber could be thinned.

After harvesting is completed, the plan is that the Truchas community will remove all usable material and remove slash prior to road closure. Remaining small and fine fuels will need to be disposed of through shredding, piling and burning or broadcast burning.

After all fuel wood is removed, the road should be closed and disturbed areas should be seeded to prevent soil erosion and to enhance wildlife habitat and cattle use.

Unit 8 – 290± acres

Unit 8 is located south of the private inholdings on the Grant and Carson National Forest further north. The north half is mixed conifer and the south half is ponderosa pine. The unit will also be harvested in 2002 as part of the Los Bancos Timber Sale. It will be cut as a diameter cut 10" dbh or larger, leaving a minimum of six to eight seed trees per acre. The timber sale will create downed slash. After completion of the sale, the remaining stand will need thinning to create a healthy forest.

The plan, upon completion of harvesting, is that the Truchas community will remove all usable firewood created by the sale and the thinning prior to closing all roads. Small and fine slash will remain on the ground, creating a fire hazard to private inholdings within the Grant to the north. The slash can be treated by shredding, piling and burning or broadcast burning.



Photograph 11 Slash in Units 7-10 – an area untouched by the Borrego Fire

After fuel wood is removed, roads should be closed with the exception of the main access road into the Grant. Disturbed areas on the unit should be seeded to prevent soil erosion enhance wildlife habitat.

Unit 9 – 229± acres

Unit 9 is located south of private inholdings in the Grant and the Carson National Forest to the north. It is mostly mixed conifer except for ponderosa pine in the southern portion. The unit will be harvested in 2002 as part of the Los Bancos Timber Sale. It will be cut as a diameter cut 10" dbh or larger, leaving six to eight seed trees minimum per acre. The sale will create downed slash of branches and tops. After the sale is completed, the remaining pole-size stand will need to be thinned.

After harvesting is completed, the plan is that the Truchas community will remove all usable material and remove slash prior to road closure. Remaining small and fine fuels will need to be disposed of through shredding, piling and burning or broadcast burning.

After all fuel wood is removed, the road should be closed and disturbed areas should be seeded to prevent soil erosion and to enhance wildlife habitat and cattle use.

Unit 10 – 143± acres

Unit 10 is located south of private inholdings in the Grant and the Carson National Forest to the north. The unit is all mixed conifer and will be harvested in 2002 as part of the Los Bancos Timber Sale. The unit will be cut as a diameter cut--10" or larger--but leaving a minimum six to eight seed trees per acre. The timber sale will create downed slash. After the sale is completed, the remaining pole-size timber could be thinned.

After harvesting is completed, the plan is that the Truchas community will remove all usable material and remove slash prior to road closure. Remaining small and fine fuels will need to be disposed of through shredding, piling and burning or broadcast burning.

After the fuel wood is removed the road should be closed and seeded. Any disturbed area should be seeded to prevent soil erosion and for enhancement of wildlife and use of cattle.

Unit 11 – 246± acres

Unit 12 – 161± acres

Unit 13 – 173± acres

Unit 14 – 155± acres

Units 11, 12, 13 and 14 are adjacent to the Carson National Forest to the north and the Pecos Wilderness of the Santa Fe National Forest to the west. They are in mixed conifer forest. The four units will be harvested in 2002 as part of the Los Bancos Timber Sale. Cutting will be a diameter cut, 10" or larger, with six to eight minimum seed trees remaining. The timber sale will create downed slash. After the sale is completed, the remaining pole-size timber could be thinned.

After harvesting is completed, the plan is that the Truchas community will remove all usable material and remove slash prior to road closure. Remaining small and fine fuels will need to be disposed of through shredding, piling and burning or broadcast burning.

After the fuel wood is removed the road should be closed and seeded. The Rio de la Cebolla road will remain open for access to that part of the Grant and trails to the Pecos Wilderness. Any disturbed area should be seeded to prevent soil erosion and for enhancement of wildlife and cattle use.

High Fire Hazard Areas

These areas were not prioritized because they are on slopes of 40% or more and/or have no access. They would be costly to manage at this time. There are three options to reduce fuels in these areas: (1) broadcast burn, (2) thin and prescribe burn, or (3) no action. Each option is discussed below.

(1) Broadcast burn. This option would require fire lines to burn blocks of not larger than 50 acres at a time, starting at ridge tops and working down. This method would be good for reducing the downed fuels and some small size timber, but would still leave enough material so that fire hazard would remain a problem in the future.

(2) Thin and prescribe burn. This option would be suitable for precommercial or commercial thinning areas where feasible along some of the existing roads. The Grant could use a small cable logging operation to thin small units every year on these stands. The resulting skid trails would break fuel continuity for the area but would require disposal of slash in order not to create a higher fire hazard. The Grant would have two options for disposal of the activity slash: broadcast burning or piling and burning.

(3) No action. With this option, the Grant would be risking a large fire occurring in these areas. They would need to be prepared to manage fire starts. The Grant could manage wildfire to a contain/confine mode more than it has in the past. This would reduce fuels and future fire sizes. For example, most lightning fires start on or near a ridge that, if confined to the ridge, create a fuels break on each side of the ridge.

Moderate Fire Hazard Areas

These areas are mostly in mixed conifer with slopes of more than 40%. Some south slopes are ponderosa pine mixed with pole-sized fir stands. The mixed conifer areas contain moderate downed fuels with dense stands that need management. Most of these areas are in deep, shady canyons where moisture is retained. The Grant could take advantage of the timber sale and cable log or sell pole-size logs to the community and dispose of slash. This type treatment would break the continuity of the downed and standing fuels and reduce the fire danger in these areas.

The Grant should contain/confine wildfire to further reduce fuels and fire starts in the future.

Sales for these areas could be made using existing open or closed roads. Other areas are inaccessible by road.

Low Fire Hazard Areas

Low fire hazard areas are in piñon-juniper stands with some pine in the canyons. Fire starts in these areas do not pose a threat to the resources or residences. There is the potential for fire starts on high wind days to become catastrophic.

Thinning on this area is not required at present.

Evaluation of Roads

Roads on the Grant are classified as low clearance, high clearance and closed (see Map 4 – Roads). There are approximately 31 miles of low clearance roads, 12 miles of high clearance roads, and 50 miles of closed roads.

Access to the Grant is from the Carson National Forest in the north via Forest Road 400 and from Santa Fe National Forest in the south via Forest Road 306. There is other access via Rio Quemado on the west, off State Road 76, but travel is limited to ATVs. This road is classified as closed, although it may be opened briefly to high clearance vehicles in conjunction with future timber harvesting. Over the long term, the road will not remain open because it lies in a canyon and washes out easily. Ingress/egress roads to the Grant will be from low or high clearance roads.

Closed roads are already healed and enhance wildlife populations. They will remain closed unless the need arises for future timber harvests or fire suppression. After such activity is completed, the roads will be put back to bed and seeded.

Some closed roads were reopened for the Los Bancos Timber Sale. These roads will remain open until the sale and thinning is completed, the fuel wood removed, and the fuels treatment completed, after which they will be put to bed and seeded, then reclassified as closed.

Many of the closed roads can be used for fire suppression as a control line with very little hand work. See Map 4 - Roads.

RECOMMENDATIONS

Based on current conditions of the Grant, The Forest Trust and the Truchas community prioritized the following recommendations:

1. The Grant should secure funding for treatment of priority areas. These include:
 - a. Thin approximately 226 acres on Unit 1 and 120 acres of Unit 2 as a defensible space to residential areas.
 - b. Mark the thinning areas on Units 3 through 6 for approximately 50 acres so that fuel wood can be cut and removed. This funding should also include thinning of smaller material that woodcutters won't take.

- c. Treat fuels on Unit 1 (226 acres), Unit 2 (120 acres), and Unit 3 (167 acres) by piling and burning.
 - d. Mark and thin Units 7 through 10 for 50± acres.
 - e. Treat slash on Units 7 and 8 (300 acres) and broadcast burn.
 - f. Thin Units 11 through 14 (200 acres).
 - g. Treat slash on Units 9 through 14 (800± acres) and broadcast burn.
2. The Grant should develop a timber program to log small areas and treat the slash annually. This could be done by cable logging steep areas and conventional logging on accessible ridges.
 3. The Grant should manage naturally caused wild fires to allow them to play a natural role in a contain or confine mode to a manageable size. This should be practiced on high and moderate hazard areas.
 4. The Grant should develop stewardship blocks large enough to supply poles, firewood, etc. to interested community individuals. The Grant can collect fees for the administration and burning of these blocks.
 5. As soon as possible, the Grant should develop at least one deeper water source for the Rio Quemado and Truchas for fire use and fisheries.
 6. The Grant should write owners of private property within and adjacent to the Grant to encourage them to reduce fuels on their lands.
 7. The Grant should upgrade and improve its fire department facilities and procedures to improve its response time and ability to fight fire on the Grant.
 8. The Grant should explore the possibility of additional dams or trick tanks throughout the grant for fire suppression, cattle and wildlife use.

Literature cited

Janssens, Jan-Willem. 1996. Natural Resources Inventory of the Nuestra Señora Del Rosario, San Fernando & Santiago Land Grant, The Forest Trust, Santa Fe, NM.

National Wildlife Coordinating Group. 1997. Photo Series for Quantifying Forest Residues in the Southwestern Region, PMS 822, NFES 1395. Albuquerque, NM: Prescribed Fire and Fire Effects Working Team, USDA Forest Service Southwest Regional Office.

MAP 1

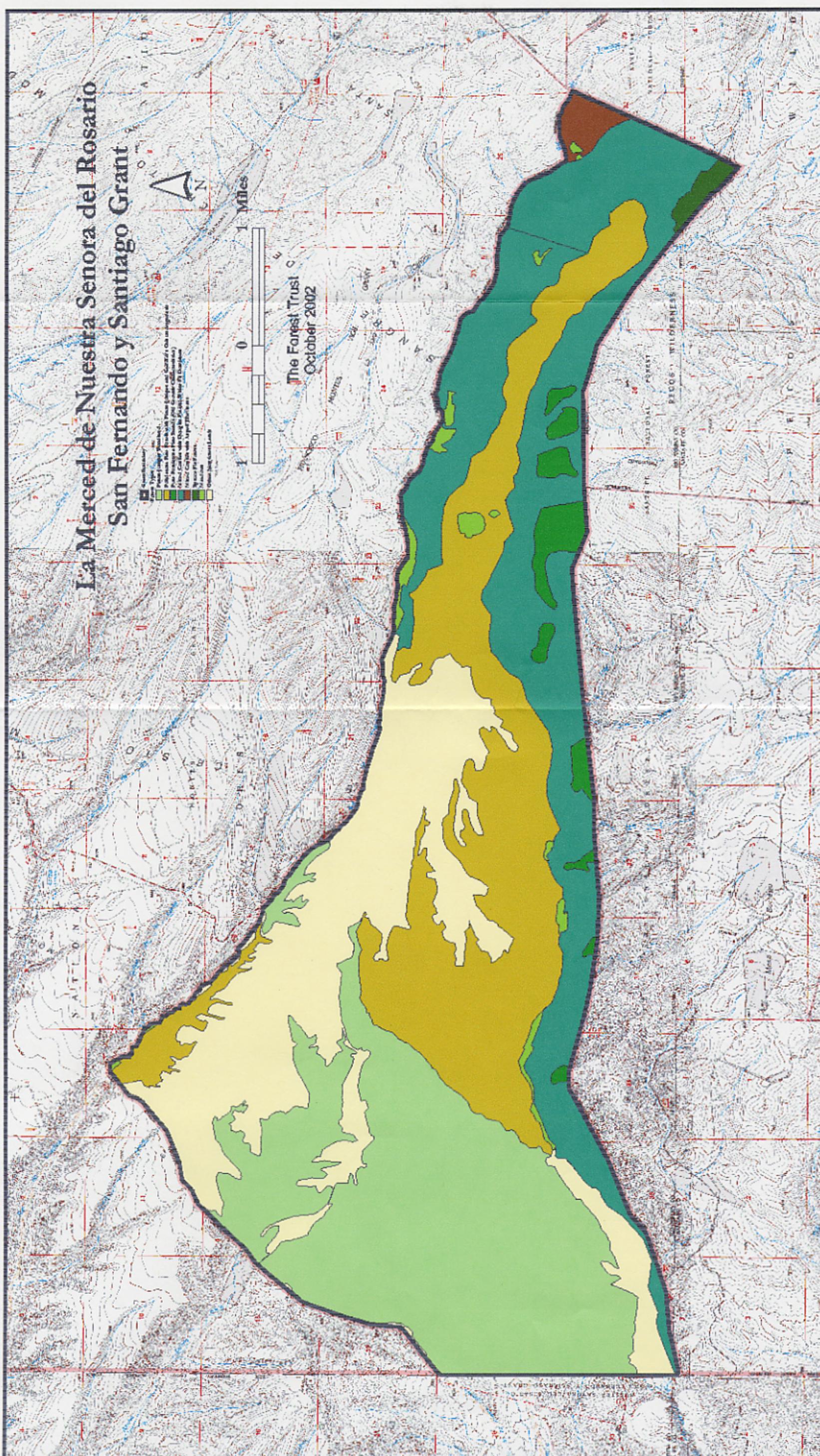
FOREST TYPES

La Merced de Nuestra Senora del Rosario San Fernando y Santiago Grant

- Legend**
- Water
 - Open Space
 - Forest
 - Wetland
 - Other



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MAP 2

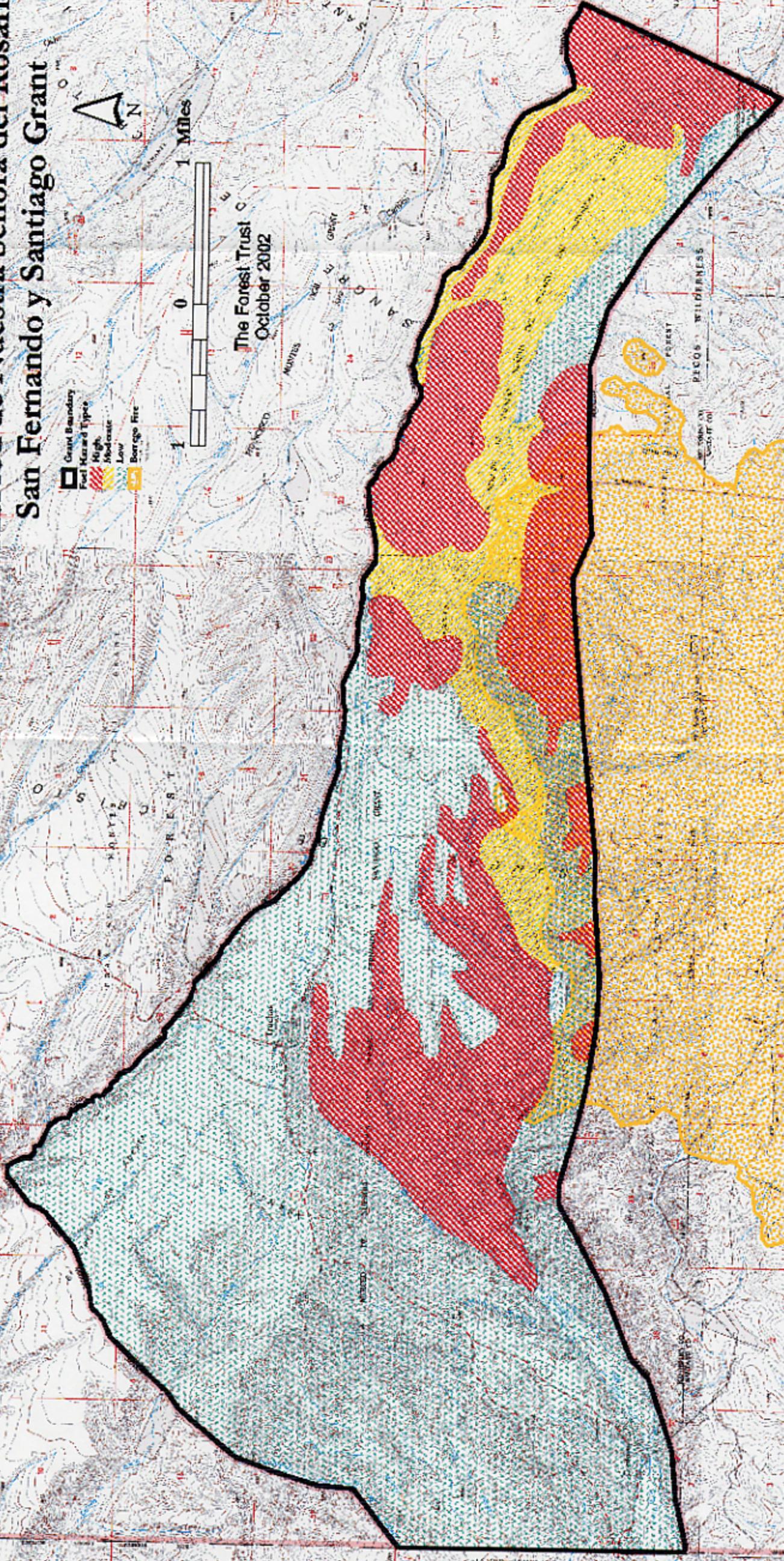
FUEL HAZARD TYPES

La Merced de Nuestra Senora del Rosario San Fernando y Santiago Grant

- Grant Boundary
- Fuel Hazard Type
 - High
 - Moderate
 - Low
- Borrego Fire



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MAP 3

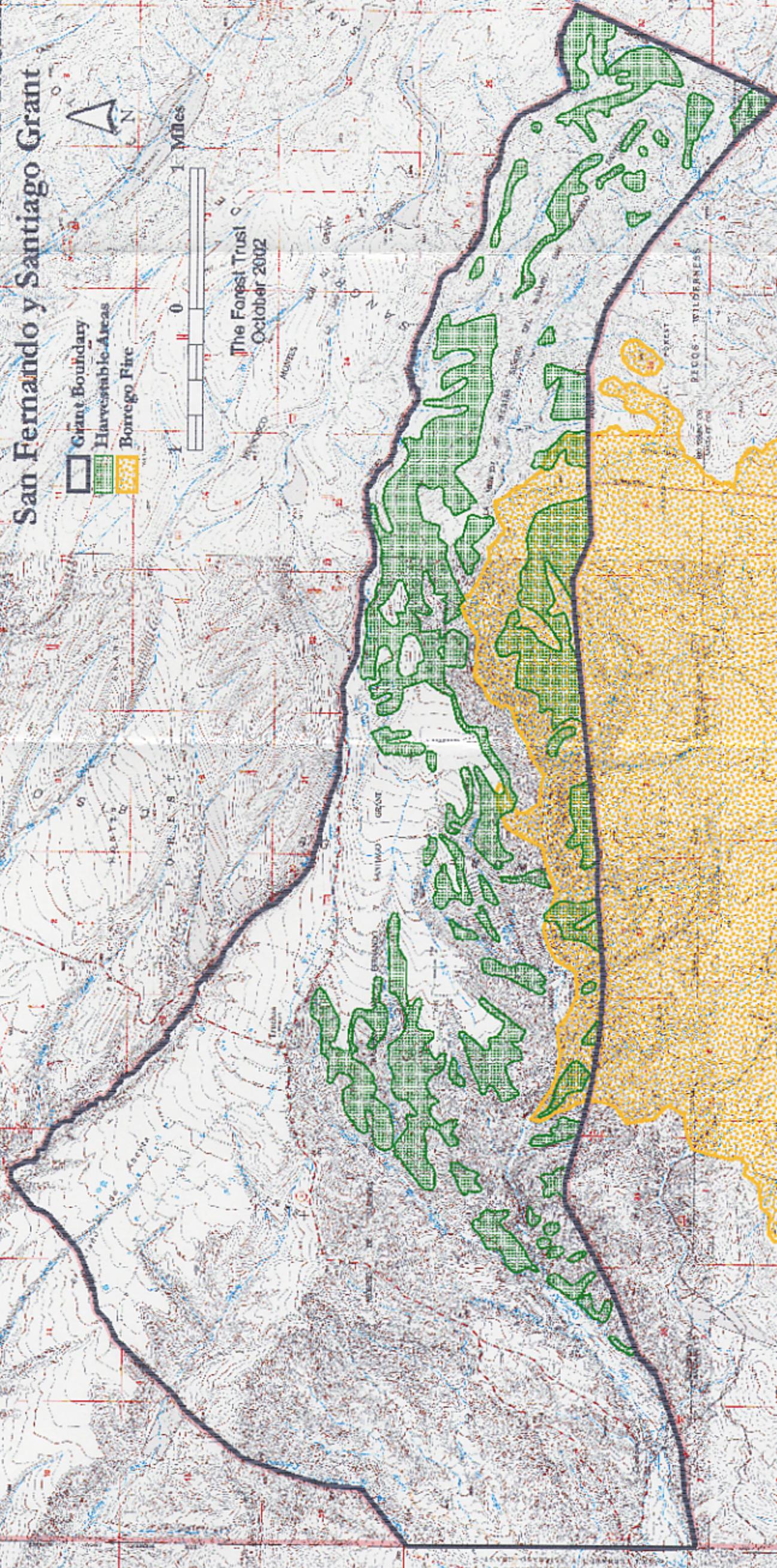
HARVESTABLE AREAS

La Merced de Nuestra Senora del Rosario San Fernando y Santiago Grant

-  Grant Boundary
-  Harvestable Areas
-  Borrego Fire



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MAP 4

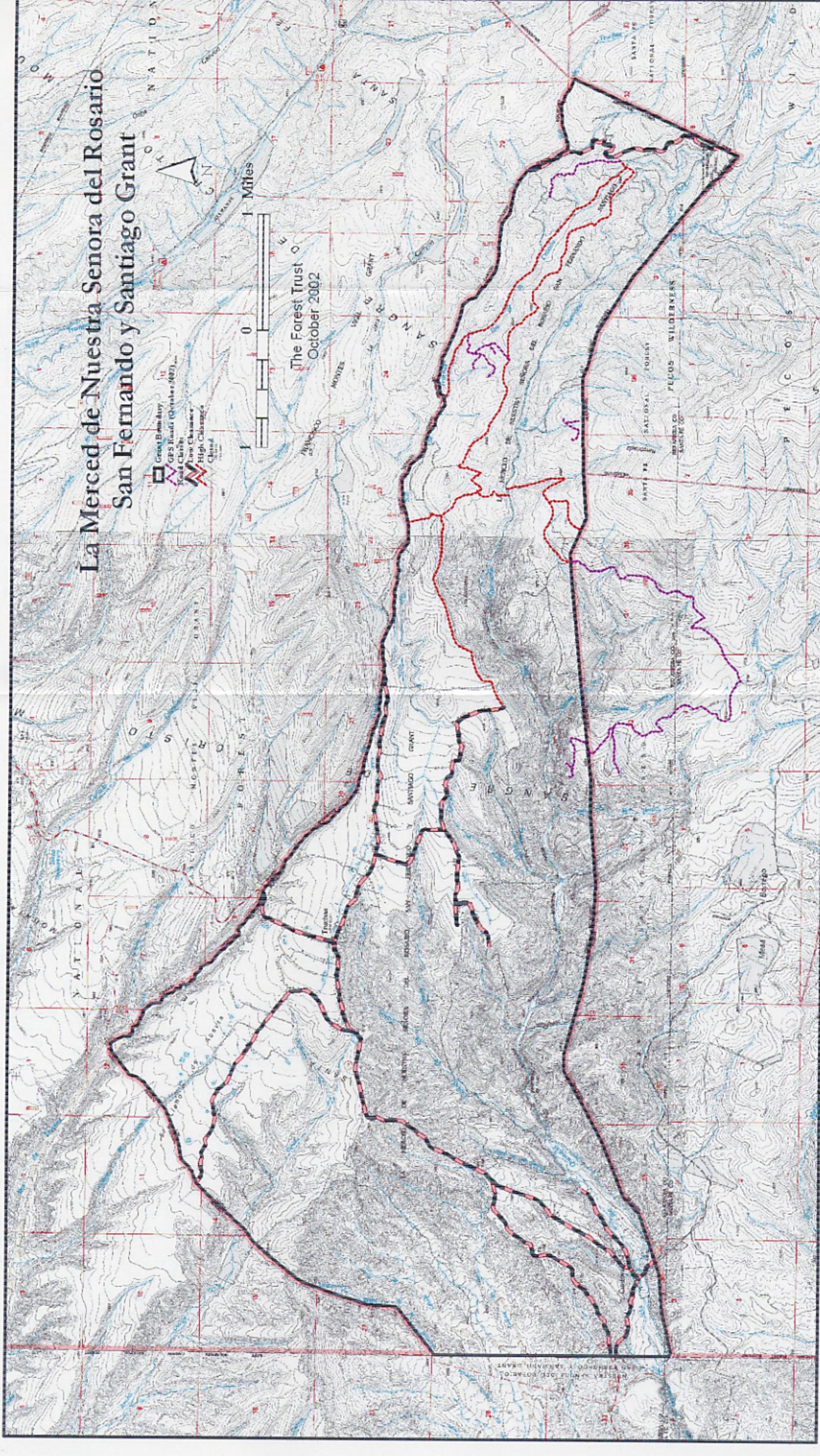
ROADS

La Merced de Nuestra Señora del Rosario San Fernando y Santiago Grant

- Great Basin Sky
- GPS Reads (October 2002)
- Field Climb
- Flow Channel
- High Clearings
- Chinle



The Forest Trust
October 2002



MAP 5

TREATMENT PRIORITY AREAS

