

Project Title

Road Decommissioning and Fuel Breaks for Forest Restoration and Fire Protection on the Santa Fe National Forest, Coyote Ranger District.

Project Summary

Because roads have been shown to contribute significantly to soil impacts, water quality impacts, and increased human fire ignitions, maintaining approved road densities is critical for forest restoration efforts to be complete and effective.¹ Wildfire frequency and seasonality are related to road density; Noss (1995) cites several studies demonstrating that 78% of human-caused fires occur within 265 feet of a road.

Also because fuel breaks around communities based on existing landscape features such as roads can serve as defensible space preventing crown fire from traveling off of and onto federal lands, strategic thinning along roads considered necessary for management and identified as strategic in protecting communities are critical in fire protection.

We propose to collaborate with the Coyote Ranger District of the Santa Fe National Forest, which supports the highest road densities of any forest in the Southwest Region (See R3 75 species BA), local fire departments, the Acequia Mesa del Medio Association and Rocky Mountain Youth Corps to decommission or obliterate roads that are not necessary for management of the District's resources or maintaining traditional uses and bring the Ranger District into compliance with the management plan's road density standards. We also propose to strategically identify roads and natural features where conservative thinning would prevent crown fire from moving on or off of federal lands. We would bring in the Acequia Mesa del Medio Association as well as community groups from northern New Mexico to train youth and under-employed citizens in heavy equipment operations as well as road and revegetation survey techniques.

Statement of Need

The Santa Fe National Forest has the highest road density of any forest in the Southwest Region.² The Santa Fe National Forest road density exceeds the recommended density set by the Department of Interior of 1.5 km/km² (2.5 mi/mi²) for a properly functioning watershed.³ The Coyote Ranger District has recognized this problem and is processing the National Environmental Policy Act (NEPA) work required to begin a road decommissioning program that would bring the Ranger District into compliance with the Santa Fe Land and Resource Management Plan (Management Plan).

¹ For a complete review see NRDC 1999, End of the Road. The Adverse Ecological Impacts of Roads and Logging: A Compilation of Independently Reviewed Research.

² USFS Biological Assessment for the Continued Implementation of the Land and Resource Management Plans for the Eleven National Forests and National Grasslands of the Southwest Region.

³ Id.

This project will benefit both nearby land owners, the Forest Service, downstream water users, as well as wildlife. The reduction in the road density of the Coyote Ranger District will lead to a reduction in human access which is strongly correlated with fire ignitions. Fire ignitions outside of the natural fire season and in unplanned locations can result in loss of control and unwanted effects on ecosystems as well as human communities in the Wildland Urban Interface (WUI).

The primary beneficiaries will be the Mesa Poleo and Gallina WUI communities. See maps in appendices. These WUI communities are the closest to the project area and will directly benefit from strategic thinning that might provide defensible fuelbreaks in the event a wildfire was moving in their direction from federal lands.

The Forest Service will benefit because fewer long-term expenditures will result from fire suppression, the need for law enforcement, and the environmental impacts from roads and undesirable fire behavior. Downstream municipalities and acequias associations will benefit from reduced water treatment and infrastructure maintenance costs. Also, recreationists will benefit especially hunters and anglers, from the improvement of both terrestrial and aquatic wildlife habitat conditions.

Employment of heavy equipment operators will benefit the local workforce and the revegetation and monitoring program will benefit local youth and other youth groups including Rocky Mountain Youth Corps through education and job training. The project will contribute to the infrastructure necessary to continue fuel treatments and forest restoration projects in the WUI for the short-term and long-term.

Project History

Forest Service regional headquarters has identified a problem: the Santa Fe National Forest has the highest density of roads in the Southwestern Region. The Coyote Ranger District is in the final process of NEPA for the project area in order to address this concern. The Coyote District Ranger is also in the process of identifying other federal funding opportunities to accomplish the work proposed in the NEPA documents. The federal grant monies are not yet secured, however, the Coyote Ranger District is committed to carrying out the required work to reduce road densities and reduce fire danger.

Project Coordinator and Partners

The project coordinator is Forest Guardians in Santa Fe and the primary contact for the project is Bryan Bird, Forest Program Coordinator. Partners include the Coyote Ranger District, local fire departments, and Acequia Mesa del Medio Association.

Roles

Coyote Ranger District:

- Staff is conducting NEPA for project and necessary for acceptance of CFRP proposal.
- The Coyote Ranger District will identify the priorities for road decommissioning and will determine the appropriate methods for closure and decommissioning.
- The Coyote Ranger District will develop the silvicultural prescriptions for fuel break thinning.
- The Coyote Ranger District reviewed the proposal, made comments and provided a letter of support.
- Staff provided guidance in identifying collaborators and partners.
- Staff will develop and participate in the monitoring plan.
- Coyote Ranger District will develop and provide signing and other safety measures during project implementation.
- Staff will provide overall project administration.
- The Coyote Ranger District will cooperate on a public education component.

Forest Guardians:

- Developed CFRP proposal.
- Provided budget information from ongoing restoration projects necessary in CFRP budget development.
- Contacted and coordinated with collaborators and partners.
- Participated in NEPA for project.
- Forest Guardians will conduct pre-project surveys, road closure and decommissioning and post-project monitoring.
- Forest Guardians will collaborate with the Forest Service on the public education component of the project.

Acequia Mesa del Medio Association:

- Acequia Association representative provided natural resource expertise and information used in development of the proposal.
- Acequia Association representative reviewed the proposal, made comments and provided a letter of support.
- Acequia association representative provided information on water diversion and policy in planning area.
- Acequia Association representative will provided input regarding heritage resources in the planning area
- Acequia Association will participate in project implementation including pre-project surveys as well as post-project monitoring.

Rocky Mountain Youth Corps:

- Will provide youth members to conduct pre-project surveys in cooperation with the Forest Service.

- Youth members will conduct revegetation in cooperation with Forest Guardians volunteers.
- Youth members will conduct post-project monitoring.

Objectives

The CFRP project will take place on the Coyote Ranger District in Rio Arriba County New Mexico and will serve the local communities in particular the WUI of Gallina, Mesa Poleo and Coyote. Fire risk and negative impacts to communities and forest ecosystems will be reduced through direct closure and decommissioning of unnecessary roads and strategic thinning to create fuel breaks in the Santa Fe National Forest and both the community watershed and the municipal watershed of Española.

The CFRP project will promote healthy watersheds by reducing high road densities which both contribute to poor water quality as well as undesirable fire ignitions during inappropriate weather conditions. By eliminating these negative consequences of high road densities, forest watersheds will be healthier and water quality improved for downstream users such as municipalities, acequia associations, and acequia systems. Terrestrial and aquatic wildlife habitats will be improved and plant and wildlife diversity will increase as a direct result.

Fire risk to communities in the WUI will be reduced through strategic thinning along roads creating fuelbreaks; safe, defensible spaces for firefighters to protect homes and lives in the event of a wildfire. Collaboration between diverse partners and sometimes adversaries will improve community relations and assist in the development of a sustainable forest restoration industry, including the use of heavy equipment and forest thinning skills that are ecologically sound.

Because strategic defensible spaces are constructed, the reestablishment of natural fire regimes to forest ecosystems in the project area will be a realistic and safe option for the Forest Service. Revegetation will take place on closed and obliterated road that are not identified as strategic fuelbreaks. The project will be self-sufficient after the project's life because fire will be reintroduced to the ecosystem and can be maintained because of strategic fuelbreaks and water quality and wildlife habitat will continue to improve as roads become less and less noticeable. In addition, people trained in survey techniques, revegetation, monitoring, and heavy equipment operation will enter the job market and presumably continue this valuable work elsewhere in northern New Mexico.

Using funding from the CFRP, the partners will identify roads in the WUI that would act as strategic fuel breaks and defensible space for firefighters. 100ft. on either side of these roads will be thinned with a leave tree prescription determined by silviculturalists in the Ranger District. In general the prescription will reflect basal areas of 30-50 square feet/acre in piñon-juniper forests and to basal area of 40-60 sq. ft. in ponderosa pine. Silvicultural prescriptions would leave healthy, disease-free trees in all diameter classes ensuring that large and old trees are retained. Strategic thinning treatments are expected to cost \$1500 per acre.

The goal for road decommissioning is 20 miles and 10 road crossings to be rehabilitated. Road decommissioning and revegetation is expected to cost \$7,000 per mile and \$3,000 per stream crossing. All applicable state and federal environmental laws and regulations will be followed.

Work Plan, Product and/or Outcomes

Activity	Who	Completion Date	Product/Outcome
Pre-project surveys	Forest Service/Youth Corps/Forest Guardians/Acequia Association	September 1, 2005	Information of existing conditions
Road decommissioning	Forest Service/Contractors	September 1, 2006	Decreased road density
Strategic thinning	Forest Service/Contractors	September 1, 2006	Decreased fire danger to WUI communities
Revegetation	Forest Service/Youth Corps/Forest Guardians	September 1, 2006	Obliterated roads revegetated

Monitoring and Evaluation Plan

Multiparty monitoring will be carried out by four major parties: Coyote Ranger District (Forest Service), Forest Guardians community volunteers, Rocky Mountain Youth Corps. Monitoring will take place in the second year of the CFRP grant and will train community members in project management, monitoring techniques, data management and report writing. These skills can be carried on into careers and other jobs by monitoring team members creating an infrastructure to maintain forest restoration. The pre-project surveys and project implementation monitoring will be lead by the Forest Service.

Activity	Who	Completion Date	Product/Outcome
Road closure monitoring	Forest Service/Youth Corps/Forest Guardians/Acequia Association	October 31, 2006	Number of miles of roads closed
Road decommission monitoring	Forest Service/Youth Corps/Forest Guardians/Acequia Association	October 31, 2006	Number of miles of roads obliterated
Fuel break monitoring	Forest Service/Youth Corps/Forest Guardians	October 31, 2006	Number of miles of strategic fuel breaks created
Revegetation monitoring	Forest Service/Youth Corps/Forest Guardians	September 1, 2007	Number of miles of roads revegetated
Water quality monitoring	Forest Service/Youth Corps/Forest Guardians/Acequia Association	September 1, 2007	Downstream water quality data

Appendices

- ◆ 8x10 Maps of proposed project area
- ◆ Qualifications (Resumes and biographies) of key personnel
- ◆ Letters of commitment from non-federal sources
- ◆ Letters of Support