

**Elk City Township Defensible Space Project  
A Partnership of the Nez Perce National Forest and  
Framing Our Community**



**Making Our National Forests Safer for Visitors, Private  
Landowners and Fire Fighters**



**While Providing  
Training and Employment Opportunities for Regional  
Workers**

## **Elk City Township Defensible Space Project Final Report**

Listed below are the four goals of the Elk City Township Defensible Space Project:

- Reduce the potential and intensity of wildfire
- Provide safety around private and federally owned structures
- Train and employment local workers and future forest managers to learn forest and fuels reduction skills in an educational participatory environment
- Test markets for low grade materials versus green sawn logs

A program of work for hazardous fuels reduction treatment for 20 sites was designed by the Red River Ranger District Fire Shop. A Forest Service fire specialist was provided to guide, train and oversee the work being done so that the FOC defensible space crew could learn to work to agency specifications. Twelve of these sites were located on the Newsome Creek side of Hwy. 14 and eight sites were along Crooked River Road. A total of twenty six acres of federally owned land with federal structures or adjacent to private home sites were treated. The forest treatment plan required manual treatment at most of the sites due to riparian areas and soil compaction concerns, but where ground conditions allowed, a mini excavator was utilized to pile slash and help direct the falling of large trees. At sites where equipment could not be used a mini excavator and feller buncher worked from the road side to load slash into a dump truck or trailer for placement at designated burn sites.

Forest Service guidelines called for:

- Shrubs and trees within 30 feet of structures were removed, leave trees were pruned to a maximum height of 18 feet, higher close to buildings and gradually dropping to 6 feet as we neared the 200 foot mark,
- trees were thinned to a maximum 10 foot crown spacing,
- brush, hazard and sapling trees were removed
- Lopping and scattering of limbs was used to return nutrients to the soil, debris was piled on sites at six locations, excess slash and the slash from the remaining fourteen sites was removed and piled at three designated sites for burning at a later date by Forest Service Fire Personnel

During the initial work phase FOC learned what equipment was effective for hazardous fuels reduction. Pole saws and a trailer were supplied under FOC's Participation Agreement, replacement blades were purchased by FOC and pole saws were purchased by FOC in 2005. The crew learned that a mini-excavator combined with a trailer was time consuming, labor intensive and inefficient for the remove of slash to remote locations. Later in the program in Crooked River larger equipment, a feller buncher, loaded a 12-yard dump truck at road side for dumping at designated burn sites.

In order to build an effective workforce and equipment pool, FOC utilized two one week Montana Conservation Corps (MCC) teams that had experience in trail brushing and came equipped for the job at hand. This permitted FOC to begin with a workforce of ten, six MCC and four local crew, and slowly introduce 1 – 2 inexperienced workers each week until we had a fully trained local crew of eight. Incorporating MCC into the project also accomplished FOC's educational goals by introducing college age students to a project that safeguards a community through hazardous fuels reduction to create defensible spaces in a participatory environment. FOC replaced MCC with local high school students for work in 2005.

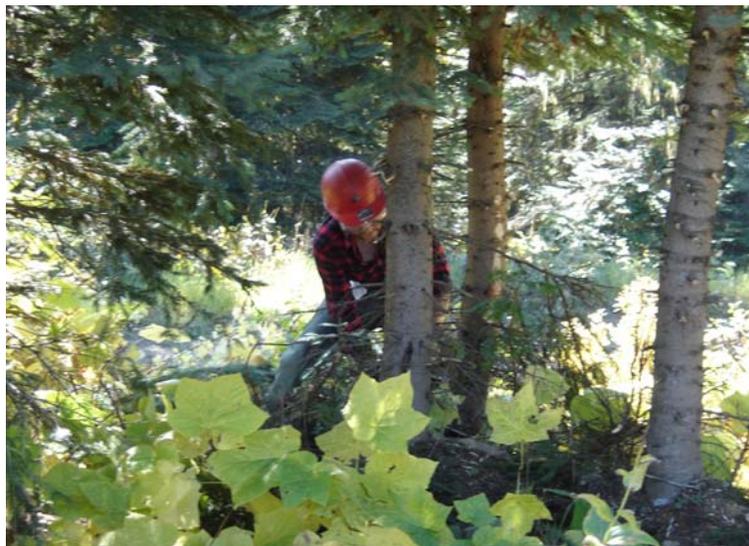
Work on the Newsome Creek portion of the project began late September, 2004 and continued into late November when it was discontinued due to winter conditions. All twelve of the Newsome sites were finished in 2004 with a revisit for final cleanup prior to the FOC crew start up Summer 2005. This worked well as it provided time for program review and training of new workers.

The 2005 work crew, comprised of workers trained the previous year, new local trainees and high school students began June, 2005 and finished their hand work August, 2005. The project was completed when piled debris was removed from all of the sites and transported via dump truck to the designated dump sites at Five-mile Pond and the fork on Crooked River Road to Buffalo Hump.

September 28, 2004 - Work by and training of four local workers and a mini excavator operator began around the Warming Shed at Hamby Saddle.



This allowed for crew members to understand the protocol for this defensible space project and learn the skills necessary to complete the tasks at each site. This was chosen as the start point because it was not complex and therefore a good initial training site.



## Elk Summit



The crew then moved on to Elk Summit where it was joined by the Montana Conservation Corps for two weeks to clear around the Elk Summit cabin and tower.



Growth was dense and 253 igloo sized slash piles resulted from the thinning and limbing efforts.

**October, 2004** – worked moved to the Newsome Work Center, Beaver Creek and the historic Mary Reed Cabin. Newsome Work Center was the first site that slash had to be removed by hand for burning, the under story was thinned and trees were limbed as the program of work defined. Many trees were left on the ground to reduce erosion a small amount of timber was removed by FOC to conduct a study on the feasibility of its use for the manufacture of value-added wood products.

Newsome Work Center upon completion shows many thinned trees left for erosion control and as we learned later removed for fire wood by residents and campers



From October to early December, 2004 the Elk City crew worked adjacent to eight private home sites, thinning, limbing and removing slash to the burn site. Following are before and after photos from a point on the ridge next to the Storey home site.

Land adjacent to Storey residence in Newsome Town Site - Before Treatment



Photo taken from the same aspect after fuels reduction work was completed at the Storey home site



November, 2004 The mini-excavator and trailer remained in the town of Newsome to effect cleanup.

All slash was removed to a burn site on Newsome Creek Road except for the piles at the Hamby Saddle, Elk Summit, Mary Reed Cabin and behind the Adams and Fairley home sites across Pilot Creek.



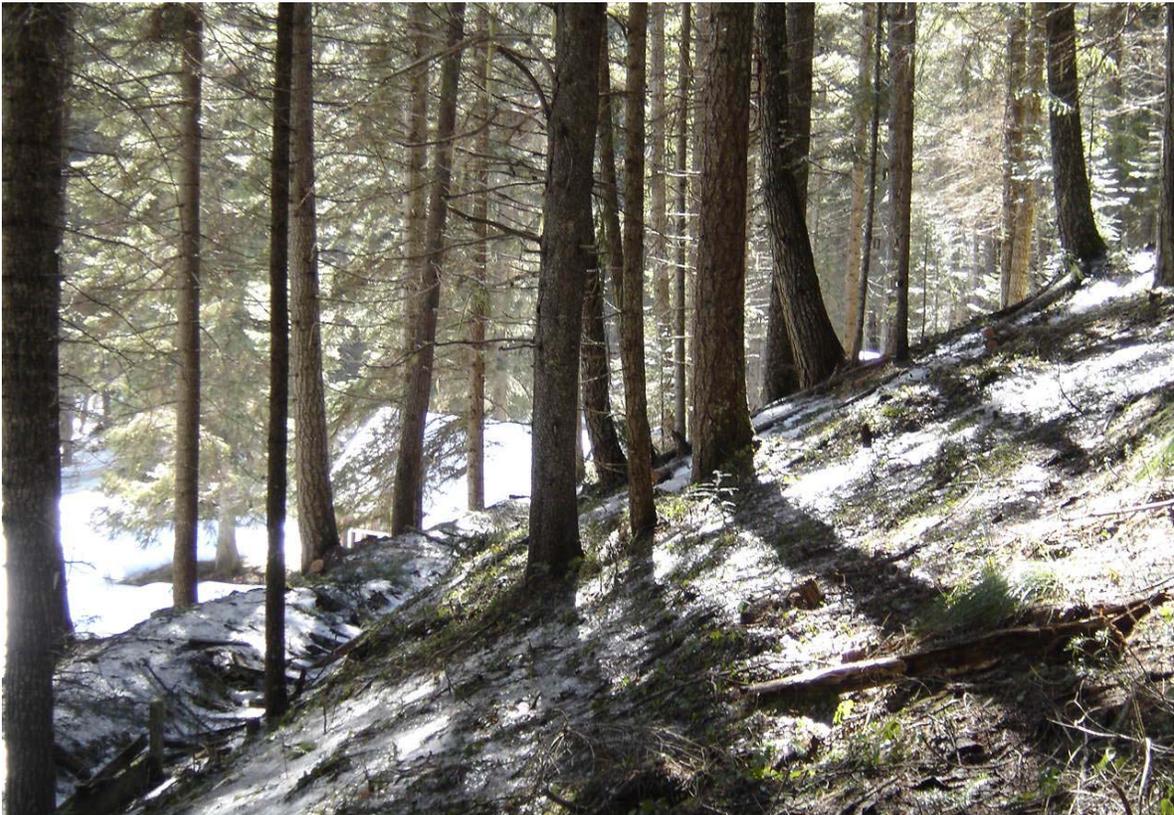
Most of the crew moved to the Crooked River to start work on sites at the far end of Crooked River Road, leaving the mini-excavator and trailer driver to effect cleanup. This included a historic cabin site with china ditches across from a forest camp ground.



## 2005

The project picked back up June, 2005 with a final clean up of the Newsome Creek portion of the project, work resumed on sites in Orogrande and along Crooked River Road. Of the eight sites treated two were around historic sites and six were adjacent to private homes. The National Forest Gnome Mine site (5 acres), the historic cabin at the upper end of Orogrande ( 2+ acres) and a site at the upper end of Orogrande were the most challenging and largest sites to be treated. Steep terrain, archeological considerations like china ditches, winter conditions and hand carrying of limbs and debris down hill sides to be piled within reaching distance for equipment from the road side for removal to the burn sites made these locations challenging.

The China ditch behind the Historic Cabin held timbers and long spikes from a decaying water trough that could have badly injured a worker that slipped down the now covered slope.



## Fish habitat Improvements

It seemed logical that if fallers were going to be on site why not make the most of their presence. Therefore FOC's lead faller spent 1 ½ days working with Dave Mays, Red River Ranger District fish biologist, dropping trees into Newsome Creek and across Beaver Creek to improve fish habitat.

Large wood debris placed in Newsome Creek



Trees placed across Beaver Creek look natural and provide shade



Additional Opportunities - Small decks of wood were left at the camp site between the Newsome Work Center and the Mary Reed Cabin for use by hunters and recreationists. The seasonal presence of moose, deer and elk hunters also gave us an opportunity to explain the program and educate nonresidents on fire safety and the fire danger that surrounded them. All appreciated the fire wood, were in favor of the fuels reduction efforts and supportive of continued efforts.

## Value-added Market Test

FOC incorporated a test of the materials that had to be removed from two of the sites the Newsome side of the project and one site on the Crooked River side of the project. This was accomplished through a Small Salvage Timber Sale.

The majority of trees cut were left at the individual sites or ended up in the slash piles for burning the next year. Newsome's Salvage Sale provided 23 CCF of saw timber and 42 CCF of non-saw timber and Crooked River's Salvage Sale provided 21 CCF of saw timber and 24 CCF of non-saw timber. The green saw logs were sent to the local Elk City mill while the non-saw logs were sent to FOC's small log yard for sorting to determine best use/best value. It was determined that the majority of the non-saw logs were only suitable for firewood, any of the remaining logs were suitable for the manufacture of fence (jack pole fence for a 2005 riparian restoration project was the first produced) with a few house logs/lathe logs available.

This Log Deck at Elk Summit shows the size and quality of the material removed



The Log Deck at Newsome Work showed more rot



### Value-Added Wood Products

Two product lines were test marketed: The first product developed for sale was bundled firewood for urban markets (Spokane and mid-state Washington). This was found to be a seasonal, break even market, which when developed more widely will turn a small profit and employ approximately six people. The key to year around employment would be the development of a second product line that could be manufactured in the off fire wood season. This led to the second product developed, Jack Pole Fencing for watershed restoration projects, and has since grown to include two lines of residential/ranch fencing. Following are photos of the bundled firewood and the riparian fencing used in 2005 to protect a section of stream in a grazing allotment.



## Jack Pole Fence manufactured at the Elk City Incubator Spans Little Elk Creek



We learned that traditional sales of green sawn logs to local mills needs to remain a part of the regions economic base as they are easiest way to do business because they required less labor and the trucking distances were shorter. The markets for wholesale and retail value-added products are still in their infancy and will need more time and effort to become profitable. FOC needs to continue to fund restoration projects that test and utilize new locally produced products that broader markets can be developed for as raw material supplies stabilize and labor capacity is increased to reach manufacturing levels. Market development efforts have been stepped up by FOC, other Pacific Northwest Nonprofits and small local businesses which have resulted in growth for the bundled firewood. Marketing of the residential and commercial fencing market started this past winter and will be offered at home and ranch supply centers this spring in Idaho and Washington.

This project was made possible through funding from the North Central Idaho RAC, the Nez Perce National Forest and Framing Our Community. As this project was labor intensive, the majority of the funds were spent on manual labor for thinning and limbing, and equipment to move slash to the burn sites. The total project cost was \$108,115 and included: Labor/sub-contractors, Travel, Supplies, Monitoring and Indirect Costs. Labor and supplies came in a little under original estimated levels and travel costs for the crews mileage to the work sites proved to be higher. The break down of expenditures is as follows:

Labor	84 %	\$90,465
Travel	2 %	\$2,045
Supplies	3 %	\$3,700
Monitoring	1 %	\$1,500
<u>Indirect Costs</u>	<u>10 %</u>	<u>\$10,405</u>
Total	100%	\$108,115