

# THE COMMUNITY PROTECTION AND LOCAL ECONOMY ALTERNATIVE

Developed collaboratively by Friends of the Bitterroot, Native Forest Network, National Forest Protection Alliance and The Ecology Center  
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*A citizen observes ecological collaboration between a Douglas-fir and ponderosa pine within the Middle East Fork Hazardous Fuel Reduction project.*

This Alternative was developed collaboratively for inclusion as an alternative in the Draft Environmental Impact Statement for the Bitterroot National Forest's Middle East Fork Hazardous Fuel Reduction project.

# THE COMMUNITY PROTECTION AND LOCAL ECONOMY ALTERNATIVE

## Objectives

The Community Protection and Local Economy Alternative (CPLE) meets the following objectives.

1. Improve the protection of homes and communities from wildfire.
2. Provide for, and allow, natural processes and natural forest succession.
3. Restore fire-adapted ecosystems in the Middle East Fork landscape.
4. Provide economic opportunities for local workers in Ravalli County.
5. Provide for clean water, healthy watersheds.
6. Improve the public understanding of wildland fire and insect/disease forest ecology and forest management.

## Summary

This alternative protects homes and communities from wildfire and maintains or improves ecosystem integrity. It is based soundly on the best available science. Compelling themes emerge from the scientific literature and on-the-ground experience with fire and forests. They are:

1) The chances of a home igniting during a wildfire is determined almost entirely on what happens within a hundred yards of the home. The landscaping within the Home Ignition Zone (within 40 meters of the home) and the building design and materials determine whether or not a home will catch fire. Home protection is a local endeavor. It is what is done on private property that really counts. What is done miles away on national forest land has almost nothing to do with saving homes from wildfire. (Cohen, 2000; 1999).

2) Insect and disease mortality, even in “epidemic” proportions, is a natural response to conditions and a natural part of forest succession. Forests have a long track record of natural, healthy forest succession following episodes of beetle epidemics. Active management is not needed. Disturbance from logging and other mechanical treatments causes unnecessary stress to the stand as well as the ecosystem. (Filip, 1979; Goheen and Hansen, 1993; McDonald et al., 1987; Morrison and Mallett, 1996; Roth et al., 1980; Wargo and Shaw, 1985.)

3) Wildland fire has been a natural force that has helped sustain the ecosystems of the Middle East project area for thousands of years,

4) The Community Protection Zone is an overlapping area where vegetation manipulation can provide opportunities for firefighters to protect other flammable features of a community (Nowicki, 2002). Most communities require treatment extending less than 400 meters (1312 feet) from the house (Id.).

5) The management actions beyond the Community Protection Zone in the project area are those that remove artificial impediments to natural recovery in order to allow restoration of natural, self-sustaining ecosystem processes. If natural disturbance patterns, such as wildland fire, are the best way to maintain or restore desired ecosystem values, then nature should be able to accomplish this task very well without human intervention (Frissell and Bayles, 1996). Wildland fires and insect infestations are part of the natural cycle of ecosystem processes in the project area. Natural recovery, or more accurately natural succession, works well. Our attempts to intervene in nature’s dynamic should be limited to removing the human-caused impediments to ecosystem recovery. Human intervention is only necessary in areas where we have done damage or made significant changes to the landscape before the fire or insect/disease infestation. The two biggest issues to deal with are to remove/rehabilitate roads and to allow lightning-caused fire to play its ecological role. (Beschta, et. al., 1995; McIver and Starr, PNW-GTR-486, 2000; Stickney, 1990).

The CPLE alternative provides home protection through a Homeowner Education Program and a Community Conservation Corps. The Corps will provide both fire hazard assessment and fire hazard reduction landscape assistance free of charge. Applying fire hazard actions to private land is the only way to effectively reduce homeowner risk due to wildfire.

The CPLE alternative maintains or improves ecosystem integrity by allowing and facilitating natural recovery and succession. Unroaded areas and areas beyond the Community Protection Zone (CPZ) will allow natural forest succession. Active recovery efforts of road rehabilitation, road removal, and streambank stabilization will be done in areas that have been damaged through human management. Thinning from below would be implemented to reduce fire hazard in the CPZ, as suggested in Graham, et al., 1999. This would be followed by pruning branches of the remaining trees up to 10 feet high (Nowicki, 2002) and reducing the surface fuels created by the cuttings (Graham, et al., 1999).

### **Basis for the Community Protection and Local Economy Alternative**

#### **Four issues must be addressed to meet the objectives:**

1. Improve the protection of homes and communities from wildland fire. 2. Allow the healthy succession of forest ecosystems, recognizing the positive role of forest insects and tree diseases. 3. Allow fire to play its natural role in the forest ecosystem. 4. Use contracting and funding flexibility to maximize benefit to sustainable local economy.

Based on the best available science, an alternative that effectively and efficiently protects homes and firefighters, allows natural forest succession following beetle infestation of the area, and facilitates restoration of fire into the ecosystem needs to be consistent with the following principles and research findings:

- The likelihood that a home will ignite from wildfire is almost entirely determined by the landscape within 40 meters of the building and by the materials and design of the building. (*Cohen, Preventing Disaster, 2000; Cohen, Reducing the Wildfire Fire Threat to Homes: Where and How Much, 2000; Cohen, Why Los Alamos Burned, 2000*).
- Management activity, including fuel reduction, beyond 40 meters away from a home has little effect on the likelihood that a home will ignite during a wildfire. (*Cohen, Preventing Disaster, 2000; Cohen, Reducing the Wildfire Fire Threat to Homes: Where and How Much, 2000; Cohen, Why Los Alamos Burned, 2000*).
- The largest Community Protection Zone required under maximal conditions is less than 500 meters. However, most communities require treatment extending less than 400 meters (1312 feet) from the house. (Nowicki, 2002)
- Considering the current risks and limited resources available for the implementation of fuels reduction projects, individual projects and strategies need to utilize the best available science to develop the most effective and efficient methods for protecting houses and communities. (Nowicki, 2002)
- The research community has not addressed commercial logging as a method for reducing wildland fuels... We did not find any reports of observations, case studies or empirical research on this topic. The absence of literature may result from the fact that commercial logging focuses on large diameter trees which do not contribute significantly to fire risk. (*Carey and Schuman, April, 2003*)
- **CONCLUSION:** Although the assertion is frequently made that reducing tree density can reduce wildfire hazard, the scientific literature provides tenuous support for this hypothesis. This review indicates that the specifics of how prescriptions are to be carried out and the effectiveness of these treatments in changing wildfire

behavior are not supported by a significant consensus of scientific research at this point in time. This conclusion is supported by the work of other researchers. (*Carey and Schuman, April, 2003*)

- Drought and other climatic factors are the primary causes of large-scale wildfires, which occur regardless of fuel conditions. (*Schmoltdt, Daniel L., et. al., PNW-GTR-455, USFS, 1999*).
- Fire suppression, logging, and grazing are the primary causes of unnatural fuel conditions. (*Beschta, et. al., 1995; McIver and Starr, PNW-GTR-486, 2000; Schmoltdt, Daniel L., et. al., PNW-GTR-455, USFS, 1999*).
- Although usually viewed as pests at the tree and stand scale, insects and disease organisms perform functions on a broader scale....Pests are a part of even the healthiest eastside ecosystems. Pest roles—such as the removal of poorly adapted individuals, accelerated decomposition, and reduced stand density—may be critical to rapid ecosystem adjustment ...In some areas of the eastside and Blue Mountain forests, at least, the ecosystem has been altered, setting the stage for high pest activity (Gast and others, 1991). This increased activity does not mean that the ecosystem is broken or dying; rather, it is demonstrating functionality, as programmed during its developmental (evolutionary) history. (Harvey et al., 1994.)

Based upon these principles and research findings, three distinct categories of the landscape emerge: The home ignition zone (HIZ), which lies within 60 meters of structures, the community protection zone (CPZ) within 400 to 500 meters of inhabited structures, and the area outside of the HIZ and CPZ. Three distinct goals are thus differentiated. In the HIZ the goal is to protect homes while providing aesthetic appeal and maintaining habitat as much as possible. Within the CPZ the goal is to enhance the ability of firefighters to safely defend community space (Nowicki, 2002). Beyond the CPZ the goal is to allow natural succession and wildland fire in the forest ecosystem. Management here would address removal of human-caused impediments to natural recovery.

Applying the above principles and research findings to the Home Ignition Zone we find that the management activity that is effective at protecting homes occurs on private property with few exceptions. In order to protect homes from wildfire, the home design and construction materials must resist ignition from firebrands. The landscape within 60 meters of the home must be thinned to eliminate the likelihood of a crown fire and small fuels must be removed to stop an approaching fire. The Forest Service's roles, to aid in accomplishing these actions, are homeowner education and assistance in fuel management within 60 meters.

This alternative includes two activities that implement effective home protection assistance. 1) A homeowner education program and 2) A home site fuel reduction Corps.

Homeowner education is based upon a coordinated program of public presentations, direct mail education material, media public interest education, and news features. This is a more intensive continuation of the education effort that has been done for many years by the Ravalli County Resource Conservation & Development.

Home site fuel reduction assistance will be accomplished with a Community Conservation Corps formed by the Forest Service. The Corps will provide free onsite assessment, education, and landscape services. The Corps will consist of workers and contractors that are locally hired, to the extent that is legal and practical.

Applying the above principles and research findings, a Community Protection Zone would allow thinning from below to reduce fire hazard in the CPZ, as suggested in Graham, et al., 1999. This would be followed by pruning branches of the remaining trees up to 10 feet high (Nowicki, 2002) and reducing the surface fuels created by the cuttings (Graham, et al., 1999) 400 to 500 meters from inhabited structures.

Applying the principles and research findings outlined above to the area outside of the Community Protection

Zone and Home Ignition Zone is based upon the understanding that natural forces, natural disturbance, and successional processes will provide for ecosystem integrity—there is no need for “recovery” except for the previously stated actions removing the human-caused impediments to natural succession. Management actions are utilized only on sites where natural recovery is determined to be unlikely to occur. In areas significantly outside the normal range of vegetative conditions due to fire exclusion, delineate where fire would be allowed to burn when caused by lightning. All actions, including small-scale experimental vegetation manipulations, will be guided by adoption of the Forest Restoration Principles and Criteria (DellaSala, et al., 2003).

## **Features of the Community Protection and Local Economy Alternative**

### **1. PROTECTS HOMES AND FIREFIGHTERS**

Homeowner education will include direct mail to every household in the Middle East Fork area describing what is needed to protect a home from wildfire. Periodic public presentation of this information will be given. In addition, public presentations will be held on Jack Cohen’s work, including his research videos. TV, radio, and newspaper ads will be run summarizing the information and advising how to get help.

The Community Conservation Corps will provide a fire-safety assessment and landscape fire hazard reduction assistance free of charge to homeowners.

Scientifically based work in the Home Ignition Zone will effectively protect homes.

Scientifically based work in the Community Protection Zone will effectively reduce firefighter risk.

Homes and lives are the highest priorities for fire protection. Efficiency is maximized when sufficient effective work is done to accomplish these goals in the highest priority area and then move on to the next prioritized area. Once the Home Ignition Zone work is done safety is improved because it gives the decision maker much greater discretion to pull firefighters back to safety, knowing the homes treated will likely be safe. This alternative avoids unnecessary, inefficient, and dangerous work.

### **2. RECOGNIZES THE ECOLOGICAL ROLE OF NATIVE INSECTS AND TREE DISEASES, AS WELL AS NATURAL RECOVERY**

Forest areas outside the HIZ and CPZ that are affected by native insects or tree diseases will be allowed to respond naturally. Removing beetle-killed trees does not remove beetles, nor does it remove competition from the stand. Beetle killed trees offer important benefits to forest wildlife, hydrology and soils. Further mechanical disturbances may cause further stress to trees (Filip, 1979; Goheen and Hansen, 1993; McDonald et al., 1987; Morrison and Mallett, 1996; Roth et al., 1980; Wargo and Shaw, 1985). Where previous human activities have resulted in conditions that require intervention to minimize impacts of future fire, active restoration will be done. This responds to the issue of insuring forest ecosystem integrity through natural forest succession.

#### **Restoration Principles**

Applicable area: Entire project area

Management actions:

Road elimination. Road rehabilitation.

#### **Road elimination**

Applicable areas. All roaded areas on the Middle East Fork project area.

Management actions:

Remove and recontour all roads not needed for foreseeable management projects, for the following reasons:

- a) The lack of funding for the Forest Service to adequately maintain all roads.
- b) The ongoing ecological damage caused by roads that are not or cannot be adequately maintained.
- c) For affirmative response to the new Roads Policy.
- d) For affirmative response to the commitments made by the Forest Service in the bull trout programmatic Biological Assessment.
- e) For compliance with watershed analysis process requirements as outlined in the Federal Guide for Watershed Analysis (as mentioned in the INFISH Decision Notice).
- f) For minimizing ecological damage following future wildfire
- g) Reduce risk of human caused fire (Gucinski, et al 2001)

### **Road rehabilitation**

Applicable areas. In all roaded areas on the Middle East Fork project area, the roads that are needed in the foreseeable future will be rehabilitated.

Management action. Upgrade all culverts, so that they meet INFISH specifications. For those remaining roads that are causing damage to Priority, Key, or Special Emphasis watersheds because of their location in Riparian Habitat Conservation Areas, this alternative would relocate those sections of road away from the riparian areas or obliterate the road. Any previously determined “future management need” is of lower priority than watershed recovery and bull trout habitat improvement.

## **3. INTEGRATES FIRE INTO THE ECOSYSTEMS OF THE MIDDLE EAST FORK**

The CPLE Alternative will guide fuels management treatments, community fire education programs, and appropriate management responses to wildland fires. This will initiate a process of determining where prescribed burning may be applied and where natural fire can be allowed to burn without suppression activities.

This responds to two issues:

1. Ecosystems need fire to play its natural role in the ecosystem.
2. Wildfires must not cause unwanted damage to homes and other structures.

### **Natural fire**

Management action. Monitor fire to insure that it does not cause harm to life or homes.

### **Fuel reduction through prescribed fire**

Applicable areas. In those areas within the CPZ deemed to be outside the normal range of vegetative conditions due to previous fire exclusion.

Management action. In areas unlikely to burn outside the normal range of intensity, apply prescribed fire. In those areas deemed to be outside the normal range of vegetative conditions due to previous fire exclusion and where a prescribed fire would be likely to burn outside the normal range of intensity, perform manual pretreatments (thin from below, prune branches to 10 feet) in preparation for prescribed fire and wildland fire use before conducting prescribed burns.

## **4. PROVIDES BENEFITS FOR SUSTAINABLE LOCAL ECONOMY**

### **Funding and Contracting**

This alternative would not require that funding be immediately or imminently available for all activities. However, the Forest Service would rank all activities by priority based upon their necessity to protect homes and restore ecological functioning, so that appropriate requests will be made in future budgets, and so as to be able to respond as funding does become available. Collaborators on this alternative offer to support Bitterroot National Forest requests for funding resources.

Many of these actions might be funded under the funds made available to Counties by the Secure Rural Schools and Community Self-Determination Act of 2000 (the County Payments bill) that was signed into law by President Clinton on October 30, 2000 (Public Law 106-393). It would require cooperation of County Government and Resource Advisory Council, as well as acceptance by the Forest Service. Stewardship contracting may offer the ability to trade commercial timber from the CPZ for work on the HIZ or for restoration work.

Contracts shall be structured so that the size and content fit the capabilities of local contractors. Contracts should be small enough and staggered in time so as to discourage the mobilization of contractors from outside the area. Hiring for the Community Conservation Corps shall begin with solicitation of workers from Ravalli County.

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