

**COMMUNITY PLAN  
FOR WILD FIRE AND FOREST RESOURCE  
MANAGEMENT  
BETWEEN ARROYO HONDO AND GLORIETA,  
NEW MEXICO**

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**IN CASE OF WILDFIRE: Call 911 Ambulance/Fire**

## 1. INTRODUCTION

We hope that the moment will never come that you have to resort to the instructions on the second page of this plan. Instead, we hope that this report will assist you as you create a more fire-safe environment at your home site and in your neighborhood. This report outlines procedures that will help **prevent wildfire and defines ways to develop or improve a community fire management plan.**

This report documents local wildfire prevention plans and wildfire emergency plans for the Wildland/Urban Interface (WUI) zone southeast of Santa Fe. The report describes regionally successful fire prevention techniques and provides area-specific recommendations for wildland fire prevention and protection for homeowners and forest owners in the project area between Glorieta and Arroyo Hondo (see map on page 4).

This community-based wildfire management plan is developed under the umbrella of the Galisteo Watershed Restoration Project (GWRP) of the Earth Works Institute (EWI). This watershed-wide project aims at *creating a working landscape in the Galisteo watershed that reflects people's sense of stewardship and caring for the land*. In 1997, EWI launched the GWRP in response to ongoing erosion and flash floods in the Galisteo watershed. EWI's role among the different partners in the project is that of facilitator and coordinator. In the last few years, EWI organized several educational field tours with residents of the neighborhoods of Glorieta Pass, Valencia, Apache Canyon, Canoncito and Canada de los Alamos, and the U.S. Forest Service and State Highway Department to discuss runoff, erosion and forest fire hazard issues in the area. During ongoing dialogue with the Pecos/Las Vegas Ranger District of the Santa Fe National Forest, the State Forestry Division and landowners in the area, EWI developed a plan for community planning and outreach, as outlined in this report. Upon invitation of landowners in the area, EWI staff also visited with landowners and neighborhood groups to assess fire hazard conditions and provide information and references for assistance. In 2000 and 2001, EWI followed the dialogue on a County Wildland-Urban Interface Management ordinance for the mountain area and informed residents about the pros and cons of the proposed ordinance. In the same period, EWI implemented soil and water conservation demonstration projects at three locations along the Galisteo Creek, in collaboration with landowners and state and federal agencies.

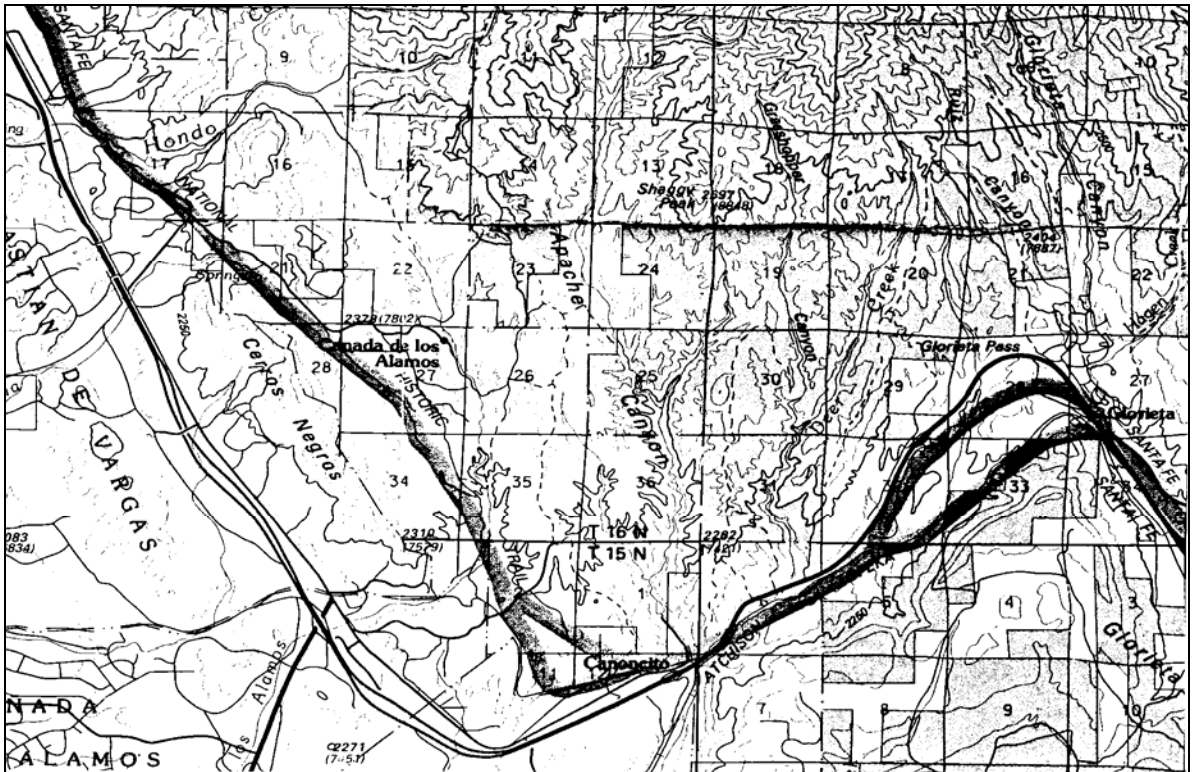
In order to preserve stream conditions in general and the investments in stream rehabilitation at the demonstration sites along the Galisteo Creek, it is of great importance that forest and fire hazard conditions in the upper watershed area of the Galisteo Creek be improved. The area between the Arroyo Hondo and Glorieta Pass constitutes the headwaters of the Galisteo Creek. The health of the forest landscape in this area is vital for watershed conditions downstream. Fire hazard prevention and forest management in the upper watershed areas will reduce the risk of damage by floods, soil erosion, and disturbances to the stream channel and riparian habitat downstream over a length of 40 miles. Healthy forests will most likely also preserve the limited water supply in the area and reduce peak discharges in the Galisteo Creek. A downstream population of approximately 5,000 households will benefit from such forest management improvements.

## 2. PLANNING AREA

This community wildfire prevention plan focuses on the lower part of the Sangre de Cristo Mountains from Glorieta Pass to the watershed boundary with the Arroyo Hondo. The area includes forestlands managed by the Santa Fe National Forest as well as private forest and woodlands.

The plan includes neighborhoods and individual households located at Glorieta Pass, Valencia, Canoncito, Apache Canyon, Apache Ridge, Canada de los Alamos, and the Overlook 1 Neighborhood. Most of these neighborhoods are organized in community or roadway maintenance associations. In addition to serving these wildland-urban interface communities, the plan will benefit about 5,000 households in communities downstream along the Galisteo Creek, such as Lower Canoncito, Eldorado, Lamy, Galisteo, RR 55-A, and Cerrillos. All these areas are impacted by flash floods, erosion and sedimentation, which in part originate in the upland forest areas. Runoff regimes will also influence the Lamy well for Eldorado. Indirectly, the entire community of Santa Fe and Arroyo Hondo will benefit, as the plan will reduce the risk of wildfire jumping over the ridge of Arroyo Hondo into the Santa Fe watershed.

### AREA MAP



Source: BLM Edition 1996, Surface management Status. Sheet Santa Fe, New Mexico.  
Scale approx. 1:100,000. U.S. Department of the Interior, Bureau of Land Management.

### 3. LANDSCAPE AND FIRE HAZARD

The neighborhoods in the study area are all located in ponderosa pine forests and pinyon-juniper woodlands adjacent to national forest lands, which consist of ponderosa pine and Douglas-fir stands. Both the private and federal forest lands are located on steep, rocky slopes with poor access and frequent occurrences of lightning strikes, as exemplified by the small lightning fire at Shaggy Peak in 2000. Furthermore, many houses are built beneath the tree canopy. Tree cover is maintained for purposes of visual screening from Santa Fe and other visual landscape considerations. In many canyons and on north-facing slopes, tree densities are well above 60 square feet “basal area”<sup>1</sup> and constitute fire ladders of dry, suppressed trees of different heights growing close together. The national forest areas are in many places inaccessible because of a lack of roads, steep slopes and lack of road easements on private lands. The national forest stands have not been thinned in at least 30 years. The combination of lightning intensity, high density of residential homes surrounded by trees, and dry, south facing slopes, with suppressed pine stands, constitutes a high wildfire risk. Consequently, the study area is considered a high to extremely high-risk area in New Mexico. The proximity of the study area to the Santa Fe watershed constitutes a reciprocal threat of spreading wildfire for the entire Santa Fe area. Treatment of the forest lands in the study area will be essential to the reduction of wildfire risk originating in the Santa Fe watershed and spreading toward that watershed area.

An investigation of State and County fire prevention officials revealed that 43 communities in Santa Fe County risk serious wildfire damage, should a fire erupt. The area between Glorieta and the Arroyo Hondo is listed as an area with high to extreme hazard ratings. Given the frequent lightning strikes on the ridges in the area, *the current circumstances make it not a question IF but WHEN a wildfire will occur.*

#### **BOX 1. Average Fire Hazard Ratings for Neighborhoods in the Area**

La Barberia:	Extreme
Old Santa Fe Trail South of La Barberia and Overlook Neighborhoods:	High
Canada de los Alamos:	High
Apache Ridge	Very High
Canoncito:	High
Ojo de la Vaca:	Very High
Glorieta Mesa:	Very High

Why are these areas at such high risk of fire? A combination of factors is at play in the assessment of fire hazard. Besides the **high incidence of lightning strikes** in the area, the most important factors are:

<sup>1</sup> The **basal area** of a stand of trees is the cross-sectional area of all trees per acre. Forestry professionals in the Southwest recommend that 60 square feet of basal area in low elevation ponderosa pine forests is a relatively fire-safe density of trees.

**ACCESS:** In all of the listed neighborhoods, road systems are poorly designed and road conditions are very bad for fire fighting and evacuation purposes. For many homes, there is typically only a single means of access. The roads are often unimproved, and too narrow for passage of fire engines, let alone for maneuvering of fire engines when residents try to evacuate in the opposite direction. Many roads are steep and winding, sometimes with severe switchbacks, and have insufficient turn around space. Steep drop offs or overhanging branches hug the roadsides and create unsafe rescue and evacuation routes.

**FOREST CONDITIONS:** The pinyon/juniper woodland and ponderosa pine forests are in many areas overly dense, and growing right up to the homes and roads. Relatively dry weather conditions in the last 6 years and the density of trees cause the forest to dry up very quickly in the spring and summer season. In many spots, pine crowns touch each other and cover lower pine and juniper trees beneath, which will help spread fire. Many homes are constructed in the trees, and often branches hang over buildings. While this looks picturesque, structures in these areas, especially those without a defensible space, are at increased risk.

**BUILDING MATERIALS:** Many homes in the area have roofs or walls constructed with exposed wood or latex components such as wood shake, paneling, composite materials, or wood sidings, fences, decks and balconies. These types of building materials increase the ignition risk of the structures. In addition, firewood piles, sheds, piles of construction material or waste, and propane tanks in close proximity to the buildings provide additional fuel and allow fire to spread rapidly.

**INCREASING DENSITY OF HOMES:** Throughout the area, the building density has increased dramatically, while road conditions have not been improved to accommodate rapid evacuation. In case of a wildfire, many homes and people are simultaneously threatened, while evacuation and rescue conditions are insufficient to accommodate traffic loads.

**WATER SOURCES:** While some neighborhoods have hydrants or have installed water tanks, such as Treehouse Road and Cougar Ridge Road, most homes in the area are not served with any water source in the neighborhood for fire fighting purposes. Apart from a few ponds and stock tanks in Apache Canyon and Ojo de la Vaca, there is no surface water available to fight fires.

**TERRAIN CONDITIONS:** The landscape between Glorieta and the Arroyo Hondo is made up of many steep, narrow canyons. Homes are located at many different elevations, sometimes high up on the ridges. Evacuation and rescue efforts are seriously hindered by these difficult terrain conditions. Many slopes are south facing and will be bone dry in the fire season, and are exposed to winds from many directions. Wildfire can easily spread in this landscape and isolate entire neighborhoods of hundreds of homes at a time.

### 3. COMMUNITY WILDFIRE PREVENTION & EMERGENCY INITIATIVES

The community wildfire planning area includes several different neighborhoods that are socially and geographically separate from each other. The disparate locations and social separation between the neighborhoods made it impossible to generate a general fire preparedness plan for the entire area as a whole. Individual neighborhoods have established partial fire protection plans based on their local needs and concerns (see below). Fire prevention measures of several neighboring communities are listed as well. These neighbor communities were encouraged to develop fire prevention plans as a result of the serious year 2000 fire season and the area-wide initiative in 2001 and 2002.

#### **APACHE CREEK RANCH**

***Vital Plan Components:***

- Local Contact Person: Anita Stalter (984-8849)
- Maps Available: unknown
- Water Sources: three 12,000 gallon tanks (total 36,000 gallons)
- Access Routes: Old Santa Fe Trail and Apache Ridge Road (DEAD END ROADS)
- Safe Haven Zones: Church of Canada de los Alamos and/or Camp Stoney
- Key Infrastructure/Facilities: powerlines along Old Santa Fe Trail, Apache Ridge Road, and Forest Road 79; local gas tanks.
- Major Fuel Sources: some ladder fuels and dense stands of pinyon and juniper in valleys, some dead trees.

***Plan Description.*** Landowners in the ranch neighborhood, organized in the Apache Creek Ranch Association, have taken proactive steps in wildfire prevention and evacuation. Members of the Apache Creek Ranch Association evaluated their situation and decided to bury three large tanks and fill them with water to serve as a local water repository for fire fighting purposes. The tanks were installed in the early summer of 2002.

In addition, Vint Lawrence has treated his property (Apache Creek Ranch) with the intention of managing water and soil resources, while enhancing permaculture opportunities. Vint Lawrence and his team have applied several water conservation mechanisms, such as the design and use of swales (furrows) and berms to retain water and to increase infiltration in forest soils. Implicitly, wildfire hazard has probably been reduced.

***In Case of Fire.*** Association members are in contact with each other and have developed a phone tree to call each other to announce and coordinate evacuation.

## CANADA DE LOS ALAMOS/APACHE RIDGE/LA POSTA/CAMP STONEY

### ***Vital Plan Components:***

- Local Contact Persons: Anita Stalter (984-8849), Heather Gaume (983-5610 or 820-0793), Senta Hoge (888-3522), Therese Martinez (Old Santa Fe Trail: 984-5071), Clair and Erik Weber (Wild Turkey Way: 984-8546), Roger and Claire Frye (La Posta: 988-4026), Julian Prada (Escondido: 992-1124, Jane Schlesinger (Old Santa Fe Trail: 992-0275), Leo Gurule (Canada de los Alamos: 982-5689), Yadi Flannery (La Posta-San Sebastian: 984-2285). Telephone tree in place.
- Maps Available: YES (see Attachment F)
- Water Sources: Camp Stoney has an 80,000-gallon swimming pool and a 40,000-gallon water tank that can be used in case of fire. Camp Stoney also has space for emergency helicopter landing.
- Access Routes: Old Santa Fe Trail and SF County Road 67-A (DEAD END ROADS). If the Old Santa Fe Trails is blocked, one can use the road through La Posta (see map). The route has signs with a flame on them.
- Safe Haven Zones: Church in Canada de los Alamos and Camp Stoney campus
- Key Infrastructure/Facilities: powerlines and telephone lines along Old Santa Fe Trail; local gas tanks.
- Major Fuel Sources: some ladder fuels and dense stands of ponderosa pine, pinyon and juniper in valleys, some dead trees.

***Plan Description.*** Residents of the village of Canada de los Alamos have banded together and established an emergency evacuation plan, and developed a set of instructions and a telephone tree to contact each other in case of emergency (see Attachment F). In addition, the community selected “safe haven” areas that serve as local destinations for evacuation and communication if fire has occurred. Camp Stoney and the village church were designated as safe places to evacuate to. The community also created a neighborhood map that shows the homes in the area, evacuation routes and safe haven areas. The map and telephone tree have been distributed from door to door in mid 2002. Connections were made with other neighborhoods, such as Overlook One/La Barberia and Apache Creek Ranch.

***In Case of Fire.*** Camp Stoney will ring their large outdoor bell three times – pause – three times, etc. and continuing while fire danger is present. The church in Canada de los Alamos may also ring its bell. Area instructions recommend that people prepare for evacuation with the following things in mind:

- Carry a chainsaw, ax, and/or shovel in your vehicle for evacuation purposes in case the road is blocked by a fallen tree, and/or you need to use your shovel to help put out a small fire.
- Have a bag packed with important family papers, medications, eyeglasses, water, First-Aid kit, food for a day, pet food, pet’s vaccination records if not wearing tags, and a change of clothes for each member of the family.
- You may want to have photo albums packed as well.
- Tune in to Radio Free Santa Fe, KBAC 98.1 on you FM dial for news on fires.

## **OVERLOOK ONE/LA BARBERIA NEIGHBORHOODS**

### ***Vital Plan Components:***

- Local Contact Person: Ken and Sandra Rowley (La Barberia: 989-8299), Mrs. Keith Clemson (Overlook: 982-5766), Richard Blake (Overlook: 989-4611). Telephone tree in place.
- Maps Available: unknown
- Water Sources: none
- Access Routes: Overlook Road (DEAD END ROAD)
- Safe Haven Zones: unknown
- Key Infrastructure/Facilities: powerlines along Overlook Road, local wood piles, local gas tanks.
- Major Fuel Sources: ladder fuels and dense stands of pinyon and juniper on the slopes and in valleys, some dead trees, and many homes have wooden balconies, decks, paneling, wood piles, and brush close to the homes.

***Plan Description.*** The Overlook Neighborhood Association began meeting in 1996/1997 and invited the Hondo Fire Chief and EWI staff to meet with the association to discuss fire prevention strategies. Neighbors were encouraged to clear trees from around their homes. Richard Blake, then Association President removed over 100 trees from his own property and encouraged other neighbors to see what he had done and do the same to their property.

Other fire prevention measures included:

- During the height of the fire season, neighbors were encouraged to place spark arresters atop their chimneys. This measure was met with about 95% compliance.
- Wood piles were moved away from homes.
- Mulch from cut-down trees was used around the properties.
- A telephone tree was started to alert each other in case of fire.
- Residents walked the neighborhood together to see what could be done to improve the roads for faster access or develop emergency vehicle turn-arounds.

It was noted that during the past year the area has had a significant loss of pinyon and juniper due to disease. These trees now pose a tremendous fire hazard to the area. Neighbors will meet in early 2003 to begin discussions about what to do about removal of the diseased trees in relation to fire planning.

***In Case of Fire.*** Residents should call the telephone tree and prepare to evacuate.

## LAMY

### ***Vital Plan Components:***

- Local Contact Person: Patrick McGinn (466-3083). Telephone tree in place
- Maps Available: none
- Water Sources: none
- Access Routes: (DEAD END ROAD)
- Safe Haven Zones: Lamy Railroad Station
- Key Infrastructure/Facilities: railroad grade (few crossings); power lines; local gas tanks.
- Major Fuel Sources: some ladder fuels and dense stands of pinyon and juniper in valleys, some dead trees, some homes with wooden paneling and wood piles.

***Plan Description.*** In Lamy, several community members met to discuss fire planning. In July 2002, residents conducted a field trip to one home that had been evaluated by the fire marshal and selected as a model home. The home provided an excellent example of different types of vegetation that could be used to keep fire away from the home. The homeowners had also trimmed trees and thinned pinyon-juniper areas and moved woodpiles away from the house. Other examples included improved turn arounds for fire engines, a neighbor information system on pets in the home, and the planting of gardens near the home as a fire break area. The community also developed a telephone tree for residents up the dead-end canyon road.

***In Case of Fire.*** Residents should call the telephone tree and follow the evacuation plan. Residents should check whether their animals are tagged before evacuation.

## **GLORIETA ESTATES**

### ***Vital Plan Components:***

- Local Contact Persons: Carol Smith (757-6642), Gail Bryant (757-6654), Marian Markham (757-3964), Marian Martinez (757-2520), or Bridget Bollschweiler (757-2819). Telephone tree in place.
- Maps Available: YES (see Attachment F)
- Water Sources: none
- Access Routes: Glorieta Road, and Avenida Ponderosa, Pine Haven Road, and Raven Tree Road (ALL DEAD END ROADS)
- Safe Haven Zones/Evacuation Site: Chavez Recreation Center
- Key Infrastructure/Facilities: unknown
- Major Fuel Sources: some ladder fuels and dense stands of pinyon and juniper in valleys, some dead trees.

***Plan Description.*** The community of Glorieta Estates, just east of Glorieta Pass, has come together for several neighborhood safety planning issues, including wildfire preparedness. In the spring of 2002, it arranged an information session with County Fire Marshall Hank Blackwell, and on May 11, 2002, the community organized a pruning and chipping party with help from the Santa Fe County Fore Department and the Glorieta Pass Volunteer Fire Station.

***In Case of Fire.*** Fire prevention staff recommend that the community plan to evacuate in case of a wildfire in the area. The community has developed an evacuation plan that consists of a telephone tree, a map (see Attachment F), and the following general guidelines and recommendations:

- Make a personal evacuation plan. Make arrangements to have animals and things (treasures) ready to go if fire occurs. Animals should have some sort of identification on them. Be alert for smell-smoke-heat.
- Have available and know the local and business phone numbers of the neighbors on each side of you. This so we can call our immediate neighbors in case of fire. We can each be responsible for our immediate neighbors.
- If you evacuate, the fire department suggests that you put a piece of wide white or silver tape across the front door. This will signify that you have gone. If possible leave a note telling where you will be. Leave the house unlocked so that it is available for the firemen if they need it.
- IF there I no time to evacuate, think about a safe house, that is, one that is fairly safe from fire, with few trees or long grass around it.
- Use the road to Glorieta if at all possible. Use the railroad road ONLY if the other way is blocked – it is a terrible road.
- The fire department has designated the Chavez Recreation Center as the evacuation site for this area. Information and facilities will be available there.

## **GALISTEO**

### ***Vital Plan Components:***

- Local Contact Person: Santa Fe County Fire Department (Hank Blackwell, Fire Marshall: 992-3076) and Galisteo Volunteer Fire & Rescue Station (phone: 466-0396)
- Maps Available: unknown
- Water Sources: none (Galisteo creek: limited supply)
- Access Routes: Highway 41, Via El Puente, Avenida Vieja (no dead ends)
- Safety Zones: unknown
- Key Infrastructure/Facilities: power lines along Avenida Vieja; individual gas tanks.
- Major Fuel Sources: some ladder fuels and dense stands of saltcedar and Russian olive under old cottonwoods, some wood.

***Plan Description.*** In Galisteo, residents have been concerned with the fire hazard of the Galisteo bosque, a grove of cottonwoods, willows, Russian olive and saltcedar along the Galisteo Creek. The cottonwood trees are of varying ages and include several old and nearly dead trees. Dense stands of willow, saltcedar and Russian olive grow under the cottonwoods and form fire ladders. The undergrowth is partly dead as a result from drought. In early 2002, one landowner made an effort to thin the undergrowth and prune up the cottonwoods on about half an acre of land.

On July 13, 2002, the Galisteo Fire & Rescue Station, residents, EWI, and UNM hosted a bosque restoration workshop, funded by the U.S. Fish and Wildlife Service. Following the workshop, which included a visit to the thinned site, residents decided to inventory where the bosque needs thinning. In the fall of 2002, several landowners thinned part of the brush, and on December 7, 2002, community members and the Fire & Rescue Station borrowed a chipper from Santa Fe County and the U.S. Forest Service to chip the thinned material into mulch. More wood was thinned later in December, while goats were brought in to remove flammable weeds and brush in a meadow bordering the bosque.

***In Case of Fire.*** Call the Santa Fe Fire Department (911 and 992-3076) and evacuate to any open space near/in Galisteo. Keep roads free for fire equipment.

## 5. INDIVIDUAL FIRE PREVENTION MEASURES

Homeowners and forest owners should also make their own fire preparedness and prevention plans, and not wait until their neighborhoods have completed a fire plan. It is impossible to eliminate the risk of wildfire in the mountain zone. However, each landowner has a responsibility to minimize the chance of fire starting or spreading from his/her property. *Taking individual responsibility will increase the opportunities for fire fighters to help you fight wildfire in case fire erupts in your area.*

The first step in your wildfire prevention and emergency plan is to acknowledge that your neighborhood may be at risk of wildfire. In order to assess the risk of your neighborhood you can obtain county maps of fire hazard areas from the Santa Fe County Fire Department and the Santa Fe County Planning Department. In addition, you should conduct a fire hazard assessment for your property by filling out the self-assessment test included in Appendix A. Three simple fire preparedness flyers with basic information for your area are included in Appendix B.

### **PREPARE FOR WILDFIRE**

Certain factors that make your neighborhood at risk are not easy to change. You may already be aware that your property is at risk or is in an area prone to wildfire. In this case, the most practical advice is to:

- 1. Keep your fire insurance policy up to date.**
- 2. Keep a neighborhood telephone tree and a personal telephone list with you to inform neighbors, friends and authorities.**
- 3. Keep your car and most valuable belongings ready for evacuation.**
- 4. Have sets of important keys to gates and cars ready for evacuation. Be sure others have back-ups of important items such as sets of keys for gates that are usually locked or different vehicle keys that are needed.**
- 5. Know the escape routes and the local safe haven areas in your neighborhood.**
- 6. Tag your animals with contact information. If you have pets, make sure that your pets are tagged for identification. In case of fire, evacuate the pets that you can take with you (cats, dogs, etc.), and open the doors and gates that may keep larger pets (horses, lamas, etc.) locked in and let them run before you evacuate. You may want to set up a buddy system that takes care of animals for when you are gone.**
- 7. Be ready to evacuate immediately. Late evacuation may not only increase the risk of being caught by the fire, it also increases the chance of traffic congestion with other evacuees leaving and fire department vehicles entering your neighborhood.**

Remember that in case of wildfire, the fire department will conduct a triage to select the homes and neighborhoods that it will try to save. This means that if your home is built and/or sited in ways that make it more prone to fire and if it is located in a remote spot with difficult access, the fire department may not be able to come to its rescue.

**For more information, contact the Hondo Fire & Rescue (989-5114) or the Santa Fe County Fire Department (911 for emergency and 992-3070 for non-emergency).**

Many people in the community have taken individual actions for fire preparedness and prevention. Their actions included:

- Thinning out dense stands of ponderosa pine, pinyon and juniper.
- Clearing brush and dead wood around homes. Branches were chipped or hauled away to the transfer station in Eldorado.
- Widening of driveways and private access roads.
- Offering ponds and water tanks to the fire department as a local water source in case of fire.
- Replacing flammable construction materials with less flammable ones.
- Moving wood piles away from homes.

Many more things can and should be done. Below is an overview of broad measures you can apply around your home. The how and what of these measures is explained in Appendices C and D. Appendix C lists many options you have in reducing wild fire starting and spreading from your property. Appendix D lists specific measurements to take in consideration for creating *defensible space* around your home as well as for fire-proof landscaping: *fire-scaping*. Chapter 6 identifies additional actions you may want to undertake with your neighborhood and at an area-wide scale.

**WHAT FIRE PREVENTION MEASURES YOU CAN TAKE AROUND YOUR HOME:**

**1. Home and Home Site Improvement**

- A. *Retrofitting Homes for Fire Protection*
- B. *Creating Defensible Space around Homes*

**2. Forest Management Improvements**

- A. *Reducing Forest Density: Pruning, Thinning, Logging, Burning*
- B. *Increasing Forest Humidity*
- C. *Doing nothing*
- D. *A combination of the above at one location, spread over time*

***“Defensible Space is an area either natural or man-made where material capable of allowing a fire to spread unchecked has been treated, cleared, or modified to slow the rate and intensity of an advancing wildfire and to create an area for fire suppression operations to occur.”***

## **8. AREA-WIDE FIRE PREVENTION MEASURES**

Collaboration and public participation is crucial for effective wildfire preparedness and prevention planning, because the hazard and impact of fire stretches over large areas, touches many different landowners, and is more effectively done together than alone. There are two ways you can be involved as a citizen and neighborhood resident:

- A. By participating in wildfire prevention planning in your neighborhood, and***
- B. By participating in wildfire and forest management planning on the adjacent Santa Fe National Forest.***

### A. Planning in your Neighborhood

It is important to get organized as a community. There are many things that you can consider doing together in your neighborhood, such as making sure that all homes are clearly numbered, roads are named, and evacuation routes known by all in the community. Neighborhoods can also set up a telephone tree system to inform each other of fire prevention measures and alert one another of the need to evacuate in case of fire. Some neighborhoods have worked together to widen their roads, while preventing runoff and erosion, or have installed large water tanks to facilitate fire fighting. Some neighbors have worked together to make their homes and yards more fire proof. Neighborhoods can also work together on the improvement of the siting of utility lines to prevent fire caused by power line spark and prevent obstruction of evacuation and rescue routes from utility lines in case of an emergency. Collaboration with the Hondo Fire & Rescue Station may help in further education of community members, in determining evacuation routes, and in assisting the station with improved access or make key boxes available for gated roads and driveways.

Many roads in the area are below County standards for safe evacuation and fire fighting purposes. Neighborhood and road associations may want to reconsider redesigning the neighborhood roads to improve fire engine access while allowing for space for the evacuation of residents. In many places, however, this will be impossible or very costly because of terrain conditions and lack of space. In those cases, turn outs and turnaround spaces need to be created where space permits to optimize emergency road use conditions. At the same time, drainage structures have to be improved to reduce runoff and erosion that will most likely be created by the roadwork. Drainage has to be designed in a way that the water is evenly spread downhill in order to avoid “robbing” certain part of the woodlands of runoff water and making them even more fire prone as a result of lack of moisture.

In general, collaboration in the community can help boost a sense of belonging and neighborhood unity. This can support beneficial collaboration and social relations in other aspects of neighborhood life. In some cases, collaboration can drive neighbors apart and increase the intensity of neighborhood disputes. Increase of fire fighting facilities and infrastructure may cause some soil erosion in the first few years, it may tap into limited water resources, and it may reduce visual quality if planned in an inappropriate manner. See Appendix C. for more details on neighborhood planning and education techniques.

### **Neighborhood Fire Prevention Reminder Points:**

- Telephone lists and telephone tree (use homes on high points as look outs)
- Plan evacuation routes with proper signage
- Widen roads and create turning points
- Install house numbering
- Identify “Safe Haven Areas”
- Identify local water storage facilities. Survey water tanks and other supply systems, mark on map, make sure to tell fire department
- Protect telephone lines, power lines, transfer boxes, gas tanks, wood piles, etc.
- Work with utility companies to move power and telephone lines or put them underground.
- Stay in touch with authorities (fire station)
- Make a simple resource inventory to assess individual properties (e.g. with a checklist) and hang on doors for self-assessments.
- Organize an outside assessment team for this, as well to be offered to property owners.
- Ask neighbors with pools and ponds to register their water supply with the local fire department.
- Obtain aerial surveys and make overlays with contours, roads, and homes.
- Be sure to give all of this information to the fire department.

### **B. By participating in wildfire and forest management planning on the adjacent Santa Fe National Forest.**

The U.S. Forest Service manages the Santa Fe National Forest, which makes up the upper half of the forested part of the Galisteo watershed. Forest and fire management of this area is delegated to the Pecos-Las Vegas Ranger District in Pecos. The national forest lands in this area are primarily designated for low intensity recreational use. The Forest Service does not plan any timber harvesting in the area. So far, foresters from the Pecos District have suggested that only modest thinning projects might be appropriate for the area. In such events, the Forest Service would not cut any new roads, but only use existing roads and trails, which will be improved for the time of the thinning project and closed or obliterated afterwards.

In order to plan any activities in the national forest, the Forest Service has to follow regulations mandated by environmental laws such as the National Environmental Policy Act (NEPA). This act requires the Forest Service to study the negative impacts of any action it plans to undertake and study different alternatives that would achieve the same goals. In addition, the Forest Service must ask the public for input in its proposed actions and in the discussion of expected impacts. It is common courtesy that forest rangers from the Pecos District talk with residents in an area before starting any projects, however, this is not mandated by law.

Area residents can play an important role in the planning stages of Forest Service projects by participating in public hearings, meetings, forest walks and by submitting their written comments to the agency's evaluation of alternatives and impact assessments. An important step in participating is making sure that you are on the mailing list of the Forest Service for any information regarding the forest areas you are interested in. Make sure that you tell the official that takes your name that you also want any information regarding the NEPA process for that area. This means that the Forest Service will send you announcements of public input sessions (also called "scoping letters") and other documentation. **You can reach the Pecos Las Vegas Ranger District at 505-757-6121.**

The Forest Service will most likely focus its activities on the following alternative strategies:

*A. Reducing forest density (and breaking up forest density)*

- Thinning of small patches
- Cutting fire breaks
- Prescribed burning

*B. Applying multiple, site-specific approaches*

Small-scale, site-specific activities may include "doing nothing." Small-scale, site-specific approaches may be very effective and generate many beneficial environmental effects. However, they may be more costly than a blanket approach for the entire area. Because time is of the essence in planning for wildfire prevention, the complexity of organizing site-specific approaches and the time involved in achieving site specific treatment will increase the risk of a fire erupting in the mean time.

During meetings in late 2001 and early 2002, many area residents seemed to prefer that the Forest Service implement selective, site-specific, low impact, community-friendly measures. The interim Pecos-Las Vegas District Ranger suggested that small pilot/demonstration projects could be set up on 10-20-acre plots in a 1,000-acre study area.

Residents have also asked Forest Service officials about the possibilities of considering implicit fire management through wildlife management activities. Such treatments may include the construction of water tanks and the thinning and burning of specific areas to create cover vegetation and fodder for bear and other animals. This may help increase spacing between trees, break up the forest landscape, and increase soil moisture levels, and implicitly help reduce the wildfire hazard in the forest.

Forest Service rangers explained that management for wildlife with a second objective of reducing forest fire hazards is often not very successful. Wildlife management and fire management objectives and locations do not generally overlap. The concept is interesting, but needs more research.

## **9. SOURCES OF TECHNICAL, LEGAL AND FINANCIAL ASSISTANCE**

The U.S. Forest Service has received funding from Congress for fire prevention and hazard reduction on national forest lands. The Wyden Amendment allows the Forest Service to make these funds available also on private land adjacent to the national forest and within the Wildland/Urban Interface zone. **Residents interested in this funding option should contact the Pecos-Las Vegas Ranger District at 505-757-6121 and ask to speak with the District Ranger.**

Cooperators with the local (Santa Fe-Pojoaque) Soil and Water Conservation District can apply for funding from the Natural Resources Conservation Service (NRCS) for ecosystem improvement and wildlife habitat improvement, which can include forest lands. The Bush Administration recently appropriated a considerable amount of money to these causes in the 2002 Farm Bill. **For information, call the local NRCS office in Santa Fe at 505-988-6253.**

Private landowners can receive free technical assistance from the Santa Fe County Fire Department and the New Mexico State Forestry Division in assessing fire hazard and forest management improvement needs. The agencies can also provide assistance in referring landowners to consultants, non-profit organizations, and other service providers for forest land assessments and planning, the use of chippers and other equipment, and forest monitoring services. However, agency capacity is limited. For rapid assistance or thorough field assessments, landowners may be advised to hire local consultants, non-profit groups, or contractors.

**For the Santa Fe Fire Department, contact Hank Blackwell, County Fire Marshall, at 992-3076.**

**The State Forestry Division office for this area is in Bernalillo. Call Todd Haines, Timber Management Officer, at 505-867-2334.**

**For other references, call the U.S. Forest Service (ask for Claudia Standish) at 505-438-7805 or Earth Works Institute at 505-982-9806.**

For more information, look at the state fire prevention and emergency brochure:  
**“LIVING WITH FIRE – A guide for the homeowner”**

You can order this publication from the New Mexico State Forestry Division and the Santa Fe Fire Department, or by calling Earth Works Institute.

## **APPENDICES**

- A. Self-Assessment Form
- B. Wildfire Education Pamphlets
- C. What to Do to Prevent Wildfire?
- D. How to Create Defensible Space?
- E. Hyde Park Estates (Example of a Firewise Community)
- F. Community Fire Emergency Plans and Maps
  - Canada de los Alamos and surrounding areas
  - Glorieta Estates

### **APPENDIX A. SELF-ASSESSMENT FORM**

### **APPENDIX B. WILDFIRE EDUCATION PAMPHLETS**

1. *Is Wildfire A Problem Here?*
2. *What Is The Fire Hazard Around My Home?*
3. *What Can We Do To Prevent Wildfire?*

### **APPENDIX C WHAT TO DO TO PREVENT WILDFIRE?**

- A. Home and Home Site Improvement**
- B. Forest Management Improvements**
- C. Participating in Community Education and Outreach Activities**

### **APPENDIX D HOW TO CREATE DEFENSIBLE SPACE?**

**APPENDIX E. HYDE PARK ESTATES**

Example of a Firewise Community

**APPENDIX F. COMMUNITY FIRE EMERGENCY PLANS AND MAPS**

**Glorieta Neighborhood Association Information**

**Canada de los Alamos and surrounding areas**

**APPENDIX G. FIRE PREVENTION AND EVACUATION PLANS**

**Glorieta Neighborhood Association Information**

**Canada de los Alamos and surrounding areas**

**APPENDIX H. CHARTS, PHOTOGRAPHS AND MAPS**

Community Fire Plan  
Group Facilitation Results  
***Home Building and Retrofitting***  
Glorieta, June 1, 2002

**Question: What kinds of building techniques are being used to reduce fire risk, and how will these techniques respond to fire? (New construction, retrofit)**

Please note: Santa Fe County has building code guidelines (booklet available)

With home building and retrofitting, a number of issues arise. These are:

1. New home construction options
2. Landscaping options
3. Fire management for property owners- regulations/options
4. What should be dictated by policy?

What is important?

1. Ground surface (litter)
2. Roof materials
3. Slope
4. Wind direction
5. Vegetation composition and density
6. Any dry wood materials that lead to home (fences, etc.)

Materials/Techniques:

1. Stucco, fire-treated lumber, roofing materials (that are fire resistant such as metal or mineral composition shingles, sprays for existing wall materials)
2. Add materials from ground level up that are fire resistant (such as stone). These can be put directly on wood materials.
3. Double or triple glaze windows to reduce reflective ignition of internal materials
4. External shutters on windows

Vegetation Management:

1. Measure 30' perimeter around the house
2. Break the continuity of any fuels:
  - a. Rake pine needles or other combustibles
  - b. Remove loose lumber, wood piles
  - c. Prune trees and shrubs up to 6-10'
  - d. Only low-lying vegetation around your house, nothing touching it
3. Move out incrementally another 30-40'. Do another assessment. Continue this process to the property edge. Think about slope, wind direction, etc.
4. Flag trees to remove incrementally so that you will like the aesthetic result.
5. Assess conditions beyond your property boundary to determine risks
6. Pinon and Ponderosa are higher risk trees due to potential die-back from infestations

**Question: What are the primary concerns of homeowners?**

The lists under the first question sum up these (safety of home and land, etc.)

**Question: What should be the key components of educational programs for builders, landscapers, elected officials, and homeowners?**

Educational needs:

1. We have a need to construct a “model” fire-resistant home and surrounding environment
2. Fire resistant building materials
3. Fire resistant vegetation/landscape designs

**Question: How will we implement all of this?**

What should be the plan?

1. Access to information
  - a. Must be available in commonly visited public places
  - b. Elected officials must be more accountable and communicate with constituents
2. Create demonstration sites (especially ones transportable to neighborhoods)
  - a. Before and after photos of demo sites
3. Pamphlets that show options relevant to our area
4. Work through schools
5. Agricultural extension agents

Who will do all of this? It should be a community partnership.

Community Fire Plan  
Group Facilitation Results  
*Community Outreach and Education*  
Glorieta, June 1, 2002

**Question: How can communities become engaged in fire reduction?**

A couple of questions developed around this first question. They are:

1. Can we expect communities to come to us?
2. How do we get participants to internalize the message?

The group came up with the following responses to these questions:

- 1) Take the message to communities through events, such as:
  - a. Events for the family, that meet family needs, such as daycare.
  - b. Events that include activities for everyone.
  - c. Tap into existing events such as Farmer's Market, 4<sup>th</sup> of July celebrations, etc.
  - d. Piggy-back with the fire department, collaborate on outreach through informative door hangers and other notices.
- 2) Provide \$ for people to do wildfire work: Encourage communities to find money for projects by co-writing grants with Earth Works as the umbrella or coordinate with SF watershed association.
- 3) Funding for materials, site visits, implementation and consultations can be sought from FEMA, National Fire Plan, State Forestry Office, Todd Haines.
- 4) Must build relationships 1 on 1.
- 5) Go door-to-door to deliver message on fire safety.
- 6) Organize outreach by clustering homes and designating leaders in each cluster who have the same outreach information.
  - a. Clusters could be based on criteria other than geography as well, such as economic group or language.

**Question: What do communities need, in the way of education and outreach, to be safer from wildfire?**

A few general suggestions and observations came out of this conversation.

- 1) Repetition of the message, don't give up.
- 2) Be active, use pilot projects to make it real.
- 3) Different people will come to each meeting but eventually leaders will emerge.
- 4) Focus on one activity versus trying to present all issues/activities at once.
- 5) Inform public institutions and public services of events and plans.
  - a. Talk with the fire department and invite them to events.

Conversation also focused on Fire Evacuation Planning as a tool for communicating with neighbors and the community. Certain suggestions came out of this conversation.

- 1) When planning fire evacuation, be sure others have back-ups of important items such as sets of keys for gates that are usually locked and block path, or different vehicle keys that are needed.
- 2) Make a resource inventory to assess individual properties.
  - a. Make the assessment simple
  - b. Assessments can be made as a checklist and hung on doors for self-assessments.
  - c. Might organize an outside assessment team for this, as well to be offered to property owners.
- 3) Develop a telephone tree including homes situated on high-points as look outs.
- 4) Obtain aerial surveys and make overlays with contours, roads, and homes
- 5) Be sure to give all of this info to the fire department.
- 6) Ask neighbors with pools and ponds to register their water supply with the local fire department.
- 7) Survey water tanks and other supply systems, mark on map, make sure to tell fire department.

**Question: What incentives/support can be offered to communities?**

Incentives:

1. Work with county solid waste managers to drop/decrease fees for depositing debris.
2. Ask fire department to provide chippers to communities.
3. Collaborate with the Forest Service to access informational materials, chippers, etc.
4. Link with chipping companies, will they take away dead and down?

Support:

1. EWI and public agencies can provide technical support.
2. Access lists of people who are already involved, such as through EWI.
3. Form steering committees made up of representatives from the various cluster groups.
4. Organize clean-up days by housing cluster.
5. Organize open houses so neighbors can come see what others are doing to be safe.
6. Work with and on inconsistencies in County ordinances. (Identify those that are barriers to community fire safety and bring them to the attention of lawmakers.)

**Question:**

**What collaborative problem-solving strategies have worked, not worked?**

Responses stemmed from participants' experiences in collaborative problem-solving fire safety initiatives. Since we had already heard from these participants about their experiences earlier in the day, conversation centered around suggestions and advice.

1. Collaboration takes time!
2. A successful collaboration is made up of a core group of diligent leaders.
3. Remember, success breeds success.
4. Implementation follows recommendations.
5. Find funding to do it!
6. Link people with resources and other people who can do the work. Match skills with those who want it done for them.
7. Make information and events attractive.
8. Don't take no for an answer when working on ordinances, etc.
9. Bring together decision-makers when possible.

The group came up with the following general strategy:

1. Just do it (demo fire hazard mitigation project), and explain it, with private property owners.
  - a. Use pilot projects.
2. Increase and improve communications through:
  - a. Repetition
  - b. Attractive events that piggy-back on others.
  - c. Keep it simple and logical.
  - d. Go door-to-door, one-on-one; go to the people
  - e. Use mediation when necessary.
  - f. Use evacuation planning and phone trees to educate and organize.
3. Marshall Resources
4. Tap into emergent or existing leadership, including political leadership.
5. Identify cluster groups.
6. Collaborate with other organizations to raise funds.
7. Tap into outside catalysts.
8. Collect information.
9. Marshall equipment.
10. Collaborate with community businesses such as banks or chipping companies.

## **Group 2: Maintaining Vegetation in Watershed Areas**

Aesthetics is very important to homeowners' properties and public lands.

Most people think thinning means clearcutting and images of land that is totally cleared of trees is envisioned and damage from erosion apparent to the naked eye. It is important to keep aesthetics in mind when working to change any landscape form.

Thinning on homeowners' and watershed properties should entail:

- Recognizing dominant vs. suppressed trees.
- Inspecting tree canopies.
- Breaking up continuous canopies by thinning around and between trees and creating a grove type appearance.
- Removing diseased trees: best to cut and remove from property or stack in 4' x 4' stacks and cover with clear plastic to keep disease from spreading to healthy trees.
- Clearing out debris that is on the ground – keep greater distances between ground and treetops.

Strategies:

- Assess property
- Investigate what has been done in other communities
- Create demonstration area so others can see the benefits
- Identify critical areas: downhill/down wind
- Better understanding of how wildfires travel
- Create lines of defenses/firelines within and surrounding communities
- Create 30' spaces around houses
- Eliminate ladders
- Separate tree canopies
- Remove ground fuels
- Mow weeds around property perimeters and keep lawns short
- Landscape with firewise plants and grasses
- Identify drainages
  - Slow waterflows
  - Create meanders
- Agreements to maintain boundaries between public and private lands
- Clean-up assistance from Federal and State agencies
- Recycle materials from clean-up
- Investigate how other communities are dealing with clean-up
  - Firewood permits on Federal and State Lands
  - Recycling materials for consumer products