

8. Priority Projects

During the neighborhood meetings several projects were identified throughout the upper Mattole watershed and neighboring Whale Gulch community to reduce risks from wildfire, and to begin the long-term process of returning natural fire to this landscape. Priority projects were generally focused on the creation of shaded fuel breaks to slow down wildfire and allow for safe evacuation, water storage for fire fighting and water conservation; and community education to encourage fire safety throughout this largely wildland-urban interface landscape.

All projects identified in this plan qualify as community identified priority projects. The following are those given the highest priority for initial action.

8.1 Fuels Reduction

Defensible Space

First and foremost, fuel reduction begins at home. Creation of defensible space around rural properties in the Upper Mattole is no longer an option. As residents learned from the Canoe and Honeydew fires, a large fire can happen to anyone in our remote community. Therefore, the first priority in reducing fuels in the Upper Mattole is to encourage and aid residents in creating defensible space around their homes, generally from 100 to 200 feet. This can be done in conjunction with the education projects outlined later in this chapter.

The concept of community chipper days was popular at many meetings. The idea is that people would fire-safe areas of their property and drag the brush to a place along a road. Then, on scheduled days, a chipper would come by to chip the piles. CDF has three chippers; one at Eel River Camp and two at High Rock Camp that are available for use. "Authorized users include trained CDF Staff, trained VFD staff, and trained FSC members provided the FSC has nonprofit status and liability insurance or posts an insurance bond."⁸⁶ There are likely other chippers as well that could be borrowed for these events. Purchase of community chippers to be located in various neighborhoods, perhaps housed or owned by local fire departments, would be very beneficial for creating defensible space around structures. In addition to purchasing a chipper, purchasing several power pole saws would also be useful. With any of this equipment, issues surrounding operators, insurance, and maintenance would need to be resolved.

An inexpensive project for the SHFSC to undertake would be to organize a series of community fire safe workdays. These workdays could be scheduled to take place at the home of an elderly or disabled community member who needed fire-safing done around their property. For example, following the Whale Gulch community meeting, local residents organized a work day to clear around the Whale Gulch School. A chipper and other equipment would be great assets to these work parties. A calendar could be created with a different location each time. The SHFSC could explore different ways to make these events fun. The recipient could provide snacks and beverages. A more complex fuels reduction project would involve organizing road-brushing crews to begin to

⁸⁶ Jim Robertson, Battalion Chief, CDF, personal communication, 6/27/04.

open up roads with dense brush identified as priorities in the neighborhood meetings. For areas where the workload is not immense, work parties could be organized by the SHFSC similarly to those described above. In this case, the target volunteers would be the residents of the road. For larger projects such as the priority shaded fuel break projects on public and/or private roads identified below, grant funding would need to be secured and a crew hired to undertake the work.

- SHFSC, CDF, and local fire departments collaborate to educate and encourage residents regarding defensible space.
- CDF, SHFSC, and local fire departments organize a series of community chipper days to assist residents in disposing of treated materials.
- MRC, VFDs, and SHFSC explore purchase of chipper and other fuel reduction equipment.
- CDF, SHFSC, and local fire departments provide outreach and assistance to residents in doing defensible space assessments.
- Residents must be diligent in creating their defensible space, as that will likely provide the best opportunity for surviving a wildfire. This should be done to 100 feet in most places, and up to 200 feet on steep slopes. Assistance is available from CDF, SHFSC, and several local contractors.
- SHFSC can help community members fire-safe their own properties through assistance in the form of education, materials, equipment, and even labor.
- The SHFSC and the MRC could offer trainings to help more community members become skilled in fire hazard reduction techniques.

Targeting local youth for some of these trainings would have a number of positive benefits for the community as well. See *“Resources for Fire Hazard Reduction Around Your Property”* in Appendix I for a current list of local contractors and organizations involved in fire hazard reduction.

Strategic Shaded Fuel Breaks

Reducing fuel loads to non-hazardous levels around the Mattole is a long-term project and can be overwhelming to consider. Nonetheless, through this planning process, areas of high priority for fuels reduction have been identified in many of the neighborhoods. These projects are rather large in scope and require further development. For example, exact location of fuel breaks would need to be identified on the ground, along with a list of participating landowners. In some cases, fuel breaks were proposed adjacent to or near public lands. In these instances, the agencies may be able to play a significant role in helping to secure funding for the projects, or provide matching assistance, such as the use of CDF’s inmate crews.

The top priority for this area is to create a system of strategically placed shaded fuel breaks. These breaks need to be located in places that make sense in terms of local fire conditions as well as population centers, ignition sources, and access roads. Fuel breaks are usually focused on roads, ridges, or rivers as they are logical places to contain a fire. Generally, large wildfires on the North Coast burn from the east or northeast to the west or southwest. Therefore, providing breaks upwind of communities makes a lot of sense. Creating a network of fuel breaks allows firefighters to contain a wildfire in a smaller area. Networks create distinct areas in the landscape surrounded

by fuel breaks where a fire can theoretically be fought and contained. These are especially important to separate Wildland-Urban Interface (WUI) communities from surrounding wildlands.

There is the beginning of a network of shaded fuel breaks in the upper Mattole watershed. The BLM's fuel break system is growing, although much of it is to the west of the planning area (see

Map 6). Given that local wildfires have demonstrated that they run from northeast to southwest, the BLM network is unlikely to provide much protection to upper Mattole communities during these events; rather, they will protect the BLM properties and the community of Shelter Cove.

In 2003 CDF created a shaded fuel break along the Briceland Road from the Ettersburg/Honeydew Junction to the Whitethorn Junction and then along the Shelter Cove Road from the Whitethorn Junction to Shelter Cove.

Public roads in the upper Mattole are a logical place to begin an area-wide strategic fuel break system, although most are not ridgetop roads. (Establishing certain ridgetops for shaded fuel breaks is also a critical consideration.) However, these roads generally bisect most of the landscape covered in this plan. Improvement of these roads through brushing and clearing will enhance their usefulness as emergency evacuation routes. This is a critical consideration in this remote area.

- A top priority for fire safety in the upper Mattole is the creation of shaded fuel breaks along the following public and/or private roads:

Priority Projects – Fuels Reduction – Proposed Shaded Fuel Breaks on Public Roads:

1. Ettersburg-Honeydew Road along Telegraph Ridge. This would start at the junction with the Briceland Road and continue to the end of the road in Ettersburg. There are some areas here that will not need treatment; others that will require extensive treatment. This project was proposed in 2004 by CDF as a Wildland Urban Interface (WUI) grant project for National Fire Plan funding, and ranked tenth in the State, but not high enough to be funded. This section of the road serves 39 parcels directly and many more on spurs. The preferred prescription for this project would be a shaded fuel break one hundred feet above and fifty feet below the road. This break would tie in with CDF's existing break on the Briceland-Thorne/Shelter Cove Road, as well as the break being developed in stages along Wilder Ridge by the Lower Mattole Fire Safe Council.
2. Briceland-Thorne Road from Thorn Junction to Four Corners. This section of the road serves all of the parcels along the Briceland-Thorne road and off the spur roads around the community of Whitethorn, and on to Four Corners in Mendocino County. It also serves as an alternative evacuation route to Whale Gulch. This project is well suited for implementation by CDF's inmate crews, and was proposed by CDF's Garberville Station staff. Like the Telegraph Ridge shaded fuel break discussed above, this project has both dense and clear areas. Given that this neighborhood is less steep, fifty feet of below-the-canopy clearance on both sides of the road would likely be adequate, although the final prescription will need to be designed after a more in-depth survey. In areas where there is a steep uphill slope, especially with neighboring subdivisions, the break should be up to one hundred feet on the uphill side. This will also tie into the existing break on the Briceland-Thorne/Shelter Cove Road.
3. Chemise Mountain Road. At its south end this road (which is in poor condition) begins in Mendocino County at Four Corners and travels north through the community of Whale Gulch until it ends at the Shelter Cove Road east of Shelter Cove, in Humboldt County. This road provides critical access for Whale Gulch and is also a potential evacuation route

for Whitethorn and Four Corners. The Mattole Restoration Council has submitted a proposal to work on the northern gravel section of this road, where it drains to the Mattole. This project would need to be coordinated with both county governments.

Priority Projects – Fuels Reduction – Proposed Shaded Fuel Breaks on Private Roads:

1. Dutyville Road (aka “River Road”). This is a private road that carries at least one hundred residences (if not more) and leaves the Ettersburg-Honeydew Road southeast across the Mattole River from Ettersburg. It serves as primary for Dutyville, Crooked Prairie, and Fire Creek, and secondary access for Blue Slide and China Creek. The lower section of this road, from its junction with the county road (Ettersburg-Honeydew Road) until Mattole Canyon Creek, and a small stretch up the road in the ten-acre subdivision section, is the highest priority, as it serves the most residents. A second priority is to continue the project at the section of the road from the dense subdivision (past Mattole Canyon Creek) up the hill towards Duty Ridge. This area was identified as very high hazard by CDF’s fuel hazard assessment ranking.
2. Huckleberry Lane. This private road leaves the Shelter Cove Road west of Thorn Junction and travels northwest along the Mattole River. This road serves the residences along it and also provides an alternative evacuation route from the north side of Telegraph Ridge.
3. Blue Slide Road. This neighborhood has already completed three miles of fuel reduction here. This fuel break should be continued on untreated areas between the base of the road to the upper forks of the creek.
4. Gibson Ridge Road. This private road traverses Barnum Timber property south of the Mattole and Whitethorn. A shaded fuel break along here could tie into the proposed Telegraph Ridge project and create part of a ring around the upper Mattole and King Range, as well as to the proposed break on Lost River Road to Four Corners. There is somewhat of a break already here on Barnum Timber land.
5. Private Roads east of Whitethorn. There are several roads here that follow creeks up the hill south of the Mattole and the BriceLand-Thorne Road into residential subdivisions. Those roads are along East Anderson, Harris, Gibson, Stanley, and Baker Creeks. The south slope of these areas were identified by CDF’s fuel hazard ranking as very high. Shaded fuel breaks and defensible space should be created in these areas.

Priority Projects – Fuels Reduction – Proposed Shaded Fuel Breaks on Public and Private Lands:

1. Four Corners/Upper Mattole River and Forest Cooperative. Creation of a shaded fuel break—starting at Restoration Forestry on Thompson Creek, traveling virtually south behind the Redwoods Monastery, then climbing the Lost River Road to the Usal Road and Four Corners. This would provide a good north-south fuel break and would be key for stopping fires from spreading between the Indian Creek and Mattole River watersheds. The break would protect this valuable forested area from the likelihood of fires starting inland and moving to the ocean (as is the pattern here, as evidenced by both the Honeydew and Finley fires.)

- a. Expand this break from Thompson Creek southwest to Swift Peak Road and Chemise Mountain/Usal Roads via Whale Gulch.
- b. Expand this break from Gray's driveway on the Usal Road north to Four Corners.

Generally, fuel reduction treatments should be implemented one hundred feet above and fifty feet below the roadway. Treatment prescriptions should focus on one-hour and ten-hour fuels in the understory and lower canopy in order to break up horizontal and vertical continuity and to reduce flashiness of remaining fuels. Total fuel loads should be reduced by approximately 100 tons per acre. Chainsaw thinning will prepare fuels. Pile and burn is the preferred method of slash treatment, with chipping as an alternative if the timeline requires operating during burning bans. After treatment, ignitions will be noticeable and remain manageable for a drastically longer time period versus a similar untreated area. In a larger-scale incident, residents will have safer escape routes for longer periods, due to the road-based location of the projects. In an extreme situation, the area on both sides of the road will be already prepped to anchor a backfire. In some instances these types of treatments have been observed to alter "running crown" fire behavior and drop it to the surface, allowing direct attack. The strategic orientation of this proposed network of shaded fuel breaks complements similar work ongoing within King Range National Conservation Area boundaries.⁸⁷ *For a general description of shaded fuel break prescriptions, see Chapter 3, Shaded Fuel Breaks.*

Costs for thinning or brushing forest stands vary widely, depending on the condition of the forest, access, and slope. Locally, it can cost anywhere from \$300 to \$1,500 per acre. However, in many cases, a supply of firewood is a result of the work. This can bring the price down if residents are accustomed to paying for firewood.

Another wildland fire hazard reduction issue relates to local watershed restoration projects designed to reduce sediment erosion into streams. Areas of exposed soil are mulched with either straw or brush and branches. The latter method is called "native mulch." It makes use of materials removed during thinning and other aspects of the restoration project. The challenge with this method is that it can result in the creation of an extremely high fire hazard, with piles of dead brush and trees scattered throughout the landscape. However, these are generally neither dense nor cover a large part of the landscape. Steps can be taken to ensure that this practice does not increase fuel hazard levels. Most importantly, the issues of horizontal and vertical fuels continuity must be addressed. In other words, for vertical discontinuity of fuels, there needs to be sufficient space between the top of these piles and the bottom of the neighboring tree canopy. In general, it is safest to leave a space at least three times the vertical height of the fuels (in this case the native mulch) below the lowest tree branches. For instance, if the mulch is four feet high, there needs to be twelve feet of vertical space between the top of the native mulch and the bottom branches of the tree canopy. Horizontal fuel continuity must also be addressed. There needs to be space between the native mulch areas and any other potential fuels (brush, trees, buildings, etc.). It is especially important that mulch is not within at least one foot (preferably much more) from the base of trees. *See Table 3 in Chapter 3 to determine horizontal spacing based on slope, using the column for Tree*

⁸⁷ Dave Kahan, Full Circle Forestry, personal communication, 7/5/04.

Crown Spacing. For example, for areas of 11-20% slope, there should be at least fifteen feet of horizontal space between the native mulch and other fuels (i.e., the rest of the forest).

- SHFSC and MRC work with restoration community to ensure native mulch projects are fire safe.

Finally, encouraging local entrepreneurs to develop herds of goats or sheep (fire goats!) that can be moved around the community to consume fuels could be a very inexpensive way to reduce fuel loads in some areas.

- SHFSC work with interested residents to develop fire goat herds and advertise their availability.

8.2 *Water Supply*

A clear priority for several neighborhoods was to increase water storage for use in fighting fires. Under optimal conditions, assuming that the local fire trucks can pump approximately 300 gallons per minute, and given that the tank reservoirs on the trucks are usually under 1,000 gallons, a truck can drain its tank in about three minutes. (Firefighters can also make that same amount of water last for hours if necessary, using it much more judiciously, and only where it is absolutely necessary. With more water on a fire, chances of suppression are almost always much greater.) Ideally one wants to be able to fill a tank and return to the fire within five minutes. Therefore, there will need to be water sources located within one mile of a fire in densely populated areas (such as Whitethorn, Whale Gulch, and Thorn Junction).

Water conservation is a critical issue in the upper Mattole, as the river has dried out in recent years. Through the Mattole River and Range Partnership (MRRP), the Mattole Restoration Council, Mattole Salmon Group, and Sanctuary Forest are working together to improve local water conservation efforts. Together these groups are providing public education on the topic, as well as offering water-saving devices at a reduced cost. They are exploring the possibility of assisting landowners with installation of tanks or ponds for water storage. The basic concept is to store winter rains—either by channeling rainwater or utilizing springs or the river—for use in late summer and fall, when water supplies are low and fire hazard is high. Current obstacles to creating water storage include funding and permitting from the State Water Resources Control Board and the Department of Fish and Game, as well as potential property tax assessment increases.

Hence, a priority project for the SHFSC and MRRP partners should be to secure funding to purchase a series of water tanks to be placed throughout the upper Mattole area. Identifying strategic locations for the water tanks will be the first step in this process. Access and the ability of fire-fighting vehicles to turn around are critical design components. Another issue that will need to be addressed is the maintenance of the tanks, such as refilling them and/or topping them off occasionally throughout the year. This should be coordinated with local fire-fighting organizations.

- SHFSC and MRRP partners secure funding for purchase of community water tanks.
- SHFSC, MRRP, and local fire departments identify priority locations and maintenance plans for water tanks.

Priority Projects – Water Supply – Proposed Water Tank Locations:

1. Telegraph Ridge along the Ettersburg-Honeydew Road. Telegraph Fire needs a 2,500-gallon tank on the uphill side of the road. It would need water supply, access, and efficient turnaround space.
2. Whale Gulch, on the uphill side of Chemise Mountain Road.
3. Thorn Junction, near the junction with Paradise Ridge Road.
4. Wilder Ridge along the Wilder Ridge Road near Ettersburg. Telegraph Fire needs a 2,500-gallon tank on the uphill side of the road. It would need water supply, access, and efficient turnaround space.
5. Blue Slide Road, at Rick and Tony's or the junction with China Creek Road.
6. Whitethorn, downtown, uphill from town.
7. Four Corners, near the Four Corners intersection.
8. Dutyville Road, on the road up to Duty Ridge.

Another option for water supply is ponds. This option is much cheaper per unit of water stored and is often easier to access by firefighters. However, ponds can dry up at critical times of the year. By providing discounted pond liners, the SHFSC could create a contract with landowners to ensure that not all the water would be used for agricultural or domestic purposes and therefore be available for fire fighting during the critical late summer/early fall months.

While ponds are ideal for storing large amounts of water for fire fighting, they must be properly sited to avoid erosion problems. Ponds built on unstable ground can give way, leading to large washouts and gulying, thus choking streams with sedimentation and damaging fish habitat. Ponds should be built on stable ground, have adequate overflow protection, and should not be built across seasonal or perennial creeks. Additionally, ponds can breed nuisance species such as bullfrogs, mosquitoes, and non-native fish that can also harm native salmon and steelhead. For more information on ponds for fire water storage, please see http://www.mattole.org/html/publications_article_36.html.

Finally, the SHFSC may want to explore the bulk purchase of fire hoses and other fire-fighting equipment to sell to local residents at discounted prices. This would help ensure that proper fire-fighting equipment is spread around the Mattole, and help the local fire-fighting agencies' ability to control fires.

- SHFSC work with CDF and fire departments to identify sources of inexpensive fire-fighting equipment and educate residents as to its availability.

8.3 Education

Several neighborhoods suggested the idea of community fire safety awareness signs. These are used effectively in many other fire-prone areas around the country. Given the history of vandalism of signs, it was suggested that local school kids create the signs. This has been effective in discouraging vandalism of BLM signs at the mouth of the Mattole near Petrolia. Additionally, this would be done in conjunction with a fire safety curriculum at the local schools.

- SHFSC work with other partners and local schools to develop community educational signs.

Signs were suggested for the following locations:

- Ettersburg
- Ettersburg School
- Ettersburg-Honeydew Road junction with Briceland-Thorne Road (beginning of Telegraph Ridge)
- Thorn Junction
- BLM King Range Office on Shelter Cove Road
- Shelter Cove Road junction with Chemise Mountain Road
- CDF Thorn Fire Station on Briceland-Thorne Road
- Whitethorn School
- Four Corners
- Whale Gulch

Fire safe education needs to start with the children. Curricula about fire ecology, dynamics, and safety exist and could be brought into local schools. Regional Fire Safe Councils are a resource for speakers that can be brought into schools, as well as into the community at large. *For a list of sample fire safety curriculum, please see Appendix I.*

- SHFSC work with local schools to implement fire safety curriculum at all grade levels.

In addition to the trainings mentioned in the fuels reduction section above, there are additional trainings that could benefit the general community. Trainings on the basics of fire fighting would be a great local investment. CDF and the local volunteer firefighters could be brought in to help lead these trainings. Combined with the availability of discounted fire-fighting supplies, these trainings could have a large, positive impact on the community's ability to stop fires quickly at their source, especially given the scattered nature of homes in the upper Mattole. If local residents could jump on a fire as soon as it started, the chances of total containment would be much higher when firefighters did arrive on the scene.

- Local fire departments, CDF, and SHFSC organize series of trainings in fire-fighting basics for non-firefighters.

The community education and discussions regarding fire safety that have happened as a result of this planning process as well as the recent Honeydew and Canoe fires have been inspiring. The SHFSC could develop an ongoing community education program to keep everyone thinking about fire and how to be proactive. Educational venues could include speakers, updated literature, and demonstrations. This should be done in conjunction with KMUD radio, which provided excellent community leadership during the Canoe and Honeydew fires.

- SHFSC continue community educational efforts on fire safety.

Finally, community education efforts need to focus on local youth. This is especially important because of the aging population of local volunteer firefighters. There is a critical need to inspire youth and those in their twenties and thirties to take an active role in their local fire departments.

- Local fire departments work with SHFSC and local media to create outreach and training program for young fire fighters.

8.4 *Ongoing Neighborhood Meetings*

Several people have expressed the desire to have ongoing neighborhood Fire Safe Council meetings such as those that took place during this process. Ongoing meetings would be a great venue for information to flow back and forth between SHFSC representatives and neighborhood residents. In this way, more people would have the opportunity to contribute to the long-term development of priority projects for fire hazard reduction and fire safety. The SHFSC could explore whether to hold such meetings regularly, such as once or twice a year, to ensure ongoing community input and assistance. Many people expressed a desire to help their Fire Safe Council be successful. This is a natural way to involve interested community members.

These meetings could happen in conjunction with SHFSC meetings. Currently, SHFSC meets regularly at Beginnings in Briceland or the CDF Station in Garberville. The SHFSC should rotate their meetings around Southern Humboldt to encourage more widespread community participation. SHFSC meetings could easily be held in the upper Mattole in Thorn Junction or Whitethorn.

- SHFSC hold neighborhood fire safety or FSC meetings in the Upper Mattole, in locations such as Thorn Junction and Whitethorn.

8.5 *Agency Cooperation*

One of the greatest benefits of Fire Safe Councils (FSCs) is that they open channels of communication between the community and the various agencies that are concerned with fire. In the upper Mattole representatives of the Bureau of Land Management (BLM), California Department of Forestry and Fire Protection (CDF), California Department of Parks and Recreation (State Parks), local Volunteer Fire Departments, and nonprofit organizations can coordinate their activities through the Southern Humboldt FSC.

FSC meetings are a great opportunity to flesh out the specifics of cooperative programs between and/or among agencies and landowners. The following is a brief summary of potential agency involvement.

- BLM, State Parks, and CDF continue to work closely with SHFSC and actively participate in projects.

Several projects were identified at neighborhood meetings on agency lands or in cooperation with agencies. Some of those are listed here.

- BLM fuel reduction or educational projects:
 - Nooning Creek Swimming Hole
 - Chamise Mountain Trail
 - Nadelos and Wailaki Campgrounds
 - Signage at King Range office and other locations
- CDF fuel reduction projects, using inmate crews:
 - Ettersburg-Honeydew Road
 - Briceland-Thorne Road

- Chemise Mountain Road
- Community chipper days
- Home fire safe inspections
- State Parks fuel reduction or educational projects⁸⁸:
 - Council Madrone
 - Fuel breaks around Four Corners and Whale Gulch
 - Shadowbrook
- Volunteer Fire Organizations
 - Local expertise

Local fire departments can play an active role in the FSC as the community's in-house fire experts. They can help with training and identification of needs, especially relating to equipment and water, and will be the key resources on many projects. However, local volunteer fire-fighting organizations are generally understaffed, while the number of emergency response calls are increasing. Therefore, community projects to support and strengthen fire-fighting organizations through local FSCs must be a priority.

8.6 Policy Issues

For this plan to be accepted as a Community Wildfire Protection Plan, it must be approved by local government, CDF, and local fire departments. Therefore, the MRC and SHFSC need to work with CDF, Humboldt County, and the Southern Humboldt Fire Chiefs' Association at a minimum to approve this document. Mendocino County approval would assist in implementation of those projects within that County. All local fire departments—Whale Gulch, Whitethorn, Telegraph, and Beginnings—could also approve this in lieu of the Fire Chiefs Association.

- MRC and SHFSC obtain necessary approvals to finalize this Plan as a CWPP.

One principal policy issue that has arisen out of this process is the fact that landowners who install water storage for fire hazard and/or water conservation are penalized by their property taxes being increased. Humboldt County officials were contacted and are exploring this issue. This has been addressed by the board of the California Fire Safe Council and is being examined for statewide legislation, potentially in cooperation with the County. A list of exemptions from property tax increases would need to be created for water tanks. This could be done for community storage tanks as well as for private landowners who install water storage tanks on their own initiative. For the latter, one option would be to have the local fire department sign off on the tank as serving fire suppression needs. The challenge is to develop agreements to ensure the water is in fact available for fire fighting, and not all used for domestic or agricultural purposes.

- Humboldt County work with local legislators to develop new policies related to taxing of water storage.

⁸⁸ Of course, State Parks should be consulted before any funding is requested to ensure that the goals, location and specifications are compatible with the mandates of the State Park system and the specific park involved.