a. Conduct fire plan review on building projects within the city and district. (72 hrs)

4. **Public Education** (300 hrs)
   a. Participate in public education programs within the City and Yuba-Sutter Area.
   b. Marysville Joint Unified School District – Provide public education along with participation in School organized functions i.e., Read-a-Thon, Athletic events, High-School ROP program. Lunch visits, Fire Station tours, Fire department class visits, School Safe program planning.
   c. Senior Safety-Provide fire safety training and public education to local senior care facilities.
   d. City sponsored Activities- Christmas Parade, Fourth of July Parade, Gold Rush Days, Peach Festival, Hot Rod Jamboree, Marysville Rodeo, and the Yuba-Sutter Fair.
   e. CERT Training- Assist Police department in Community Emergency Response Teams
   f. Participate in Fire Prevention week with Fire Station Open House
   g. Participation in local TV access channel presentation of fire safety programs for July 4th and Christmas.
   h. Participation at Marysville Motocross, providing prevention and EMS standby duties.
5. **Campfire and Burn permit issuance** (60 hrs).
   a. Issue campfire permits and provide local burn policy information.

CONCLUSION: The Marysville Battalion continues to interact with its community emphasizing fire safety. Marysville maintains a good cooperative relationship among its neighbors and collectively provides a strong fire safety message that benefits all. This message helps protects its citizens and the surrounding areas.

28. Completed Projects and Fire Plan Successes

Since the initial implementation of the Fire Plan process in NYP a number of projects have been completed to some degree. Through these projects CDF and its cooperators are able to demonstrate the success of the program. The following projects have been completed. There is a brief summary after each one that will identify if the initial goals were accomplished and what the Unit feels the results of each project will be.

The projects that have been completed prior to June of 2004 include: Foresthill Fuel Breaks Ure Mountain Pre-Fire Project Gillis Ridge Fuel Break Meadow Vista/Applegate Fuel Breaks Forty-Niner Pre-Fire Project Cascade Shores Pre-Fire Project Columbia Hill Fuel Breaks Owl Creek Neighborhood Fuels Reduction Project Alta Sierra Fuels Reduction Program (Ongoing) FORESTHILL FUEL BREAKS: Existing roads were used for the location of the shaded fuel breaks taking advantage of the area occupied by the road surface, which is devoid of all vegetation. Modifying the fuels for a distance of 25 feet on both sides of the existing road gave an effective shaded fuel break width of approximately 70 to 80 feet.

The location of these shaded fuel breaks will allow ready access and a strategic defensive position for fire suppression resources and facilitate long-term maintenance of the fuel breaks. Shaded Fuel Break Locations:

- Yankee Jim's Road from Foresthill to the North Fork of the American River Approximately 7.5 miles
- Spring Garden Road from Yankee Jim's Road to the Foresthill Road
- Approximately 3.5 miles
- Ponderosa McKeon Road from the Foresthill Road to the Middle Fork of the American River
- Approximately 5 miles
- Foresthill Road from Ponderosa McKeon Road to Michigan Bluff Road
- Approximately 12 miles
- Area west of the town of Michigan Bluff from Chicken Hawk Road to a USFS fuel break.
    - Approximately 2 miles

The total area encompassed by the shaded fuel breaks is about 203 acres over a distance of approximately 30 miles.

URE MOUNTAIN PRE-FIRE PROJECT PROPOSAL (Completed)

Actions involved in the project:
The Ure Mountain Pre-fire project was designed to tie in with pre-fire projects that have been undertaken by Yuba County, CDF, and the Dobbins – Oregon House Fire Department as a cooperative program. This project includes homeowner education, fuel break construction and roadside clearing to reduce fuel loads. There has been strong support and requests of these types of projects by the local community.

Event 1: Chipper support for homeowners. Home inspections will be conducted in the late spring and summer months. Residents who remove vegetation as a result of the inspections may need alternative ways to dispose of the material. Burn days will be limited due to air quality and fire hazard concerns. The proposed support for the homeowner is to hire a professional chipping service to follow up the inspections. The inspectors will notify the residents when the chipper and crew will be in their neighborhood. The homeowner can then clear the vegetation around their residence and bring it to the curbside. The crew will then chip the vegetation and deposit the material back onto the property. As a result of a grant by Northern Sierra Air Quality District, a similar sized subdivision in Nevada County offered this support during the summer and fall of 1996. It had a strong response from the community and was considered to be very successful.

Event 2: A series a shaded fuel breaks along existing roads and public utility right-of-ways that are located in strategic areas to allow fire fighting resources access and a location to effectively suppress an encroaching wildfire. In addition, the location of these

fuel breaks will facilitate a safer evacuation of residents in this access-limited area should a large fire occur. Using existing roads and right-of-ways for the locations of the shaded fuel breaks takes advantage of areas that are devoid of all vegetation. Modifying the fuels for a distance of 35 feet on both sides of the existing roads will give an effective shaded fuel break width of approximately 100 feet. The location of these shaded fuel breaks will allow ready access and a strategic defensive position for fire suppression resources and facilitate long term maintenance of the fuel breaks. It will require coordination with both the county and affected property owners, but has extensive community support. The use of a mechanical masticator to do the initial heavy work, followed up by handcrews, has proven to be the most cost-effective way to accomplish the fuel breaks. The proposed fuels breaks would occupy approximately 420 acres.

Justification: This project will result in a direct reduction of the fire hazard to the 500 homes within the project and will provide enhanced protection to the communities of Dobbins – Oregon House, Brownsville, Challenge, Loma Rica and many more.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Yuba County
- Local Service Groups
- Natural Resources Conservation Service
- Feather River Air Management District
- Dobbins - Oregon House Fire Department

Gillis Ridge Fuelbreak (Completed)

Allen Edwards retired after many years in State Service. He had decided to spend his time working with his sons on his family's timber property in Placer County. This property is located above the North Fork of the American River, a canyon known in the area for experiencing a number of major fires in the past. The combination of fuels, weather and topography all but guaranteed that history would eventually repeat itself and the American River Canyon would once again be under siege by a wildfire.

The canyon below the Edward's property was covered primarily by Manzanita, Ceanothus, and Scrub Oak. There were also pockets of oak and conifer stands in the drainages and scattered across the landscape. The brush was near critical levels based on live fuel moistures and due to its age had a very significant amount of dead materials mixed in with the live. The standing fuels averaged between six and eight feet in height but could be found up to fourteen feet tall in places. The mixed oak and conifer stands typically had a significant brush understory. These stands were even more volatile than the rest of the landscape due to the presence of "needle drape" throughout the understory. This added layer of fine fuels resulted in an increase in torching which also increased the potential for spotting.

The North Fork of the American River flows almost due North - South below the Edward's property. Because of this, the fuels receive direct sunlight through the first half

of the day. The humidity and fuel moisture are significantly reduced on this slope by mid-day and the fuel temperature is dramatically increased. Mid-September is typified by hot, dry weather and continuous canyon winds. The standard S-SW winds combine with the daytime up-canyon winds to create very breezy conditions in the canyon and surrounding areas. Around mid-night the up canyon winds will give way to the colder air settling into the canyon causing strong down-canyon winds.

The topography of the American River Canyon has a very powerful effect on any fire that occurs with in it. The slope ranges from ten to two hundred percent with most of it in the 45 – 75 % range. This slope greatly increased the fire's spread by allowing the pre-heating of the fuels and keeping the flaming front in contact with a constant supply of unburned fuel. It also hampered fire-fighting efforts by limiting the access to the fire's edge, as there were very few roads in the area.

When Allen first began working his land he realized that he needed to consider the potential for a wildfire coming out of the canyon. One of his first efforts was to develop fuelbreak along the ridgeline of his property to help reduce the likelihood of a fire spreading to the remainder of his parcels. Along the ridge top, his property was primarily a second growth mixed conifer woodland. It was typified by uneven aged Ponderosa Pines, Black Oak, and a heavy brush component. Working with his sons, Allen took the time to thin the stands for up to 150' along the roadway. In doing this he removed the ladder fuels and provided an open stand from which fire fighters could make a stand against an encroaching wildfire. Prior to treatment one could have easily found 30 – 40 stems in a 15' – 15' area. After treatment that number was reduced down to 3 – 6 stems in the same area. He also took the time to prune all remaining stems up at least eight above the ground. By doing these two things he was able to have a significant effect on the fire's behavior within the fuelbreak. At the time of the Ponderosa Fire Allen was working with the BLM in an effort to extend his fuelbreak through their land that is adjacent to his.

The Division Supervisor that was responsible for that portion of the fire, Ken Hughes, said," The fuelbreak was integral in our operations along Gillis Ridge. It gave us a place to safely fire from where we would not put our crews in danger. We were able to extend the fuelbreak along the ridge and tie in with the river to fully contain the head of the fire. Without the work he, (Allen Edwards) had done prior to this fire there is a very good likelihood that the fire would have run up into the homes further to the west."

Even though this fuelbreak is not listed in the current Nevada – Yuba – Placer Fire Management Plan as a project, the Unit has looked at it a number of times and recommended it for funding through the Natural Resources Conservation Service (NRCS). They direct most of their funding to projects that have been determined through CDF's Fire Planning process to have a great potential for reducing government costs and citizen losses due to a wildfire.

It cost Allen Edwards and the NRCS about $4,500 total to treat about ten acres of land. That money proved to be a wise investment as the fuelbreak resulted in a fire perimeter

that had very few homes and other structures within it. Without the fuelbreak it is very likely that the fire would have continued up into the south eastern edge of the city of Colfax.

FORTY - NINER PRE-FIRE PROJECT (Completed)

Due to the extensive movement of California's population from the urban areas to the more rural areas, the loss of structures to wildland fire is ever increasing. The Forty-Niner area is a prime example of a community in the rural-urban interface/intermix. Many of the homes were constructed prior to any type of regulations concerning fire safe issues being enforced. It is estimated that there are over 1,600 homes within the project area. Of those 1,600 homes approximately 95% do not meet the **minimum** requirements (based on Calif. Public Resources Code 4291) for fire safe clearance and access.

Recent ground surveys of the area estimate over thirteen tons of dry, dead fuels per acre. Much of this fuel is Greenleaf Manzanita or Ceanothus, both of which can result in extreme fire behavior and spotting. Due to the heavy fuels in the area, simply meeting the minimum requirements will not likely prevent structural damage during a period of severe fire behavior. This was evident in the recent Williams fire in which one-third of the homes destroyed met the minimum clearance requirements but were not prepared for a firestorm.

Large fires in the unit have caused approximately 48 million dollars worth of damages and destroyed over 270 homes since 1985. Nevada, Yuba, and Placer counties experience 800-900 fires per year in the area protected by CDF. On average, one to two percent of those escape the initial attack stage and result in an extended attack or major fire. Based on those numbers eight to nine fires per year have the potential to become costly and damaging fires. As long as California continues to experience the movement of the population from the urban areas into the rural areas, this problem will continue to worsen. However, through the implementation of the CDF State Fire Plan and the identification of high-risk areas, we will be able to reduce the damage to life, property, and the environment due to wildland fires.

Actions involved in the proposed project:
The Forty-Niner pre-fire project was designed to tie in with current pre-fire projects that have been implemented by the Nevada County Resource Conservation District, CDF, Bureau of Land Management, and the Natural Resource Conservation Service as a cooperative program. This project includes fuel break construction and roadside clearing to reduce fuel loads. There has been strong support and requests of these types of projects by the local community.

Event 1: Chipper support for homeowners. Home inspections will be conducted in the late spring and summer months. To date over 100 of the homes in this project area have been inspected. Residents who remove vegetation as a result of the inspections may need alternative ways to dispose of the material. Burn days will be limited due to air quality

and fire hazard concerns. The proposed support for the homeowner is to hire a chipping contractor to provide chipping services to the residential landowners. This chipping will be coordinated to provide for the most cost efficient coverage possible. Once the homeowner clears the vegetation around their residence, they will notify the coordinator who will then schedule chipping services for them and any other nearby participants. The crew will then chip the vegetation and deposit the material back onto the property. This program has been ongoing for approx two years and over 200 landowners within the project area have utilized the chipping service so far. It has received a strong response from the community and is considered to be very successful.

Event 2: : A series a shaded fuel breaks along existing roads and public utility right-of-ways that are located in strategic areas to allow fire fighting resources access and a location to effectively suppress an encroaching wildfire. In addition, the location of these fuel breaks will facilitate a safer evacuation of residents in this access-limited area should a large fire occur. Using existing roads and right-of-ways for the locations of the shaded fuel breaks takes advantage of areas that are devoid of all vegetation. Modifying the fuels for a distance of 35 feet on both sides of the existing roads will give an effective shaded fuel break width of approximately 100 feet. The location of these shaded fuel breaks will allow ready access and a strategic defensive position for fire suppression resources and facilitate long term maintenance of the fuel breaks. It will require coordination with both the county and affected property owners, but has extensive community support. The use of a mechanical masticator to do the initial heavy work, followed up by handcrews, has proven to be the most cost effective way to accomplish the fuel breaks. The proposed fuels breaks would occupy approximately 180 acres.

Justification: This project will take approximately three years once on the ground work begins. It is estimated that over 180 acres and 400 residences will be treated by the project providing enhanced protection to over 20,000 acres of wildland-urban interface.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Nevada County
- FireSafe Council of Nevada County (FSCNC)
- Federal Emergency Management Agency (FEMA)
- Governor's Office of Emergency Services (OES)
- Local Service Groups
- Nevada County Resource Conservation District (NCRCD)
- Natural Resources Conservation Service (NRCS)
- Northern Sierra Air Quality District (NSAQMD)
- Forty-Niner Fire Protection District (49er FPD)

Estimated Cost of Proposed Project Total = $826,350

The work accomplished to date is the result of a FEMA Hazard Mitigation Grant. FEMA has thus far contributed over $481,000 to this program while CDF and others have contributed over $120,000 as part of the match share to the program.

CASCADE SHORES PRE-FIRE PROJECT (Completed)

The Cascade Shores pre-fire project was also designed to augment a current pre-fire project that has been implemented by the Nevada County Resource Conservation District through a CDF funded grant. This project includes fuel break construction and road side clearing to reduce fuel loads. CDF Conservation Crews assisted in this project. There has been strong support and requests of these types of projects by the local community.

Cascade Shores Pre-fire Project

Event 1: An inspection program of the Cascade Shores area to enforce the Public Resources Code 4291 Fire Safe standards (LE 38 Inspection). Nevada County Planning Department estimates that there are approximately 1,100 housing units in this area. To date over 200 of these residential properties have been inspected. Inspection of these housing units will serve two purposes:

1. 1. Ensure compliance with PRC 4291. This will promote a fuel condition adjacent to structures where fire suppression resources will have a better chance of protecting homes should a wildfire occur.
2. 2. Educate the homeowners of the state law requirements regarding defensible space standards and what they should do to help the chances of their house surviving a wildfire in the area.

The Nevada Yuba Placer Unit has found, in its Nevada County LE 38 Inspection program in 2000, that only about 5% of the residences required a second inspection to ensure compliance with PRC 4291. Approximately 1% of the residences required a third inspection.

Event 2: Second LE 38 inspection of approximately 55 housing units.

Event 3: Third LE 38 inspection of approximately 11 housing units. *Includes General Services vehicle rental for inspectors.

Event 4: A series a shaded fuel breaks along existing roads and connecting old mining diggings that are located in strategic areas to allow fire fighting resources access and a location to effectively suppress an encroaching wildfire. In addition, the location of these fuel breaks will facilitate a safer evacuation of residents in this access limited area should a large fire occur. Using existing roads for the location of the shaded fuel breaks takes advantage of the area occupied by the road surface that is devoid of all vegetation. Modifying the fuels for a distance of 35 feet on both sides of the existing road will give an effective shaded fuel break width of approximately 100 feet. The location of these shaded fuel breaks will allow ready access and a strategic defensive position for fire

suppression resources and facilitate long term maintenance of the fuel breaks.
Shaded Fuel Break Locations:

1. Pasquale Road west of Cascade Shores subdivision. Approximately 5 miles long.
2. Quaker Hill Cross Road. Approximately 4 miles long.
3. Along the old mining diggings to the south and east of Cascade Shores. Approximately 3 miles long.

The proposed fuels breaks would occupy approximately 145 acres.

Event 5: Homeowner support for removal of vegetation as a result of the LE 38 inspections. The inspections will most likely occur in the late spring and summer months. Residents who remove vegetation as a result of the inspections may need alternative ways to dispose of the material. Burn days will be limited due to air quality and fire hazard concerns. . The proposed support for the homeowner is to hire a chipping contractor to provide chipping services to the residential landowners. This chipping will be coordinated to provide for the most cost efficient coverage possible. Once the homeowner clears the vegetation around their residence, they will notify the coordinator who will then schedule chipping services for them and any other nearby participants. The crew will then chip the vegetation and deposit the material back onto the property. This program has been ongoing for approx two years and over 130 landowners within the project area have utilized the chipping service so far. It has received a strong response from the community and is considered to be very successful.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Nevada County
- Local Service Groups
- Nevada County Resource Conservation District
- Natural Resources Conservation Service
- Northern Sierra Air Quality District
- Forty-Niner Fire Protection District
- Cascade Shores Subdivision Homeowners Association

Estimated Cost of Proposed Project Total = $252,924.43

The work accomplished to date is the result of a FEMA Hazard Mitigation Grant. FEMA has thus far contributed over $143,000 to this program while CDF and others have contributed over $35,000 as part of the match share to the program.

COLUMBIA HILL SHADED FUEL BREAK PROJECT

With California's wildland-urban interface areas quickly growing, as well as the population of Nevada County, the objective of the Columbia Hill Shaded Fuel Break Project is to create a shaded fuel break in the Columbia Hill area of Nevada County. Strategically, the project will tie in with the earlier established Montezuma Fuel Break to give firefighters a place to make an efficient stand against a wildfire on the San Juan

Ridge.

In the 6 mile fuel break area there are approximately 85 separate landowners, 47 of whom chose to participate in the project. Nearly all of these homeowners have insufficient defensible space and combining this with poorly maintained roadside vegetation, the Fire Safe Council of Nevada County was able to work with the California Department of Forestry and Fire Protection to identify the prior mentioned aspects of the area as a recipe for disaster.

The Columbia Hill area is predominately heavy timbered land with thick manzanita understory fuels.

Actions involved in the proposed project

The Columbia Hill Fuel Break Project was designed to tie in with previously established fuels reduction efforts, such as the Montezuma Fuel Break. Specifications written into the project called for the creation of a 400' wide shaded fuel break to run 200' along both sides of Tyler Foote and Cruzon Grade Roads in the project area. There has been strong support and great interest in this project from the involved community.

Event 1: Fuel Break Construction. A community meeting was held in July of 2003 to introduce this project to the community. After a number of other mailings to landowners, the FSCNC began meeting with landowners who chose to participate in the project to mark property boundaries as well as determine what specific work they would like accomplished. Under the grant funding the project the FSCNC was also able to hire a contracted forester who met with each landowner who wished to have timber removed from their land to mark timber and confirm their wishes. Once this was accomplished, a Timber Harvest Plan was submitted to the California Department of Forestry and Fire Protection and the hand clearing and timber work was put out to bid. Pending approval of the Timber Harvest Plan, the FSCNC will select a licensed timber operator to contract with to complete the work at which time a FSCNC representative will be on site at all times to ensure correct operations are taking place on individually owned lands. The end result will be a 400' wide fuel break throughout much of the Columbia Hill area. This portion of the project has been completed with the exception of one small section that has been cleared to 100' along roadway.

Event 2: Fuel Break Maintenance. With the exception of one parcel, all participating landowners have agreed to donate revenue from their harvested timber back to the Fire Safe Council of Nevada County. These funds will be placed in a trust fund and utilized to maintain the fuel break over the next five to ten years.

OWL CREEK NEIGHBORHOOD FUELS REDUCTION PROJECT

In 1988, the Forty-Niner fire ravaged the Owl Creek area of Nevada County. Since that

time, residents of the area have seen the fuels in the area regenerate to the levels that were present prior to that fire. Many homeowners in the area have a genuine concern regarding the threat of wildfire and approached the Fire Safe Council of Nevada County in 2003 to seek grant funding for roadside fuels reduction in their neighborhood. There are approximately one hundred separate landowners in the area of Owl Creek, McKitrick Ranch, Barn Owl, Hoot Owl, Arctic Owl, Red Tail Hawk and Pau Hana Roads, 68 of whom chose to participate in the fuels reduction project funded under a Bureau of Land Management Community Wildfire Prevention Grant.

Currently the roadways in the area have heavy fuel accumulations on the roadsides, including dense manzanita and scotch broom. In some areas these accumulations are so great that it is extremely difficult to drive the roads, thus it would be impossible for fire engines to use these roads as access, many of which were initially intended as fire roads. In the event of a wildfire such fuel loads would greatly hinder the ability of residents to evacuate, as well as compromise the safety of residents and firefighters alike. The goal of this program is to bring roads in the area up to higher safety and evacuation standards.

Actions involved in the proposed project:
The Owl Creek Neighborhood Fuels Reduction Project was designed to create safer evacuation routes for residents as well as safer, more efficient ingress for firefighters. This program will provide 30' of roadside clearing on both sides of the road to any landowner within the project area who wishes to participate. The project is completely participant driven and the work completed is up to the specific landowner. There is also a number of Bureau of Land Management Parcels in the area which are of great concern to the residents. With the issuance of a variance, these lands will benefit from the roadside clearing as well. There has been great support from the community for this project, as it was initiated by the community itself.

Event 1: Roadside clearing for participating landowners. Fire Safe Council of Nevada County (FSCNC) staff and volunteers have met with all 68 participating landowners to complete on-site consultations and determine what work is to be completed. FSCNC coordinated brush clearing contractors will be moving through the area in an efficient manner, completing the roadside clearing work as indicated by the FSCNC consultation notes. All materials removed will be chipped and spread back onto the property with the exception of Scotch Broom which is to be removed to a landfill or transfer station. The project work was completed by mid-June of 2004.

OREGON RIDGE FUEL BREAK PROJECT

Actions involved in the proposed project:
The Oregon Ridge Pre-fire project was designed to provide a strategic location to attack a spreading wildfire. The fuel break spans the length of Oregon Ridge. It begins in the town of Challenge and continues past the Oregon peak lookout. It is over six miles long and up to 300 feet wide. Oregon Ridge is made up primarily of large land holdings owned and managed by timber companies (CHY, Soper-Wheeler, and Siller Bros).

These companies immediately recognized the potential benefits of having a fuel break on their property. The Pendola Fire burned through this area a couple of years prior to the re-establishment of the fuel break. Had it been in place at the time of the fire, the threat to the communities of Dobbins and Oregon House would have been significantly reduced. The Oregon Ridge fuel break is the result of a cooperative program that has grown from a grass roots effort in the foothills of Yuba County. This project includes homeowner education, fuel break construction and roadside clearing to reduce fuel loads. There has been strong support and requests of these types of projects by the local community.

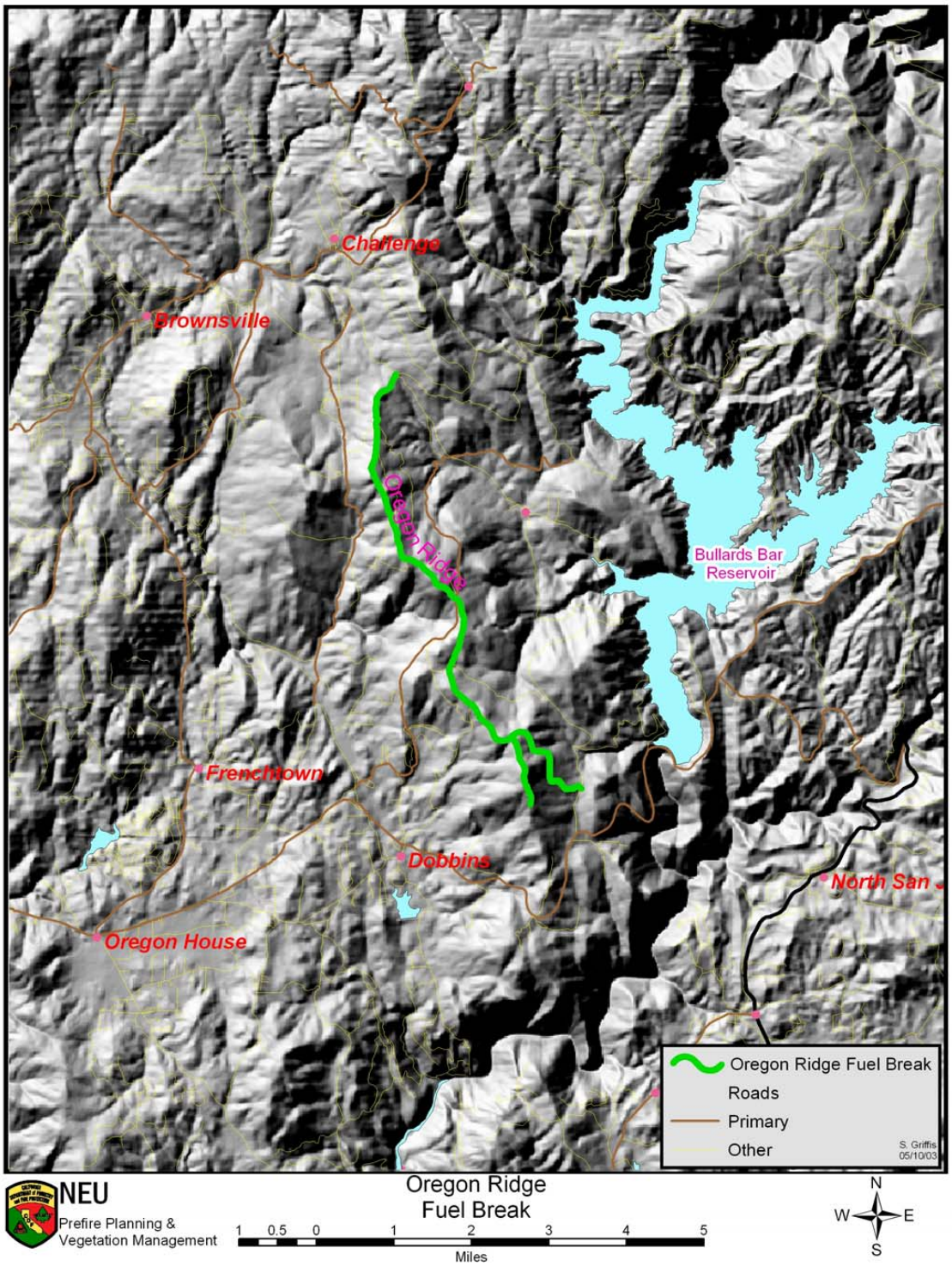
Event 1: A shaded fuel break along existing logging and fire access roads that are located along the ridge-top to allow fire fighting resources access and a location to effectively suppress an encroaching wildfire. Using existing roads for the location of the shaded fuel breaks takes advantage of the area occupied by the road surface that is devoid of all vegetation. Modifying the fuels for a distance up to 125 feet on both sides of the existing road will give an effective shaded fuel break width of approximately 300 feet. The location of these shaded fuel breaks will allow ready access and a strategic defensive position for fire suppression resources and facilitate long term maintenance of the fuel break.

Justification: This project will result in a direct reduction of the fire hazard to the communities of Dobbins – Oregon House, Brownsville, and Challenge.

Much of the work on this project has been accomplished with funds from Prop 204 and some private funds. Total Project cost estimate **$50,000**.

Potential Stakeholders to participate in Cost Sharing to Fund the Project:

- Yuba County
- Yuba River Watershed and FireSafe Council
- Local Service Groups
- Tahoe National Forest
- Plumas National Forest
- Natural Resources Conservation Service
- Feather River Air Management District
- Dobbins - Oregon House Fire Department



29 Appendices

1. Assets at Risk Ranking Methodology
2. Individual Assets at Risk maps
3. NYP Implementation Process
4. Excerpts from PRC 4290 & PRC 4291