Hidden Lake, New Mexico

Updated Wildland Urban Interface Community Wildfire Protection Plan

Prepared for:
Hidden Lake, New Mexico

Submitted by:

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Hidden Lake, New Mexico
Community Wildfire Protection Plan

We the undersigned approve the Updated Hidden Lake Community Wildfire Protection Plan:

Organization: Hidden Lake Property Owners Association

Signature: _____ **Date:** 4/14/16

Name and Title: **Brad Snyder, President**

Signature: Joseph M Stehling Jr **Date:** 04/14/16

Name and Title: **Joe Stehling, Firewise & FAC Coordinator**

Organization: Colfax County Administration and Fire Department

Signature: William E. Sauble **Date:** 5/24/16

Name and Title: **William E. Sauble, Chair, Colfax County Board of Commissioners**

Signature: _____ **Date:** 4/14/16

Name and Title: **Larry Osborn, Fire Marshal**

Signature: Bob Coss **Date:** 5/18/16

Name and Title: **Bob Coss, Chief, Moreno Valley Fire District**

Organization: U. S. Bureau of Land Management, Taos Field Office

Signature: Rudolph E. Pacheco pp **Date:** 4-27-16

Name and Title: **Rudolph E. (Pat) Pacheco, Fire Management Officer**

Organization: New Mexico Energy, Minerals and Natural Resources Department, Forestry Division

Signature: _____ **Date:** 4/14/16

Name and Title: **Ernie Lopez, Cimarron District Forester**

Hidden Lake, New Mexico
Community Wildfire Protection Plan

We the undersigned approve the Updated Hidden Lake Community Wildfire Protection Plan (cont'd):

Organization: Colfax County Sheriff's Department

Signature: _____ **Date:** 6/13/16

Name and Title: Rick Sinclair, Colfax County Sheriff

EXECUTIVE SUMMARY

The original Community Wildfire Protection Plan (CWPP) for the Hidden Lake Subdivision was signed in November of 2006. This update uses information and text from the original CWPP, the Colfax County CWPP (prepared by Southwestern Environmental Consultants, Inc. in 2008), the CWPP for the Village of Angel Fire (prepared by The Placitas Group and Anchor Point Group in 2009) and information from the Firewise website.

The community of Hidden Lake has been very active in reducing the potential hazards from wildfire since 2006. Having this updated CWPP in place will enable the community to continue to compete effectively for Federal and State grants which can assist in implementing the projects described herein.

The Action Plan focuses on four areas which are described in detail in the report:

- Property Owner Information and Involvement;
- Reducing Structure Ignitability;
- Fuels Treatment; and
- Emergency Response and Evacuation Planning.

What is a CWPP?

The term "Community Wildfire Protection Plan" was first defined in the Healthy Forests Restoration Act (HFRA) in 2003. It was meant as a process where communities could engage adjacent federal land management agencies to address the threat to communities posed by wildfire and provide guidance to the agency to conduct fuels treatments to protect communities. The New Mexico Fire Planning Task Force adopted this CWPP process for all areas of the state to obtain a consistent approach to identify communities at risk and plan for fire in the wildland urban interface. As defined in HFRA, for a CWPP to be valid it must be approved by the local government (Colfax County), local fire official (County Fire Marshal) and the state agency responsible for forest fires (New Mexico State Forestry). Federal agencies such as the USDA-Forest Service, the Bureau of Land Management, and the Natural Resources Conservation Service should be engaged and are being given an opportunity to participate.

A current CWPP is critical for communities to remain competitive for future state and federal grants for wildfire protection and management. It is also seen as a living document that will be monitored and modified as action plan items are completed and new opportunities arise.

This project meets the requirements of the Federal Healthy Forests Restoration Act (HFRA) of 2003 for community fire planning by:

1. **Identifying and prioritizing fuels reduction opportunities across the landscape.** See the *Fuels Treatment* section beginning on page 19 of this document.
2. **Addressing structure ignitability.** See the *Reducing Structure Ignitability* section beginning on page 13.
3. **Collaborating with stakeholders.** See page 30 of this document.

More recent national action has come in the form of the development of the National Cohesive Wildland Fire Management Strategy and the companion National Action Plan. From this strategy, published in April, 2014 come these words: (https://www.forestsandrangelands.gov/strategy/thestrategy.shtml)

> "The Wildland Fire Leadership Council (WFLC) adopted the following vision for the next century:
>
> > *To safely and effectively extinguish fire, when needed; use fire where allowable; manage our natural resources; and as a Nation, live with wildland fire.*
>
> The primary national goals identified as necessary to achieving the vision are:
>
> Restore and maintain landscapes: Landscapes across all jurisdictions are resilient to fire-related disturbances in accordance with management objectives.
>
> Fire-adapted communities: Human populations and infrastructure can withstand a wildfire without loss of life and property.
>
> Wildfire response: All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions."

In this document, Colfax County rates "High" (which is the highest category) on the map of national priorities for broad-scale fuels management and on the map for national priorities for community planning and coordination. Much of the western United States rates high in these two categories. Colfax County also rates "high risk of large wildfires, with less potential for resource benefits." Much of the western United States rates in this same category or the category called "high risk of large wildfires, more potential for resource benefits."

The only national priority where Colfax County rates "low" is the category called "national priorities for managing human-caused ignitions. The highest priorities in this category tend to be in the eastern United States.

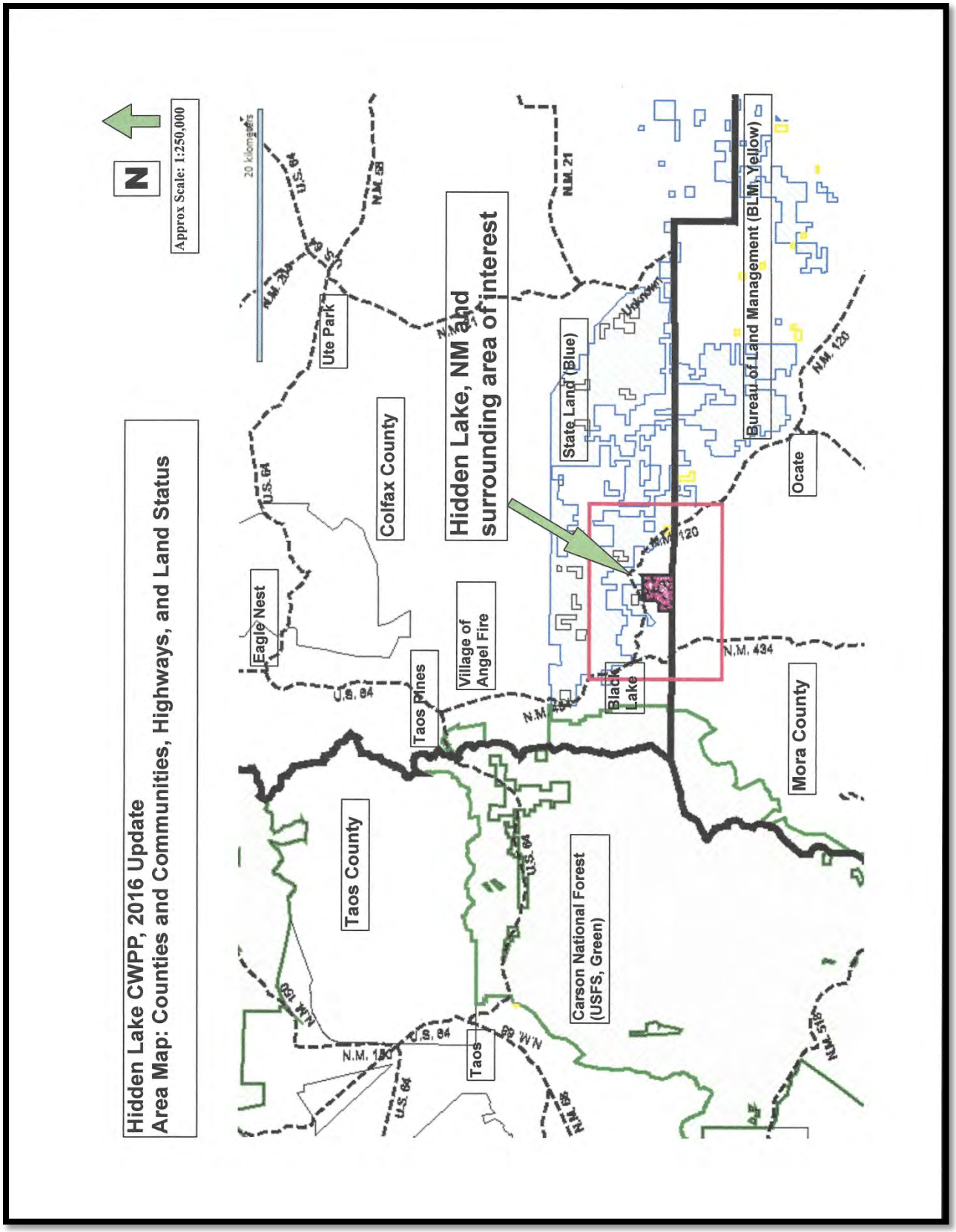
Also on the national level, there is a group called the Fire Adapted Communities (FAC) coalition, which "is a group of partners committed to helping people and communities in

the wildland urban interface adapt to living with wildfire and reduce their risk for damage, without compromising firefighter or civilian safety. The coalition provides information and expertise on the development of the website and other activities related to Fire Adapted Communities." The quote is taken from their website http://fireadapted.org. The members of the Coalition are:

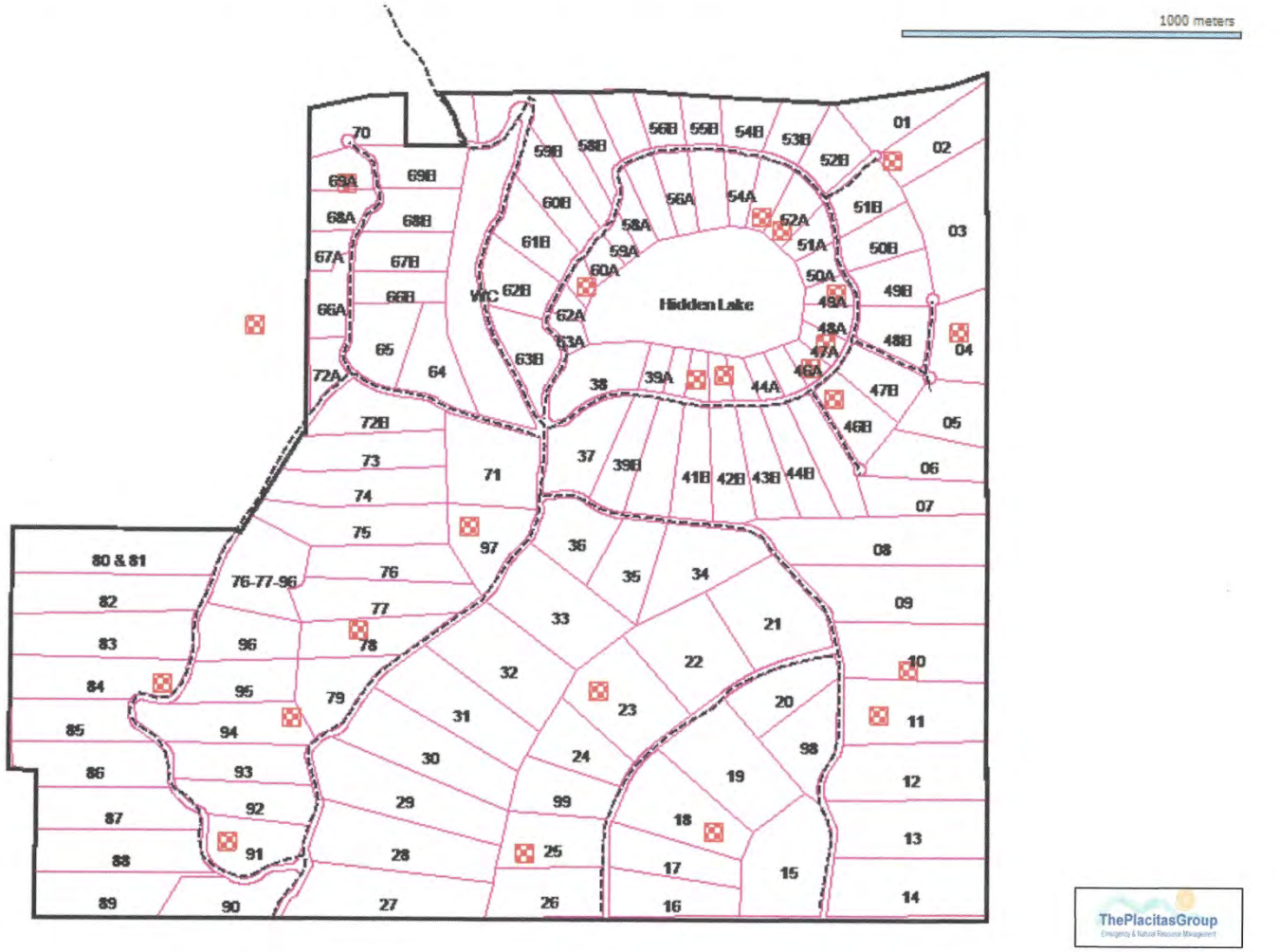
1. USDA Forest Service
2. United States Department of the Interior
3. Insurance Institute for Business and Home Safety
4. International Association of Fire Chiefs (Ready, Set, Go!)
5. National Association of State Foresters
6. National Fire Protection Association (Firewise)
7. National Volunteer Fire Council
8. The Nature Conservancy (Fire Learning Network)
9. United States Fire Administration
10. National Wildfire Coordinating Working Group – Wildland Urban Interface Mitigation Committee; and
11. The Watershed Research and Training Center

The Coalition has some very valuable resources available, as do the Firewise Program and Ready, Set, Go. There are tremendous amounts of free information available to landowners and homeowners online.

Funds for this update to the Hidden Lake Community Wildfire Protection Plan were provided through the 2015-2016 Wildfire Risk Reduction Program for Rural Communities from the New Mexico Association of Counties (NMAC). This program was the first formal program established through the NMAC/Bureau of Land Management Partnership. Beginning in 2005, funding has been provided through the National Fire Plan to assist communities throughout New Mexico in reducing their risk from wildland fire.


Hidden Lake CWPP, 2016 Update
Area Map: Counties and Communities, Highways, and Land Status
N
Approx Scale: 1:250,000
20 kilometers
Hidden Lake, NM and surrounding area of interest
Colfax County
Taos County
Mora County
Ute Park
Eagle Nest
Taos Pines
Village of Angel Fire
Black Lake
Ocate
State Land (Blue)
Bureau of Land Management (BLM, Yellow)
Carson National Forest (USFS, Green)
Taos
U.S. 64
N.M. 21
N.M. 120
N.M. 434
N.M. 38
N.M. 68
N.M. 518

Hidden Lake CWPP, 2016 Update
Property Lot Map with Structure Locations, 9/29/15



Hidden Lake CWPP, 2016 Update, Structure Locations, Property Boundaries with Lot Numbers and Vegetation, (Google Earth Imagery, Sept. 2013)

ACTION PLAN

The Action Plan is the heart of the Hidden Lake Community Wildfire Protection Plan (CWPP). It details the prioritized actions that the community and cooperators want to take to reduce the risk of wildfire damage to people, property and the environment. It will require a high level of commitment to accomplish the tasks shown in this action plan.

Projects described in the action plan should be accomplished, substantially initiated or "on-going" over the next ten years.

The Hidden Lake Property Owners Association will take the lead in monitoring the progress of the proposed projects. Prioritization should not be restrictive; if an opportunity arises to accomplish a lower priority project the community should take advantage of the situation.

The CWPP is a living document to be periodically adjusted to reflect lessons learned and new ideas. We recommend that the Firewise Coordinator for Hidden Lake contact core team members annually or every other year to discuss lessons learned and make any necessary adjustments.

The major topics in the Action Plan below are:

- **Property Owner Information and Involvement**
- **Reducing Structure Ignitability**
- **Fuels Treatment**
- **Emergency Response and Evacuation Planning**

PROPERTY OWNER INFORMATION AND INVOLVEMENT

Hidden Lake should continue to participate in the national Firewise program, which is a multi-agency effort designed to educate homeowners, community leaders, planners, developers, and others to protect people, property, and natural resources from the risk of wildland fire before a fire starts (http://www.firewise.org/). The Firewise program provides information and resources to all communities and interested people at little to no cost.

In 2015, Hidden Lake celebrated its 10th year as a Firewise Community/USA. This is a feat for which the community should be congratulated.

The Colfax County Coalition of Firewise Communities (CCCFC), a private, non-profit organization, has been developed to support local communities to promote the Firewise program, increase fire department fire protection capacity, and provide fire prevention education. The communities in the vicinity which are designated as Firewise Communities/USA participants: Elk Ridge, Hidden Lake, Taos Pines Ranch, Ute Park, Aspen Hill, Lakeview, Green Valley, Idlewild, and Cimarron. The current president of the coalition is a resident of Hidden Lake.

There has been confusion over whether Colfax County has explicitly adopted NFPA 1, Chapter 17 (Wildland Urban Interface) and thus also NFPA 1141 (Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas), NFPA 1142 (Standard on Water Supplies for Suburban and Rural Fire Fighting) and NFPA 1144 (Standard for Reducing Structure Ignition Hazards from Wildland Fire).

Colfax County did reference NFPA 1 – Chapter 17 as being "enacted" in the Wildfire Response Plan in August 2004. However, when the County passed Fire Prevention Code 2006-1, it referenced only the Open Burning Chapter of NFPA 1, and said that it might enact other provisions of NFPA 1 by resolution in the future. Thus, it must be assumed that since no action has taken place at the County level since then, the provisions of Chapter 17 (and its referenced standards) are not enforceable in Hidden Lake.

Property Owner Information and Involvement Action Items

1. Because Hidden Lake has enforceable covenants, we recommend that they be amended to incorporate the most relevant sections of NFPA 1141, 1142 and 1144, having to do with structures, water supplies, roads, and driveways. This is the best way to ensure that new construction, roadways and signage meet the codes.
2. Continue to educate property owners and potential contractors (such as home-building, forest thinning, landscape designers, and architects) about forest health and fire prevention. Continue to provide Firewise fire prevention materials, customized Ready Set Go brochures and copies of the New Mexico version of Living with Fire to encourage all homeowners and landowners to take responsibility and implement defensible space practices.
3. Continue to coordinate with the Colfax County Firewise Coalition to promote fire prevention, fuels treatment and defensible space.
4. Use email lists (or other systems such as Facebook or Next.door.com, which is a social network for neighborhoods) of the property owners to alert them when fire danger is very high to extreme. **When visiting their properties, owners should advise the property manager or Firewise coordinator of the visit so notification can be provided in the event of an emergency.**
5. Property owners should be encouraged to sign up with the County Emergency Notification System. The link to the system (https://public.coderedweb.com/CNE/6AF053DCB942) can be found on the County's website http://www.co.colfax.nm.us/ens. Owners can request that notifications be sent to them via phone, text and/or email.
6. We recommend that Hidden Lake residents continue to work with County officials to formally adopt NFPA 1141, 1142, and 1144 on a County-wide basis.

REDUCING STRUCTURE IGNITABILITY

Structures are vulnerable to ignition during a wildfire from both embers *and* radiant and convective heat. Reducing structure ignitability is accomplished by considering construction techniques and materials and by reducing fuels in zones around a structure to create a defensible space. This defensible space can improve a structure's resistance to wildfire and provide firefighters a safe area in which to suppress wildfire and/or defend the structure if that is possible during a wildfire.

There are several aspects of Hidden Lake that mitigate the risk of wildland fire. First, NFPA 1144 requires that all new construction have defensible space and meet certain construction standards. It cannot be reiterated enough – defensible space saves homes. It is perhaps the best action homeowners can take to prevent the loss of their houses. Second, all of the utilities (except at the entrance to the subdivision) are located below ground. This greatly diminishes the risk of a wildfire starting from a downed power line. Third, the vegetation types (wetter and at higher elevations) in Hidden Lake have tended to have longer periods of time between fires than many other vegetation types in New Mexico. However, as noted on page 36 below there are concerns surfacing that many higher elevation forests are experiencing high mortality events or are predicted to experience them in the next 10-30 years due to climate change. Finally, there is water available in one pond and Hidden Lake itself.

Across the western United States, many communities within the wildland urban interface lack these critical elements.

An additional concern for the Community of Hidden Lake to consider is the risk of a wildfire starting from a house fire. Without adequate defensible space, a residential structure fire could transfer into the wildlands surrounding the house. Because of the high density of the forest, if the appropriate conditions exist, fire could spread into adjacent trees and potentially move into surrounding areas. Defensible space not only protects homes from wildfire, but it also protects the forest from ignitions starting in structures.

Reducing Structure Ignitability Action Items:

1. Periodically conduct an assessment of the hazards in the Home Ignition Zone. Send recommendations to individual homeowners on actions they can take to reduce the risk to their homes and property.
2. Encourage property owners to maintain the defensible space around their homes. Grass and other vegetation should be trimmed or maintained throughout the year, but certainly before the beginning of the traditional fire season and after it cures in late summer.
3. Continue to pursue state and federal grants that support wildfire mitigation, defensible space, and forest health projects within Hidden Lake. Landowners and local government can provide cost share support.
4. Continue to hold a slash treatment/chipper day in July or August of each year. Helping people dispose of slash is an important incentive to get the work done.

ASSESSMENT OF CURRENT HOMES

On September 7, 2015, the Placitas Group (Fred and Shelley Rossbach) and Hidden Lake Property Owners Association Firewise Coordinator Joe Stehling visited all 20 homes in the subdivision. Most of them are very defensible from fire, and the one that has the greatest amount of woody vegetation close to the house is scheduled for thinning in the near future. Each property owner is being given a report with recommendations on how they can become more Firewise.

The most common problems noted around the homes were:

- Grassy fuels too close to the house. During fire season grasses should be mowed regularly. It is best to have an area of gravel (12-18" wide) along the house.
- Lack of screening around the deck or other open spaces below the house. Embers from a nearby fire could easily blow into such areas, and if there is anything flammable in that space, could start a fire.
- Firewood stacked too close to the house, and/or between living trees. Firewood should be staked (using rebar or other metal poles), uphill and at least 30 feet (preferably more) from the house. It should be placed so that on a windy day, the smoke and flames (from the prevailing winds) would blow away from the structure if the woodpile caught fire. Radiant heat is a powerful force.
- Firewood stored between living trees. This is not healthy for the live trees, and if an ember should land on the firewood it will provide ladder fuel to ignite the trees, allowing the wildfire to spread.
- Some above ground propane tanks had vegetation or firewood too close to them.

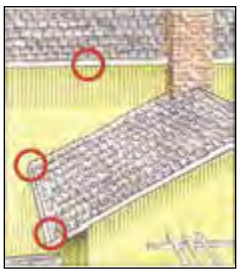
RECOMMENDATIONS FOR ALL CURRENT AND NEW HOMES

The following recommendations apply to all structures which could be threatened by wildfire. This list should be incorporated into the checklist used by the Architectural Review Committee when reviewing specific plans for a new home.

To improve life safety and preserve property, every home in Hidden Lake must have compliant, effective defensible space. This is especially important for homes located on steep slopes, in chimneys, saddles, or near any other topographic feature that contributes to fire intensity. These recommendations are intended to give homeowners enough information to immediately begin making their home fire-safe or improve existing home mitigation efforts. Defensible space must be maintained throughout the year. Key characteristics are:

- ✓ Firewood is stacked on a side contour, at least 30 feet away from structures. Place it so that on a windy day, the smoke and flames (from the prevailing winds) would blow away from the structure if the woodpile caught fire. Do not place firewood between living trees; if "sides" are needed, use metal fenceposts.
- ✓ Trees and shrubs are properly thinned and pruned within the defensible space. Slash from the thinning has been disposed of properly.

- ✓ Roof and gutters are clear of debris. Branches overhanging the roof and chimney are removed to a distance of at least 10 feet.
- ✓ Chimney screens (1/2” mesh or smaller) are in place and in good condition.
- ✓ Metal shields are installed between the home and attached wood fences.
- ✓ Driveway culverts can accommodate the weight of a fire truck.
- ✓ An outdoor water supply is available, complete with a hose and nozzle that can reach all parts of the house. Fire extinguishers are checked and in working condition. Hand tools such as shovels and rakes are easily accessible.
- ✓ The driveway is wide enough and the clearance of trees and branches is adequate for fire and emergency equipment. (Check with your local fire department.) Driveways should have a turnaround for fire apparatus.
- ✓ Road signs and the house number are posted and easily visible.
- ✓ Attic, roof, eaves, and foundation vents are screened and in good condition. **Stilt foundations and decks are enclosed, screened (with 1/8” mesh) or walled up where feasible.**
- ✓ Propane tanks are located at least 30 feet from all structures. The area around the tank must be free of combustible material such as yard debris, and weeds. The website www.propane101.com recommends that the ground be cleared for a distance of 10 feet all around the tank. It is also important to not have branches overhanging the tank, as the pressure relief valve may “blow” during a wildfire and shoot flames toward the sky.
- ✓ The defensible space is constantly maintained:
    - o **Mow non-irrigated grass to a low height. Mow early in the morning, avoiding times of wind, and avoiding rocks because a grass fire could ignite from a spark.**
    - o Remove any branches overhanging the roof or chimney. Trim away branches within 10 feet.
    - o Remove all debris and cuttings from the defensible space.

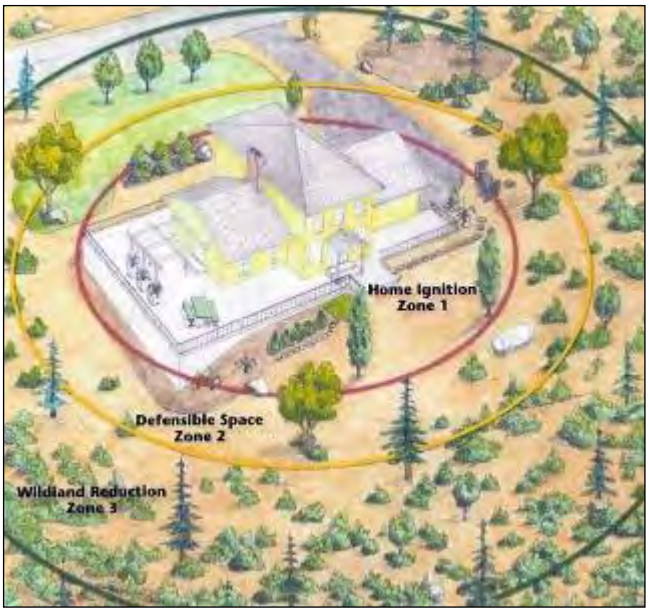


Clean Gutters and Roof

Enclose Decks

Maintain Chimneys

Defensible Space Zones in Timber and Brush Lands



ZONE 1 (within 10 feet of the home), shown as the Home Ignition Zone, suggests eliminating all flammable materials (such as fire-prone vegetation, wood stacks, patio furniture and umbrellas). Irrigated grass, rock gardens, non-flammable decking, or stone patios are desirable substitutions.

ZONE 2 Defensible Space (10 to 100 feet from the home – on steep slopes or areas of high winds the Defensible Space will need to be expanded to 150 feet) suggests thinning trees and large shrubs so there is at least 10 feet between tree tops (crowns). Crown separation is measured from the furthest branch of one tree to the nearest branch on the next tree. On steep slopes or areas subject to high winds, allow at least 1.5 times more space between tree crowns. Remove all ladder fuels from under these remaining trees. Prune all trees to a height of at least 10 feet, or 1/3 of the live crown height. Small clumps of 2 to 3 trees may be occasionally left but leave more space between the crowns of these clumps and surrounding trees. Isolated shrubs may remain, provided they are not under tree crowns. Remove dead stems from trees and shrubs annually. Where shrubs are the primary vegetation in Zone 2, refer to the "Brush and Shrubs" section below.[1]

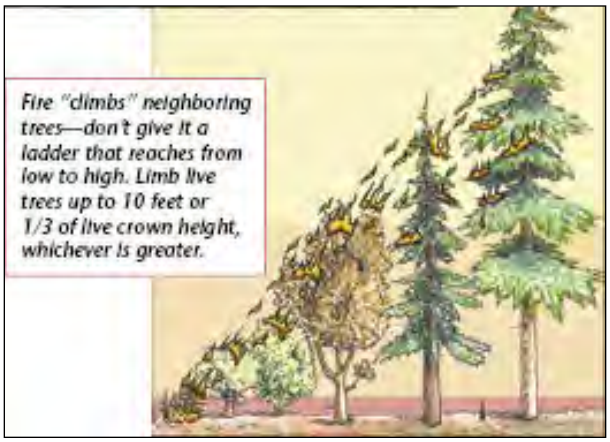
ZONE 3 Wildland Reduction, aka Extended Defensible Space (beyond 100-150 feet), suggests a much more limited thinning and pruning to the standards in zone 2. The goal in this zone is to improve the health of the wildlands, which will also help to slow the approaching wildfire.

[1] http://www.ext.colostate.edu/PUBS/natres/06302.html, referenced 9/10/07

BRUSH AND SHRUBS

Brush and shrubs are smaller than trees, often formed by a number of vertical or semi-upright branches arising close to the ground. On nearly level ground (increase 1.5 times for slope and windy areas), minimum spacing recommendations between clumps of brush or shrubs is 2 1/2 times the height of the vegetation. Maximum diameter of clumps should be 2 times the height of the vegetation. All measurements are made from the edges of vegetation crowns.

For example: For shrubs 6 feet high, spacing between shrub clumps should be 15 feet or more apart (measured from the edges of the crowns of vegetation clumps). The diameter of shrub clumps should not exceed 12 feet (measured from the edges of the crowns). Branches should be pruned to a height of 3 feet.



Eliminate Ladder Fuels

Increase Defensible Space in Windy and Steep Areas.

IMPORTANT WORDS ABOUT STRUCTURE IGNITABILITY

Dr. Jack Cohen, a research scientist with the USDA Forest Service, is one of the nation's foremost experts in how homes burn during wildland fires. He has studied many fires where numerous homes were lost, including the Cerro Grande Fire in Los Alamos, New Mexico, the Hayman Fire in Colorado, and the Aspen Fire in Summerhaven, Arizona. In addition, he has conducted his own experiments to study how homes ignite during a wildfire. His research has been critical in helping people mitigate the risk to their homes.

In his paper "Thoughts on the Wildland-Urban Interface Fire Problem," (2003), Dr. Cohen states "My research results indicate that the big flames of high intensity wildland fires do not directly ignite homes at separation distances beyond 100 feet…The research suggests that if the big flames are not igniting the destroyed homes, then relatively low ignitions must be the ignition sources. ***Thus, a home's characteristics, its exterior materials and design, in relation to the immediate area around a home within 100 feet principally determine the home ignition potential. I call the home and its immediate surroundings the home ignition zone***" [emphasis added].

Dr. Cohen continues, "Thus a home's location does not necessarily determine its vulnerability to wildland fire; the condition of a home's ignition zone determines its vulnerability. ***Where home ignition zones overlap property boundaries, the fire dynamics do not change, but the social dynamics do. In this case the community must collectively reduce their ignition potential to prevent a wildland-urban fire disaster"*** [emphasis added].

There are varying opinions among experts about exactly what should happen within certain distances of homes, and how to define and identify each zone. In general, it is agreed that certain critical actions must be taken within 30 feet of the home, and vegetation treatment of some kind should occur within a radius of 100-300 feet from the home depending on the vegetation type, slope of the land and the architecture/construction of the home itself.

FUELS TREATMENT

Fire has a natural role in the environment. Unfortunately, today's forest fuels are often not totally natural due to years of fire suppression. At the same time, more people now live in this environment. In general, people are concerned about forest practices (i.e. cutting trees) but they are willing to consider the benefits to prevent catastrophic fires and improve forest and watershed health.

Reducing and modifying fuels within and adjacent to the community can reduce the threat of a catastrophic wildland urban interface fire. A community may be *affected* by a wildfire but fuels treatments can help a community survive without major damage.

Thinning prescriptions should be flexible and customized to the site conditions. Wildlife is very important to local residents, and all prescriptions should consider potential effects on and trade-offs for wildlife. The New Mexico Department of Game and Fish (NMDGF) can be consulted in future planning for implementation of thinning. The NMDGF has participated in similar projects in Northern New Mexico and has encouraged monitoring of the effectiveness of treatments to reduce forest fuels and promote long-term forest health.

Prescriptions should encourage diversity of tree species, ages, and allow non-uniform stand structure and distribution. Thinning projects should optimize use of small diameter wood materials to encourage a local forest industry. A viable forest industry will create additional opportunities to efficiently manage future forest and watershed health projects.

Fuels Treatments Action Items in Priority Order:

1. Continue to work with owners of undeveloped lots that have not been thinned to persuade them to thin their lots. Emphasize that a wildland fire would damage their property values as well as the viewshed, which is defined by Merriam-Webster as "the natural environment that is visible from one or more viewing points." This work will be done by the Firewise/Fire Adapted Communities Coordinator and/or the property manager.

2. Work with neighboring landowners to strengthen the existing shaded fuel break along the south and west boundaries of the subdivision.

3. Finish the shaded fuel break around the subdivision.

4. Continue to pursue state and federal grants that can support fuels reduction projects on undeveloped lots. Landowners can provide cost share support.

5. Coordinate with the local electric utility (Kit Carson Electric) to ensure that the above ground electric lines (at the entrance to the subdivision) are maintained with an adequate fuel break at all times.

Completed, Ongoing and Planned Projects in the Area

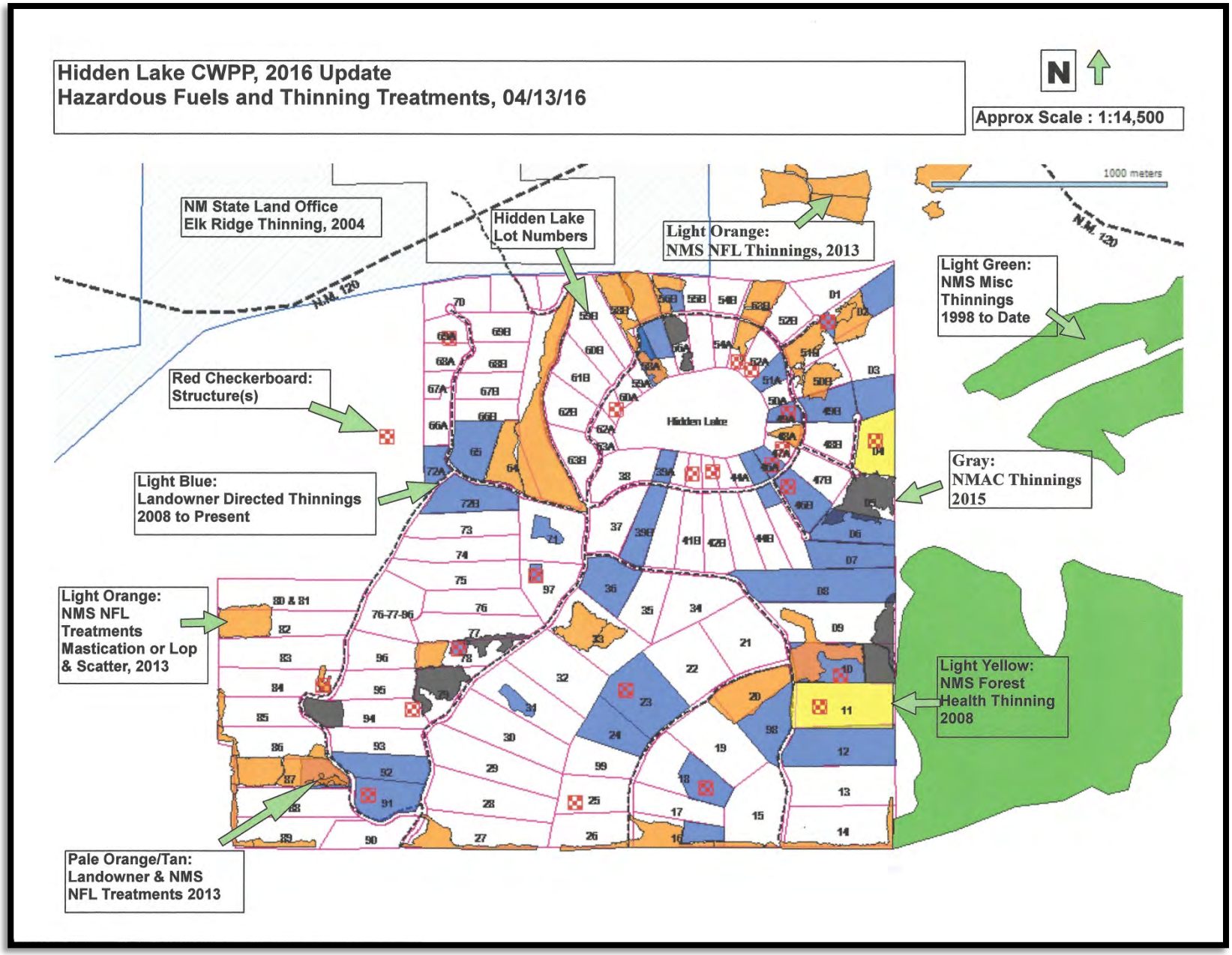
A total of almost 400 acres within Hidden Lake have been treated since 2006 with a mix of grant and property owner funding. In addition, neighboring areas have also been thinned in recent years (see next page for map). This is a tremendous amount of work which we commend. It should be noted that "landowner directed thinning treatments" may be old, and were not funded by outside entities. They are thus of varying densities.

Fuels Treatment

Estimate of defensible space, hazardous fuels and thinning acres by program area and year in the Hidden Lake area.

Program	Date	Acres
New Mexico Association of Counties (NMAC), Defensible space & hazardous fuels treatments in Hidden Lake	2015	28
NM Forestry, Non-Federal Lands, hazardous fuels treatments in Hidden Lake (NMS-NFL)	2013	151
NM Forestry, Forest Health Program (NMS-FH), thinning treatments in Hidden Lake	2006	19
Hidden Lake landowner directed treatments, various prescriptions	2006 to date	191
NM Forestry, Miscellaneous thinning projects in the vicinity of Hidden Lake	1998 to date	716
NM Forestry, Non-Federal Lands, hazardous fuels treatments in Elk Ridge (NMS-NFL)	2013	27
NM State Land Office, Elk Ridge, hazardous fuels treatments	2006 to 2008	40

It is important to remember that **fuel breaks must be maintained to be effective**. Thinning usually accelerates the process of regenerative growth. The effectiveness of the fuel break may be lost in as little as three to four years if ladder fuels and regeneration are not controlled. One of the most difficult issues in establishing and maintaining fuel breaks can be securing the cooperation and participation of landowners. Hidden Lake has an amazing track record of getting landowners to participate thus far. The landowners whose projects were funded by the New Mexico Association of Counties have already agreed to maintain their projects as a condition of the grants.


Hidden Lake CWPP, 2016 Update
Hazardous Fuels and Thinning Treatments, 04/13/16
N
Approx Scale : 1:14,500
1000 meters
NM State Land Office
Elk Ridge Thinning, 2004
Hidden Lake
Lot Numbers
Light Orange:
NMS NFL Thinnings, 2013
Light Green:
NMS Misc
Thinnings
1998 to Date
Red Checkerboard:
Structure(s)
Light Blue:
Landowner Directed Thinnings
2008 to Present
Gray:
NMAC Thinnings
2015
Light Orange:
NMS NFL
Treatments
Mastication or Lop
& Scatter, 2013
Light Yellow:
NMS Forest
Health Thinning
2008
Pale Orange/Tan:
Landowner & NMS
NFL Treatments 2013
N.M. 120
Hidden Lake

EMERGENCY RESPONSE AND EVACUATION PLANNING

Planning for evacuation is extremely important. When discussing wildfire, many people focus only on the potential loss of homes, other structures and trees. **The greatest potential loss, however, is the loss of human life.** Sometimes people don't have time to leave (i.e. the fire is approaching too quickly), sometimes they refuse to leave until it's too late, and sometimes there are problems on the roads themselves (too many cars, cars which break down, RV's which block roads, etc.). It is critical for individual residents and property owners to carefully think through and plan for different evacuation scenarios.

Hidden Lake has unpaved roads and cul-de-sacs, inadequate street address labeling, and property owners and visitors who visit infrequently are often unfamiliar with the road network. During a wildfire when physical conditions are poor (smoke, ash and poor visibility along roadways and intersections) and peoples' emotions are high, Hidden Lake has the ingredients for disaster. Everything the community can do to prepare for an evacuation will be time and money well spent.

In addition, emergency responders don't come only for wildfires, but also structure fires and medical emergencies. It's important that they be able to reach homes quickly.

Emergency Response Services are provided by Moreno Valley District 6, with mutual aid from the Angel Fire Fire Department. In addition, Colfax County has developed a Rapid Response Team of approximately 30 members who can help anywhere in the County.

New Mexico State Forestry's Cimarron District, located at Ute Park, NM provides fire suppression response for wildland fires on non-municipal and non-tribal state and private lands in Colfax County and maintains Joint Powers Agreements for wildfire suppression and resource mobilization with Colfax County. New Mexico State Forestry participates in initial attack and provides support for extended attack incidents.

The USDA Forest Service, Carson National Forest, Camino Real Ranger District administers a large portion of the forested lands near Hidden Lake. The Carson National Forest provides initial attack fire suppression resources and they can mobilize a significant number of resources for extended attack wildfire suppression through their local, regional and national interagency dispatch centers. Other federal agencies such as the Bureau of Land Management have initial attack resources in the nearby Taos, NM area. All the federal land management agencies and New Mexico State Forestry participate in interagency dispatch and mobilization.

Emergency Response and Evacuation Planning Action Items:

1. Install better road signs (as per NFPA 1141) and addresses at existing structures for emergency responders. Ensure that local emergency responders (District 6 and Village of Angel Fire) have current maps that show lot numbers and street addresses.

2. Establish signs identifying the one evacuation route (Shields Ave to Highway 120 to Angel Fire). Advise people NOT to drive the road down to Ocate unless led by emergency officials. The road to Ocate is poorly maintained, extremely narrow in places and has significant flammable vegetation along it. Unless fire officials organize an evacuation down this road, no one should attempt it. Two-way traffic is impossible in many places, and one vehicle with a breakdown could cause a major problem. Standard evacuation route signs (for hurricanes and tsunamis) are blue and white.
3. Work with the Pueblo of Sandia about using or creating a road across the Rainbow Ranch (south of Hidden Lake) and/or creating a "safe zone" for residents of Hidden Lake.
4. Thin vegetation along roadways, driveways and at intersections where necessary to create the greatest potential for visibility during a wildfire and ensure the safety of vehicles trying to evacuate. Most of the roads and driveways in Hidden Lake are in good shape right now, but vegetation grows over time and maintenance will be needed.
5. Work with County and State road crews to ensure that the grass and vegetation along roads and highways are mowed regularly during times of high fire danger.
6. Work with local first responders (Fire District 6, Angel Fire Fire Department, USDA Forest Service, and BLM) to test turn-arounds at the ends of driveways and roads with their equipment. Improve where necessary. Remember that emergency response may also involve medical emergencies and structure fires, not just wildfires.
7. Use radio stations to disseminate emergency information. Work with radio station KRTN (93.9 FM) in Raton to ensure that they will broadcast any necessary emergency messages. Make sure property owners know which radio station(s) to tune to in the event of an emergency. Encourage property owners to keep their cars full of gas (most cars have a radio), and to acquire a hand-cranked or other portable radio. (Electricity is often one of the first "casualties" of a major wildland fire and cell phones and computers may not work). Encourage property owners to have a NOAA/emergency radio in every house (and car when visiting) with crank/solar backup.
8. Distribute the customized Ready Set Go brochures to property owners.
9. Consider installing dry hydrants in both the pond and Hidden Lake, following the guidelines in NFPA 1142. At a minimum, ensure that local fire officials know where the water supplies are, and how to access them with or without a dry hydrant installed.
10. As noted above, we recommend that property owners be encouraged to register with the Colfax County Emergency Notification System (http://www.co.colfax.nm.us/ens/) so that they can be notified (via home phone, cell phone, text, and/or email) if something is happening in their community. The

actual URL for the system is: *https://public.coderedweb.com/CNE/6AF053DCB942*. Encourage property owners to sign up for text messages and email, since voice systems can become quickly overloaded.

11. Once property owners are registered with the Colfax County ENS, work with the County Emergency Manager to run a test of the system regularly.

12. Encourage property owners with gates to provide keys to local emergency personnel using a Knox Box or other method.

13. Coordinate with Colfax County to create and publicize an evacuation plan for livestock, including instructions on where to take animals and what paperwork needs to accompany them. Unless told otherwise during the emergency, livestock owners should plan to take their animals to the rodeo arena in Cimarron.

14. Identify homes that have generators that might help pump water from private wells.

15. Publicize websites that may help property owners prepare and/or be aware of incidents as they occur. Some websites are:
    a. http://inciweb.nwcg.gov/
    b. https://nmfireinfo.com/ - this is a website specifically for fires in New Mexico. There is an option to get updates via email and social media on the "Information" tab on the site.
    c. https://www.disasterready.org/blog/top-mobile-apps-disaster-preparedness-and-response#.Vuxz3uZ3H20
    d. https://www.knowyourstuff.org/iii/login.html - for inventorying your home's contents; and
    e. http://www.redcross.org/get-help/prepare-for-emergencies/mobile-apps which has a wildfire option (and is also available in Spanish).

16. Distribute the refrigerator magnet and laminated flyer (intended to be placed in a kitchen drawer in a home) shown on the next three pages to homeowners in Hidden Lake. These were produced using the same grant money credited on page 7. **WE EMPHASIZE THAT THESE ARE ONLY FOR USE IN HIDDEN LAKE.**

    There are many homes in New Mexico that would not be safe to stay in, due to their lack of defensible space and/or their construction standards. The homes in Hidden Lake are well constructed, and have good defensible space. In addition, the subdivision is quite isolated, and there easily could be fires that would prevent homeowners from evacuating safely.

    Credit for the design of the magnets and flyers goes to Maryle Malloy of Malloy Visual Design (http://www.malloy-visualdesign.com)

WILDFIRE SAFETY

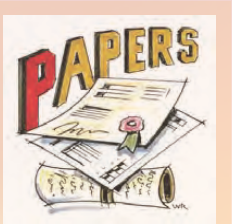
- Listen to the local radio station for instructions
- Check your phone(s) for voice and/or text messages
- Follow instructions from emergency personnel. If advice is not available, make the safest choice possible

EVACUATING SAFELY IS YOUR FIRST CHOICE

- Leave gates open for firefighters
- Take Shields Ave to Hwy 120 and drive to Angel Fire
- Take livestock to the rodeo arena in Cimarron

SHELTER IN PLACE IF YOU HAVE NO OTHER CHOICE

- Put on cotton clothing and cover your mouth with a dry cloth
- Close all windows and doors
- Turn off all fans and close interior doors
- Gather family and pets, buckets of water, mops, radio, drinking water, cell phone, flashlight and fire extinguisher



REMEMBER THE 5 P's

WILDFIRE SAFETY

EVACUATION CHECKLIST

Evacuation is the best choice, as long as you have time to avoid the fire.

STEP 1 Listen to the radio/Internet/voice and text messages for instructions, but recognize you may have to take action on your own

STEP 2 Gather papers, pills, pets, pictures, phones, eyeglasses, medical devices, jewelry, and mementos first

STEP 3 Leave gates OPEN for fire fighters

STEP 4 Drive: Take Shields Ave to Hwy 120 to Angel Fire to the main fire station

- DO NOT attempt to evacuate via the road to Ocate, unless the auto caravan is led by emergency officials
- Make sure your vehicle always has enough gas for lots of slow driving and waiting
- Drive slowly with your headlights ON and doors UNLOCKED. Turn off fans if it's smoky outside
- If you are trapped by fire while you're in your car, park in an area without vegetation, close all windows, lie on the floor and cover occupants with blankets or jackets
- Take livestock to the rodeo arena in Cimarron

WILDFIRE SAFETY

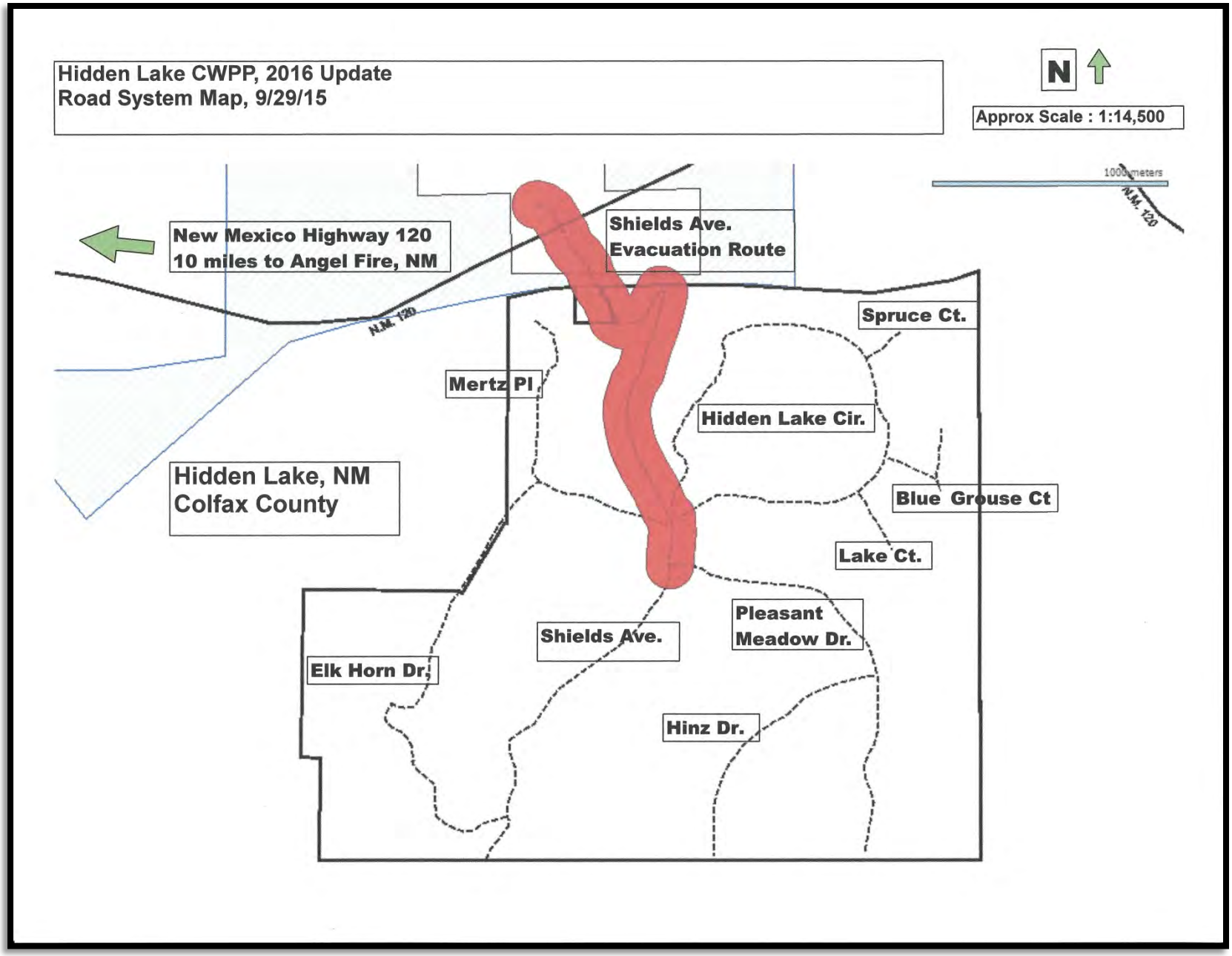
SHELTER IN PLACE - YOUR LAST RESORT

NEVER try to outrun a fire (it could be "spotting" a mile ahead of the main front); nor drive into one. Cars are not good protection against heat and flames.

Your HOME, on the other hand, might provide excellent protection against a crown fire (which is likely to pass your location within minutes).

If you must stay in your home because the fire is too close, or you cannot escape without driving into the fire, here are some guidelines:

- Put on cotton clothing and cover your mouth with a dry cloth
- Close all windows and exterior doors to prevent sparks from blowing inside
- Close all interior doors to slow the spread of smoke or fire
- Turn off all equipment/fans that circulate air in the house
- Move all wood and fabric covered furniture away from windows and glass doors
- Gather family and pets and have buckets of water, mops, radio, drinking water, cell phone, flashlight and fire extinguisher available
- Stay in an interior room, away from the perimeter
- Fill bathtubs with water
- After the fire passes, walk around your home and property and douse embers and extinguish any small fires
- Place livestock in an area least likely to burn, with water available


Hidden Lake CWPP, 2016 Update
Road System Map, 9/29/15
N
Approx Scale : 1:14,500
1000 meters
N.M. 120
New Mexico Highway 120
10 miles to Angel Fire, NM
Shields Ave.
Evacuation Route
N.M. 120
Spruce Ct.
Mertz Pl
Hidden Lake Cir.
Hidden Lake, NM
Colfax County
Blue Grouse Ct
Lake Ct.
Pleasant
Meadow Dr.
Shields Ave.
Elk Horn Dr.
Hinz Dr.

COMMUNITY DESCRIPTION

The information below was adapted from the original CWPP and the Firewise website (http://firewise.org/wildfire-preparedness/be-firewise/success-stories/new-mexico/Hidden-Lake?sso=2655992d-9482-4517-902d-ff65365d2f4e)

The subdivision of Hidden Lake (HL) is located on the northern end of Ocate Mesa, about 13 miles southeast of the Village of Angel Fire off of State Road 120 and 4.2 miles east of State Road 434/120 Junction. Elevation ranges from 9,300 feet to over 10, 000 feet. The northeastern New Mexico subdivision is about eighteen years old and encompasses nearly 1,500 acres. Ownership and management responsibilities were transferred from the developer to a property owners association in August 2001.

Common areas include a 35-acre lake and a drainage easement and wildlife corridor consisting of about 24 acres. A nine-mile road system connects the 99 individually owned lots plus one association owned lot in the subdivision. The majority of the property contains the Engelmann spruce-corkbark fir habitat type. The characteristic tree species found in this habitat type are Englemann spruce (Picea engelmannii), corkbark fir (Abies lasiocarpa) (var. arizonica (Merriam) Lemm.), bristlecone pine (Pinus aristata), Douglas-fir (Pseudotsuga menziesii), limber pine (Pinus flexilis), quaking aspen (Populus tremuloides) and white fir (Abies concolor).

Slopes ranges from 0 to 60 degrees. Most lots have moderate to large amounts of heavy dead and down woody material. Typical basal area is greater than 190 sq. ft. per acre with a large amount of undergrowth creating ladder fuels. The estimated average number of trees per acre is 631 with an average diameter at breast height of 7.5 inches. Mixed conifer is a forest type with a high fuel loading and long fire return intervals. Large areas of the forests in this area have not had a fire in over 100 years.

The 100 lots in the Hidden Lake subdivision range in size from about 10 acres to 20 acres. Currently, 22 lots have structures that include single-family dwellings, unattached garages and various out-buildings. Structures are predominately log construction with a few constructed of cedar, stucco, or Structural Insulated Panels (SIP). All houses have metal roofing. The community is a mixture of full time and seasonal residents, with four property owner families residing all year in 2015. An association called the Hidden Lake Property Owner's Association (with a Board of Directors) governs the community. A full-time in-resident property manager maintains the road system, keeps the roads plowed during the winter (annual snowfall averages over 135 inches), provides fire safety and security patrols and supports property owners in a variety of ways.

Electrical and telephone utilities are below ground except at the entrance easement road. Under dry windy conditions, branches, wind downed trees, or other debris can break the line or cause an arc with some lines and be a source for ignition. Vegetation maintenance along power line rights of way is essential. In the event of a wildfire, service may be shut off if power and telephone lines are threatened. The

National Fire Protection Agency (NFPA) Chapter 17 guidelines should be reviewed for discussion with Kit Carson Electric on clear space around power easements.

Colfax County (Moreno Valley Fire Department) supplies water and equipment for firefighting with mutual aid from the Village of Angel Fire. The Colfax County Coalition raised most of the money for the Aspen Hill fire substation just north of the Hidden Lake entrance. The Pueblo of Sandia paid for the roofing.

There is also a specialized County firefighting crew based in Raton that could be called in for assistance.

There is only one point of access or convenient vehicular egress from and to Highway 120, and it is at mile marker 4.2. Subdivision roads are not surfaced and vary from 16-24 feet in width. Some interior roads are steeper than a 15 percent grade with one sharp curve. The roads are fairly well crowned so erosion is not a significant problem. Most of the driveways are wide enough for most emergency equipment, but few have turn-around potential.

COLLABORATION: COMMUNITY, AGENCIES AND STAKEHOLDERS

The Hidden Lake Property Owners Association contracted with The Placitas Group, Inc. to conduct stakeholder and public meetings, complete a Community Risk Assessment, and write the plan. This updated Hidden Lake CWPP was initially developed using existing information. Two draft plans were shared with all known stakeholders and the public for comment and correction.

Engaging Stakeholders

An extensive list of potential Interested Parties was developed, including a wide range of people interested and aware of the issues surrounding wildfire management in the Hidden Lake development. These Interested Parties were sent an email of invitation to attend the first meeting. A draft copy of the updated CWPP was sent in advance of the meeting. The Interested Parties are:

- Current Property Owners
- County officials (including county commissioner, fire officials, emergency manager, county manager and sheriff)
- Fire Chiefs of District Six and the Village of Angel Fire
- State agencies including New Mexico State Forestry, the State Land Office and the State Police;
- Federal government agencies including USDA-Forest Service, Carson National Forest, Camino Real Ranger District, and the Bureau of Land Management, Taos District

- Sandia Pueblo (which owns the Rainbow Ranch southwest of Hidden Lake)
- Colfax County Coalition of Firewise Communities; and
- Forest Stewards Guild

The first core team meeting was held on November 5, 2015 at the First National Bank in Angel Fire. Representatives from the following entities (9 people in all) attended the meeting:

- ✓ New Mexico State Forestry
- ✓ Angel Fire Fire Department
- ✓ Moreno Valley Fire Department
- ✓ Colfax County Sheriff's Department
- ✓ Colfax County Coalition of Firewise Communities
- ✓ Hidden Lake Property Owners

In addition, written comments on the first draft were received from Forest Stewards Guild and three Hidden Lake property owners.

The second core team meeting was held on April 14, 2016 at the First National Bank in Angel Fire. Representatives from the following entities (7 people in all) attended the meeting:

- ✓ New Mexico State Forestry (NMSF)
- ✓ Colfax County Fire Marshal's Office
- ✓ Colfax County Sheriff's Department
- ✓ Colfax County Coalition of Firewise Communities
- ✓ Colfax County Soil and Water Conservation District (CCSWCD)
- ✓ Hidden Lake Property Owners
- ✓ Bureau of Land Management – Taos Field Office

In addition, written comments on the second draft were received from Forest Stewards Guild and one Hidden Lake property owner.

Second core team meeting participants (from left): Justin Torres (CCSWCD), Joe Stehling (Hidden Lake), Ernie Lopez (NMSF), Rick Sinclair (Colfax County Sheriff) and Larry Osborn (Colfax County Fire Marshal)

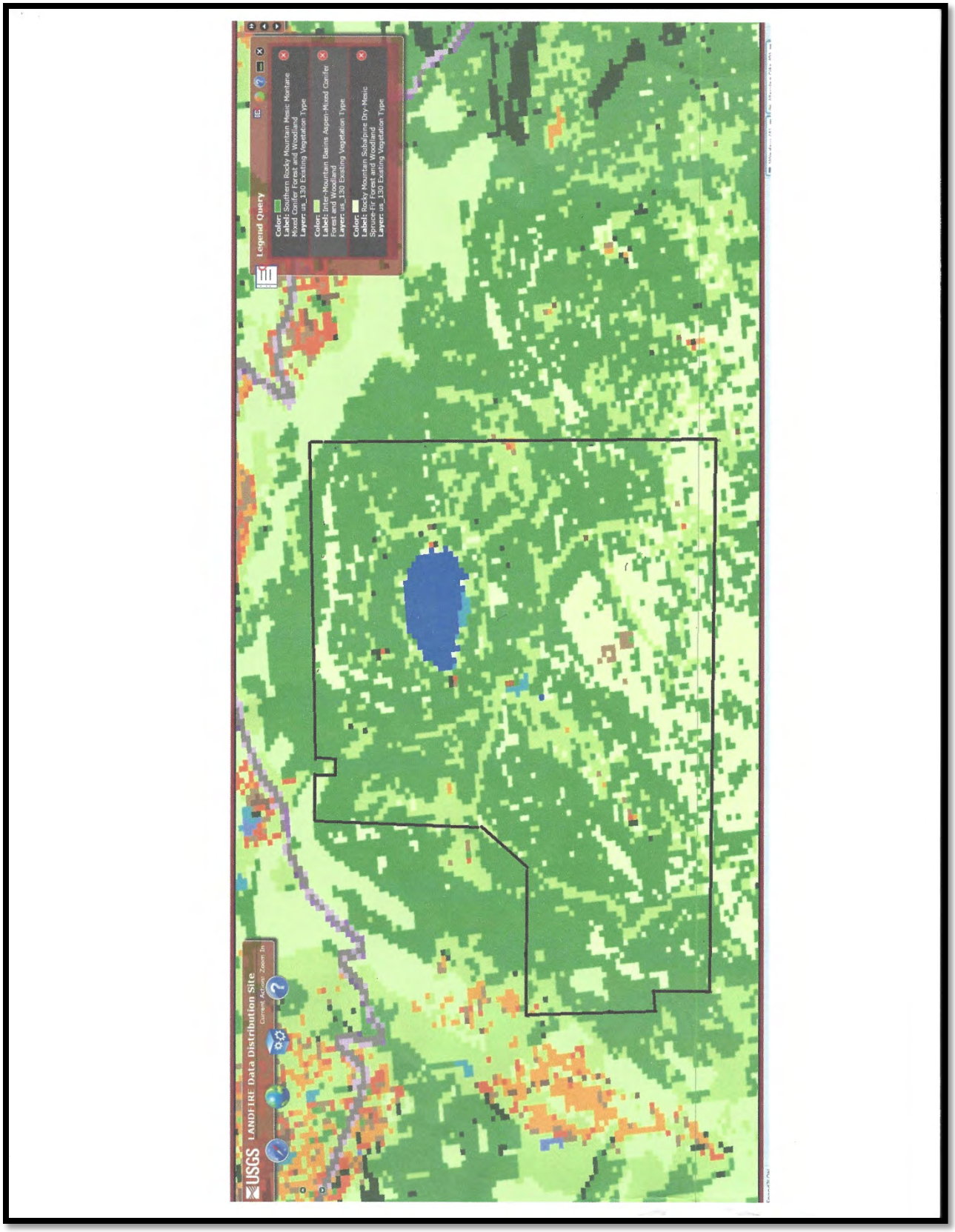
CURRENT VEGETATION

Existing Vegetation

Existing Vegetative Type (EVT) describes complexes of plant communities. EVT data for the Hidden Lake area were developed by LANDFIRE, 2012 (see page 37 for more information about LANDFIRE). The three most common plant communities are (the legend on the map is hard to read; it is described here):

- Southern Rocky Mountain Mesic Montane Mixed Conifer Forest and Woodland (Douglas-fir and ponderosa pine) – dark green on the map below
- Southern Rocky Mountain Subalpine Dry Mesic Spruce-Fir Forest and Woodland – yellow on the map below; and
- Inter-Mountain Basins Aspen and Mixed Conifer Forest and Woodland – light green on the map below

One of the concerns about current vegetation is insect activity. The New Mexico Forest Health Conditions Report 2014 (available at http://www.emnrd.state.nm.us/SFD/FWHPlan/documents/2014NewMexicoForestHealthConditionsReport.pdf) states in the summary that "widespread and severe insect activity continues in portions of the state, notably…spruce defoliation and mixed conifer mortality on the Cimarron District of State Forestry." Hidden Lake is within the Cimarron District.


Legend Query
Color:
Label: Southern Rocky Mountain Mesic-Montane Mixed Conifer Forest and Woodland
Layer: us_130 Existing Vegetation Type
Color:
Label: Inter-Mountain Basins Aspen-Mixed Conifer Forest and Woodland
Layer: us_130 Existing Vegetation Type
Color:
Label: Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland
Layer: us_130 Existing Vegetation Type
USGS LANDFIRE Data Distribution Site
Current Action: Zoom In

CURRENT RISK SITUATION

Fire Risk Assessment

Fire Risk is considered to be the likelihood of an ignition occurrence. This is primarily determined by the fire history of the area and the current environmental conditions at any given time. We consider the **Hidden Lake area to have a high risk for WUI fires.** This assessment is consistent with page 23 of the Colfax County CWPP and is based on the analysis of the factors listed below.

General Fire Occurrence Information

Seven large wildland urban interface fires have occurred in the Mora, Colfax and Taos County areas since 1996. All of these fires indicate a potential for large fires in the Hidden Lake area. The fires include:

- 1996- Hondo Fire, 7,600 acres, Town of Red River evacuated for three days.
- 1998- Osha/Zia Fires, 200 acres, Village of Angel Fire evacuates western neighborhoods.
- 2002 – Ponil Fire, 92,194 acres, fire in Colfax County threatens Ute Park, NM.
- 2003 – Encebado Fire, 5,400 acres, Taos Pueblo watershed damaged, major electric transmission lines serving Hidden Lake threatened.


ALBUQUERQUE JOURNAL North EDITION
TUESDAY June 23, 1998
Rich Tribes To Get Less Fed Money Under Plan
NEW MEXICO
Groups Challenge Internet Law
Restrictions Aimed at Sexual Material
Governor Declares State Of Emergency
Blaze Burning Near Angel Fire

- 2004 – Ojo Feliz Fire, 16,600 acres of mostly grass and stands of Ponderosa Pine 11 miles north of Mora**. Residents of Hidden Lake were advised to prepare to evacuate.**
- 2011 – Track Fire, 19,970 acres in NM, 7,822 in CO. Damaged the Raton Watershed; closed Interstate 25 for 4 days.

General Fire Occurrence Information

Stakeholders from Colfax County described an intense wildfire that occurred in the mid-1970's, 10 miles from the community of Hidden Lake within the current boundaries of the Village of Angel Fire. The fire was located on the southeast side, now known as the Valley of the Utes. The old fire scar is evident from the resulting stand of aspen trees. The fire burned more than 500 acres in similar fuel models to the Hidden Lake area.

Since 1996, a number of large wildland urban interface fires have occurred in the Colfax, Mora and Taos County areas. Fire names such as the Hondo, Osha/Zia, Escobedo, Ponil, Ojo Feliz, Track, H12 and West Fork fires are familiar because they impacted the surrounding communities with evacuations and the destruction of homes, infrastructure and forest and watershed resources. All of these fires indicate a potential for large fires in the region.

New Mexico State Forestry Fire Occurrence

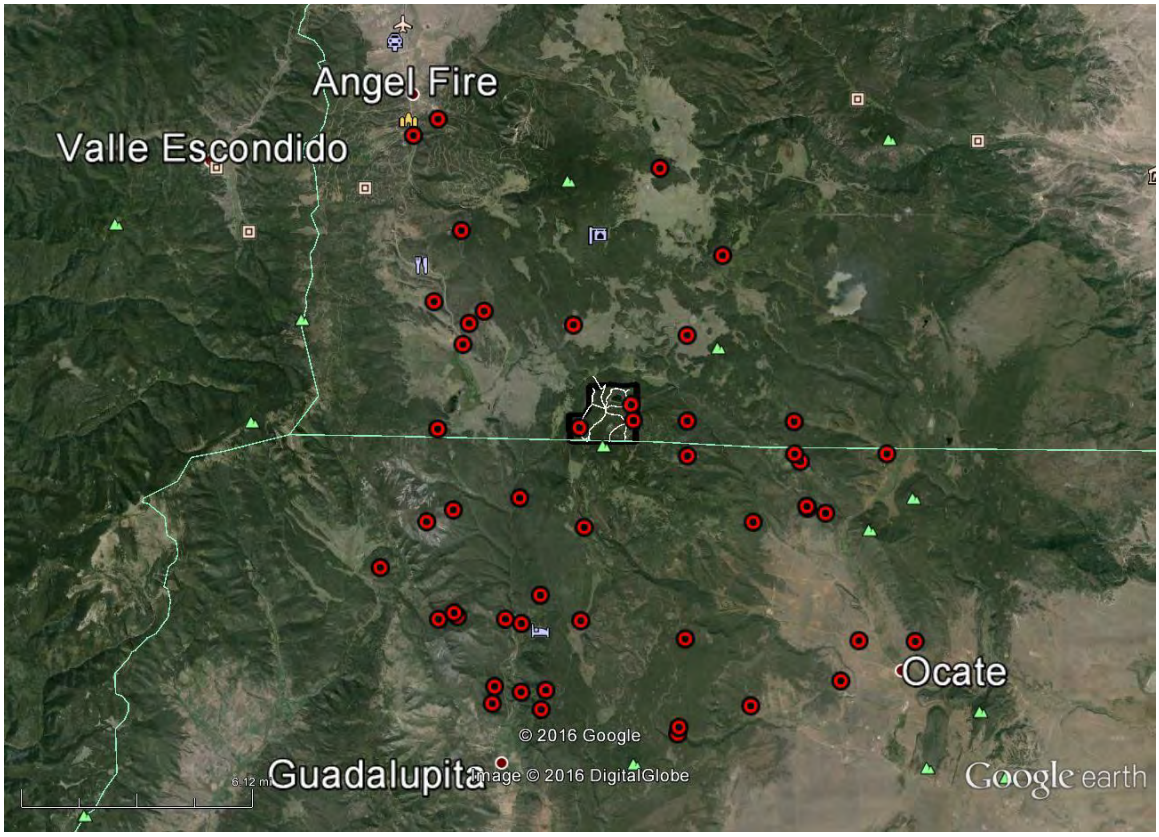
New Mexico State Forestry provided a summary of their wildfire occurrence data for Colfax and Mora counties from July 1, 2005 to June 30, 2015 for fires on non-municipal, non-federal lands. The data indicate that wildfires are common in the region around the Hidden Lake Community. The data described 48 incidents within approximately six air miles of Hidden Lake over the ten-year time period (see the map on page 36). Three of the fires occurred within the boundary of the Hidden Lake subdivision. Details of these Hidden Lake area fires include:

- 75% of the wildfire incidents were caused by lightning and 25% were human caused. The human caused fires were primarily a result of debris burning or hot ashes/campfire.
- Almost all of the fires were less than one acre. Three fires were between 10 to 100 acres in size.
- The fires primarily occurred in the mixed conifer and ponderosa pine forest cover types. These forest cover types are drier and have a higher potential for ignitions and rate of spread than the spruce–fir cover type found at Hidden Lake. However, they are represented by fuel models with similar fire intensity to those found within the Hidden Lake area.

Residential development in the WUI is increasing in the study area. As the density of structures and the number of residents increases, potential ignition sources will multiply. Efforts are being made to mitigate the increased likelihood of human ignition spreading to the surrounding wildland fuels.

New Mexico Highway 434 to the south and west and Highway 120 to the north are “point sources” where people and wildland fuels interact. Also, rural interface development in the Sierra Bonito subdivision to the south and west is a significant area of human activity where fire ignitions could occur.

Below is a map of the wildland fire occurrence within approximately six miles of Hidden Lake, New Mexico (center of the photo). The data is from the NM-EMNRD Forestry Division Colfax and Mora County Databases from July 2005 to June 2015. There were 12 human-caused fires which burned 35.2 acres, and 36 lightning-caused fires which burned 74.3 acres, for a total of 48 fires which burned 109.5 acres during that 10 year period.



Although fire history has long been used to determine risk, there are new issues facing areas like Hidden Lake. An article on the website Climate Central (http://www.climatecentral.org) refers to a recent study by the University of Wyoming published in October of 2015 in the Proceedings of the National Academy of Sciences which "suggests that global warming may be ushering in an era of high-elevation wildfires unlike any seen in more than 1,000 years." This article quotes other scientists about the meaning of the study and their own observations. This study took place in northern Colorado.

Another study by UC Davis found that more high elevation fires are occurring in California (https://www.ucdavis.edu/news/drought-and-climate-change-fuel-high-elevation-california-fires-study-finds).

FIRE BEHAVIOR POTENTIAL and FIRE REGIMES

There are 13 Anderson (1982) Fire Behavior Fuel Models which are general and used across a variety of species and vegetative cover types. FBFMs are used to calculate potential fire behavior parameters such as rate-of-spread, fire intensity and potential for crown fires.

Hidden Lake and surrounding areas are primarily represented by Fuel Model 2: Timber-Grass Understory, Fuel Model 8: Closed Timber Litter (Aspen), Fuel Model 9: Mixed Conifer Light (Ponderosa pine), and Fuel Model 10: Mixed Conifer Medium (Douglas fir and Spruce/Fir).

The LANDFIRE program (www.landfire.gov) is a shared program among the wildland fire management programs of the U.S. Department of Agriculture, Forest Service and U.S. Department of the Interior, providing landscape scale geo-spatial products to support cross-boundary planning, management, and operations. One of the projects that LANDFIRE has is to map and describe Fire Regime Groups (FRG's). The maps indicate that most of Hidden Lake is in FRG III, which is described as having a 35-200 year return interval with low and mixed severity. The mid-south portion of the community is classified as FRG IV, representing a 35 to 200 year fire return interval with potential for replacement severity. Wildfire in this group would occur very infrequently but would likely be larger and potential fire behavior would be more intense. These maps would change with forest thinning and management (for the better) and climate change (potentially for the worse).

For more information on either of these topics, please email us at placitasgroup@comcast.net and we can provide more detailed maps and descriptions.

GLOSSARY

The following definitions apply to terms used in the Hidden Lake Community Wildfire Protection Plan.

Crown Fire (Crowning): The movement of fire through the crowns of trees or shrubs, which may or may not be independent of the surface fire.

Defensible Space: An area around a structure where fuels and vegetation are modified, cleared, or reduced to slow the spread of wildfire toward or from the structure. The design and distance of the defensible space is based on fuels, topography, and the design/materials used in the construction of the structure.

Extended Defensible Space (also known as Zone 3): A defensible space area where treatment is continued beyond the minimum boundary. This zone focuses on forest management with fuels reduction being a secondary consideration.

Fine Fuels: Fuels that are less than ¼ inch in diameter such as grass, leaves, draped pine needles, fern, tree moss, and some kinds of slash which, when dry, ignite readily and are consumed rapidly.

Fire Behavior Potential: The expected severity of a wildland fire expressed as the rate of spread, the level of crown fire activity, and flame length. Fire Behavior Potential is derived from fire behavior modeling programs using the following inputs: fuels, canopy cover, historical weather averages, elevation, slope, and aspect.

Fire Mitigation: Any action designed to decrease the likelihood of an ignition, reduce Fire Behavior Potential, or to protect property from the impact of wildland fire.

Fire Return Interval: The time between fires in a defined area, usually at the scale of a point, stand or relatively small landscape area. This is called Mean Fire Interval (MFI) in the LANDFIRE system, where it refers to the average number of years between fires in representative stands.

Fire Risk: The probability that an ignition will occur in an area with potential for damaging effects to people, property, and/or the environment. Risk is based primarily on historical ignitions data.

Flame Length: The distance between the flame tip and the midpoint of the flame depth at the base of the flame (generally the ground surface) – an indicator of fire intensity.

Fuel break: A natural or constructed discontinuity in a fuel profile used to isolate, stop, or reduce the spread of fire. Fuel breaks may also make retardant lines more effective and serve as control lines for fire suppression actions. Fuel breaks in the WUI are designed to limit the spread and intensity of crown fire activity.

Ladder Fuels: Naturally occurring fuels that allow flames to move upward from grasses to bushes to trees.

Mixed-severity fire: The severity of fires varies between nonlethal understory and lethal stand replacement fire with the variation occurring in space or time. In some vegetation types the stage of succession, the understory vegetation structure, the fuel condition and/or the weather may determine whether a low or high-severity (or surface or crown) fire occurs. In this case individual fires vary over time between low-intensity surface fires and longer-interval stand replacement fires. In others, the severity may vary spatially as a function of landscape complexity or vegetation pattern. The result may be a mosaic of young, older, and multiple-aged vegetation patches.

Slash: Debris left after logging, pruning, thinning, or brush cutting; includes logs, chips, bark, branches, stumps, and broken understory trees or brush.

Spotting: Behavior of a fire producing sparks or embers that are carried by the wind and start new fires beyond the zone of direct ignition by the main fire.

Stand replacement fire: A fire that is lethal to most of the dominant above ground vegetation and substantially changes the vegetation structure. Stand replacement fires may occur in forests, woodlands and savannas, annual grasslands, and shrublands. They may be crown fires or high-severity surface fires or ground fires.

Surface Fire: A fire that burns on the surface litter, debris, and small vegetation on the ground.

Understory Vegetation - the smaller vegetation (shrubs, seedlings, saplings, small trees) within a forest stand, occupying the vertical zone between the overstory and the herbaceous plants of the forest floor.

WUI (Wildland Urban Interface): The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.