United States
Department of
Agriculture

Forest
Service

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Environmental Assessment

Treatment of Dead Trees in the Wildland/Urban Interface Resulting from the Rodeo-Chediski Fire

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INTRODUCTION AND BACKGROUND

The Forest Supervisors for the Apache-Sitgreaves and Tonto National Forests propose to remove dead trees from burned areas on National Forest, one-half mile or less from private lands. This project is intended to reduce fuel loading adjacent to private lands, help create wildfire suppression zones, and improve public safety. Commercial salvage is proposed where economically feasible.

The 2002 Rodeo-Chediski Fire burned 460,000 acres of forested lands, including over 176,000 acres of the Tonto and Apache-Sitgreaves National Forests. The fire threatened thirty communities and subdivisions and destroyed 470 structures. The wildfire killed millions of trees, causing serious short and long-term hazards to users of the National Forests, local communities and subdivisions, and other forest resources. Public safety hazards from burned trees include falling trees and fuel loading adjacent to private lands.

The Forest Service has already accomplished fire recovery work within the Rodeo-Chediski Fire area. This Proposed Action is specific to the Wildland-Urban Interface, defined herein as National Forest lands within one-half mile of private land. The Forest Supervisors previously approved this project with a Decision Memo in December 2002. The Decision Memo was challenged and subsequently overturned by the Arizona District Court in July 2003 (No. Civ-03-0054-PHX-FJM). The court found that a Decision Memo was not appropriate to meet National Environmental Policy Act (NEPA) documentation requirements for the project, however the court did not impose an injunction on the Forest Service, so work on the project is in progress. The Forest Supervisors have prepared this Environmental Assessment to demonstrate that the project will not have any significant adverse effects.

Two Decision Memos for similar work immediately adjacent to roads, private landlines and administrative sites and infrastructure were approved in December 2002 and upheld by the court. A Draft Environmental Impact Statement (DEIS) proposing salvage on approximately 40,000 acres of National Forest within the fire area was released for public comment in October 2003. The DEIS contains cumulative effects analysis for all the concurrent fire recovery projects. This Wildland-Urban Interface Environmental Assessment (EA) incorporates the cumulative effects analysis by reference and tiering.

Approximately 34,580 acres of National Forest System lands lie within one-half mile of private land boundaries (see attached Project Map). Just over half of this acreage is proposed for treatment of dead fuels.

Large-scale maps of proposed treatment areas are located in the Project File at the Black Mesa Ranger Station, Apache-Sitgreaves National Forests in Overgaard, AZ.

PURPOSE AND NEED FOR ACTION

This project responds to the need for public safety by reducing fuel loading on National Forest System lands within one-half mile of private lands. The need for action is the difference between the existing and desired condition. Existing standing dead fuel loadings range from 49 tons per acre to over 91 tons per acre. The desired fuels condition for National Forest lands within the Wildland-Urban Interface is 4.8 to 7.8 tons per acre of down material. The Fuels Specialist Report (Project Record #25) describes the existing and desired fuels condition in further detail. Dead trees pose a threat to public safety as they fall down. Over time, the dead trees will become a wildfire hazard that could threaten private land.

The purpose of this project is to reduce fuel loading within the Wildland-Urban Interface in a manner that:

- ► is consistent with applicable land management policies and plans;
- ► does not pose a risk of significant adverse effects; and
- ► is economically feasible.

Relationship to Policies and Plans

Consistency with Forest Plans

The Tonto National Forest Plan was adopted in 1985 and the Apache-Sitgreaves National Forests Plan was adopted in 1987. Each plan assigns Management Areas (MAs) with particular goals, standards and guidelines (see Chapter 3 of the respective Forest Plans). The project area includes: MA 01 (Forest Lands), MA 02 (Woodlands), and MA 03 (Riparian Areas), and MA on the Apache-Sitgreaves National Forests, and MA 5D on the Tonto National Forest.

MA 01 – For forest lands, management emphasis is a combination of multiple uses including a sustained yield of timber and firewood production, wildlife habitat, livestock grazing, watershed, and dispersed recreation.

MA 02 – Management emphasis for woodlands consists of fuelwood production, wildlife habitat, watershed condition, and livestock grazing. Other resources are managed in harmony with the emphasized resources.

MA 03 – Management emphasis for riparian areas recognizes “the importance and distinctive values of riparian areas when implementing management activities” by giving preferential consideration to riparian area dependent resources (as defined in the FLMP, p. 277-1; note that these resources include watershed condition) in cases of unsolvable conflicts, managing to maintain or improve riparian areas to satisfactory riparian condition (as defined in the FLMP, page 277-1), and implementing other resource uses and activities to the extent that they support or do not adversely affect riparian dependent resources. Management emphasis of riparian (MA 03) is directed at areas with riparian dependent resources in the priority order of: threatened and

endangered species; cold water fisheries; warm water fisheries; and all other riparian areas. A very small amount of MA 03 is in the Wildland Urban Interface area.

MA 5D – Emphasis is management for a variety of renewable resource outputs with primary focus on intensive, sustained yield timber management, timber resource protection, creation of wildlife habitat diversity, increased populations of emphasis harvest species, and recreation opportunities.

The project is designed to meet, or move the area towards meeting, the goals and objectives established in the Apache-Sitgreaves and Tonto National Forest Land and Resource Management Plans, (Forest Plans) as amended. Special consideration was given to Forest Plan standards and guidelines for retention of snags, down logs and woody debris in areas to be treated by this project (see Project Record #50).

Other Laws, Regulations and Policies

This project has been designed consistent with all current laws, regulations and policies that apply to post-fire recovery projects, including salvage.

National Fire Policies

The Fuels Report (Project Record #25) discusses National Fire Plan and other national policies related to wildland fire. Reducing future fuel loading within the wildland-urban interface area is consistent with all national fire policies.

Public Involvement

On August 24, 2002, a scoping notice was mailed to 389 groups, organizations and individuals who have asked to be kept informed of activities on the Apache-Sitgreaves and Tonto National Forests associated with the Rodeo-Chediski Fire. Thirty-eight replies were received plus 188 e-mail form letters (treated as one letter) from members of the Center for Biological Diversity expressing opposition to any action within the burn. All scoping responses were evaluated (see Analysis of Scoping Comments, Project Record #21, 47). This Proposed Action was circulated for scoping again in August 2003. Two letters were received during the 2003 scoping period.

Several public issues were raised during the two scoping periods. These issues were used to develop design criteria to reduce risk of significant adverse effects. All issues were resolved through mitigation measures and adherence to Forest Plan standards and guidelines.

Decisions to be Made

The Forest Supervisors will decide:

- ►Whether or not to continue felling and/or removal of dead trees within the project area.
- ►Whether or not to modify the design criteria and mitigation measures.
- ►Appropriate monitoring requirements to evaluate project implementation.

►Whether or not the project may have significant environmental effects that must be evaluated in a separate Environmental Impact Statement.

ALTERNATIVES, INCLUDING THE PROPOSED ACTION

No Action

The No Action alternative would discontinue treatment of dead trees within the wildland-urban interface, except as part of other National Environmental Policy Act decisions. Under the No Action alternative, fuel loading on National Forest System lands adjacent to private lands would not be reduced through salvage logging or other means.

Proposed Action

The Proposed Action is treatment and/or removal of dead trees on National Forest System lands within one-half mile of private lands burned in the Rodeo-Chediski Wildfire of 2002. Approximately 34,580 acres of National Forest System lands lie within one-half mile of private land boundaries (see attached Project Map). Treatments are proposed on 56 percent of this acreage (approximately 19,000 acres).[1] Salvage logging is economically viable on about 13,700 acres and would yield approximately 17 million board feet of timber. Fuel treatments (fall and lop, chip or crush slash) would occur on areas salvaged logged as well as an additional 5,500 acres of treatment where commercial opportunities are minimal.

The Proposed Action includes mitigation measures and design features listed in Table 1.

Mitigation Measures and Design Features

The following mitigation measures and design criteria were developed by the Interdisciplinary Team (IDT) to reduce risk of significant adverse effects and meet Management Area Standards and Guidelines. The following Best Management Practices (BMPs) are based on: experience and field observations made after the fire, Terrestrial Ecosystem Survey (TES) mapping unit properties, limitations and suitabilities for various management practices, and BMPs from the Black Mesa Ranger District Report: "Soil and Water Conservation Practices to Mitigate Harvest Activities, Best Management Practices," Prepared by Dave Maurer, Forester, 11/20/2000, among others.

[1] Areas excluded from consideration include stands that are unburned or burned at low severity levels and slopes that exceed 40 percent. Some burned stands are not proposed for treatment to reduce inherent risks or that significant environmental impacts may occur. All acreages are approximate and are being field verified and adjusted during implementation.

Table 1. Mitigation Measures and Design Features

Resource/ Mitigation ID	Mitigation Measure/Design Features
Soils and Water (SW) 1	Fall all non-merchantable dead standing trees along the contour.
SW 2	Fall dead trees away from stream channels with defined bed and banks. Avoid felling trees into or across these channels.
SW 3	Fall dead trees across swales and ephemeral streams that do not have defined bed and banks.
SW 4	Clean dead and down debris in channels where the debris may be mobilized in flood events and end up in debris jams lodging downstream in constricted channel reaches, culverts, bridges and/or spillways.
SW 5	Remove fences that cross watercourses to prevent accumulation of debris and damming or diversion of run-off flow.
SW 6	Stabilize discontinuous gullies and head-cuts in or downstream from meadows and grasslands.
SW 7	Limit salvage and removal of trees to areas with slopes less than 40% for ground-based logging. Operate on or near the contour, where possible, allows for natural drainage of skid trails, and minimizes gully formation within skid trails. [2]
SW 8	Establish 150 foot filter strips in Streamside Management Zones with moderate to severe erosion hazard (TES soil units[3] 53, 178, 183, 186, 191, 193, 197, 198). Log decks are only permitted on the uphill side of existing roads located within the filter strip. .
SW 9	Establish 100 foot filter strips in Streamside Management Zones with slight erosion hazard (TES soil units 53, 178, 183, 186, 191, 193, 197, 198). Log decks are only permitted on the uphill side of existing roads located within the filter strip.
SW 9	Avoid decking logs within 100 feet of live stream channels or within swales and ephemeral channels.
SW 10	Limit ground disturbing activities (tractor skidding, decking, machine piling, etc.) to dry or frozen conditions on TES soil units 183, 191, 192, 193, 197, 198, and 202. to reduce compaction and soil displacement (rutting).
SW 11	At the discretion of the Contracting Officers Representative, restrict hauling and skidding during wet periods to prevent damage to soils or road systems. See Apache-Sitgreaves Guidelines for Excessive Rutting, 6/10/92. These guidelines are applicable to all TES units but particularly in 53, 187, 198 and 202.
SW 12	Design, locate, and use designated skid trails where appropriate, especially cultural resource sites, sensitive soils and steeper slopes. Skid trails should cross drainages perpendicular to the channel. No skidding up and down channels. After harvest, close skid trails by scarifying them, placing slash and woody debris on disturbed areas, and seeding them.

[2] Normal operations are limited to 25% or less, however skidding/yarding may occur on slopes up to 40% to reach logs endlined out.

[3] TES soil unit maps are in the Project Record.

Resource/ Mitigation ID	Mitigation Measure/Design Features
SW 13	Select landing locations and sizes that minimize vegetation and soil loss. After harvest, close landings by scarifying them, placing slash and woody debris on disturbed areas, and seeding them.
SW 14	Use fell to lead yarding methods to complement skidding.
SW 15	Fall dead trees away from the channel in bottom areas along 2nd order streams with defined bed and banks. Avoid felling into or across drainages.
SW 16	Remove debris generated from product harvest activities away from stream channels. Avoid operating equipment within. Removal of material by hand or through end-lining is allowed. NOTE: Slash and debris may be left in first order headwater channels of ephemeral drainages designated by the district watershed representative, where slash can help retain runoff and sediment and provide headcut stabilization.
SW 17	Avoid piling of logging debris, except in areas designated by the district watershed specialist. Scatter slash where possible.
SW 18	Leave stumps high in channels and swales to facilitate catching debris during floods.
Fuels 1	Crush, lop, scatter or chip slash to create a fuel bed less than two feet deep. Prescribed burning is not recommended at this time.
Heritage (H) 1	Avoid use of mechanized equipment (trucks, skidders, chippers, crushers, e.g.) within cultural site boundaries.
H 2	Avoid staging of equipment or supplies within cultural site boundaries.
H 3	Avoid piling of logging debris within cultural site boundaries.
H 4	This project is considered a No Effect Undertaking (see SHPO Clearance Project Record 30). Consult with the State Heritage Protection Office if unexpected adverse effects cannot be avoided during implementation.
Engineering (E) 1	Abate dust to reduce hazards caused from poor visibility and minimize dust on road sections adjacent to private land.
E 2	Use signing in accordance with MUTCD, Manual on Uniform Traffic Control Devices, 2000 edition.
E 3	Construct turnouts or double lane sections in accordance with FSH 7709.56.
E 4	Restrict activities on weekends and holidays on high use travel routes.
E 5	Restrict hauling on unsurfaced roads to dry or frozen conditions.
E 6	Employ radio communication and and install mile-posting signs to warn operators of traffic conditions.
E 7	Implement road closures and/or one way travel restrictions during logging and salvage activities to minimize conflicts with haul vehicles.
E8	Install additional signing on State 60 and 260 during harvest or road work activities and consider adding flag people under extremely heavy traffic conditions. Use radio communication and mile posting to warn operators about traffic conditions.
E9	Improve or correct rolling dips, stream crossings, and culverts. Extend and enlarge, as needed, the raised portion of water bars on the uphill side of the road to ensure all flow from ditches or drainages is diverted across the road.

Resource/ Mitigation ID	Mitigation Measure/Design Features
E10	Install hardened drainage crossings at natural grade. Additional rolling dips or water bars are preferred to culverts to divert water off roads and out of roadside ditches. Consider not re-installing any culverts removed by the Burned Area Emergency Rehabilitation (BAER) team.
E 11	Runoff from road prisms must be discharged frequently enough to avoid erosion or overtopping of roadside ditches. Drainage from the road prism and associated ditches must be discharged into buffer strips (or scattered slash piles) where its energy can be dispersed and sediment can drop out before reaching the natural drainage system. If this is not possible, relocate that portion of the road away from the channel or identify it as needing future relocation as part of the long-term rehabilitation of the burned area
Wildlife (W) 1	Maintain a speed limit of 25 mph through all owl habitats to minimize vehicle-owl collisions.
W 2	Restrict operations during breeding season in designated spotted owl activity acres (PACs) (see Appendix A for specifics).
W 3	Restrict operations during breeding season in designated goshawk post-fledgling areas (PFAs)(see Appendix A for specifics).
W 4	Avoid treatment within ¼ mile of 1997 and 1998 owl nest sites.

Monitoring Plan

For this project, monitoring would be conducted in accordance with the requirements outlined in both the Apache-Sitgreaves and Tonto National Forest Plans.

Monitoring for sale activities would occur during and immediately following sale implementation. Forest Service representatives would monitor unit layouts, road closures, road maintenance activities, and harvest operations to ensure compliance with contract requirements and specifications.

The DEIS for the Rodeo-Chediski Fire Salvage Project includes a monitoring plan (Appendix F). This plan is incorporated into the Proposed Action by reference. The monitoring plan would be implemented during and after operations approved under the DEIS and this EA.

Other Alternatives Considered

No other action alternatives satisfy the purpose and need. Two other alternatives were suggested by members of the public:

An alternative that accomplished fuels reduction work without commercial salvage logging was suggested. Such an alternative would require fuels reduction work to be accomplished without removal of dead trees. All debris would be treated on-site and costs for this action would not be offset by the sale of wood products and would exceed the budget for fuels treatment. Therefore, this alternative was dropped from further detailed consideration.

An alternative was suggested that would "redirect timber salvage funds to…assist private landowners with reducing risk on their own lands." This alternative is beyond the scope of project-level NEPA and is not legal. This project aims at reducing fuels on National Forest surrounding private lands. The Forest Supervisors could choose No Action if they wish to abandon the project and return funding for other purposes.

The project is currently being implemented (no injunction was ordered by the courts), which renders consideration of other alternatives moot. The DEIS considers four action alternatives for salvage within the rest of the Rodeo-Chediski Fire area.

Comparison of Alternatives

The following table compares the No Action and Proposed Action alternatives.

Table 2 Comparison of the No Action and Proposed Action alternatives.

Activities/Actions	No Action	Proposed Action
Acres Treated	0	19,376
Salvage Volume	0	17 million board feet
Operations Costs	0	$4.7 million
Fuel Tonnage After Treatement	49 – 89 tons per acre	11 – 72 tons per acre

ENVIRONMENTAL EFFECTS OF THE ALTERNATIVES

This section describes the environmental impacts of the Proposed Action and No Action alternatives. This section is focused on the significance of various environmental effects to determine whether or not to prepare an Environmental Impact Statement. Further analysis and conclusions about the potential effects are available in Resource Specialists Reports and other supporting documentation cited below.

Soils and Water

This section summarizes effects analysis described in the Project Record #38, Soils and Hydrology Report, Wildland Urban Interface. These findings are also supported by soils and water analysis in the DEIS.

No Action

Runoff from the burned area has increased significantly since the fire. Initial estimates by the BAER Team indicated peak flow rate increases from two to four times, particularly where a high percentage of the area was moderately to severely burned.

Increases in runoff from the burned areas will increase the frequency and extent of flooding Numerous bankfull flow events have occurred in the washes coming out of the burn area since the fire. Roads have been washed out in places and backwater areas have large deposits of black ash and sediment. Several downstream private landowners have had water near their homes.

Little dead and down material remained on the ground in moderate to severely burned areas. Over time the dead trees will begin to fall. Dead burned tree located on the banks of the streams and washes will fall into the drainages as streambanks are undermined by high flows. These can create debris jams that result in damage to infrastructure within the Wildland-Urban Interface.

Large amounts of sediment will likely become mobile due to bare ground in the severely burned areas, the soil types involved, and steep slopes within the burn area. Grade changes and stream channel configuration will cause deposition of sediment and ash in some areas and down cutting and bank cutting in other areas.

Future fires with such high fuel loads would also have the potential for soil impacts that are more severe than the original fire. The duration would be longer and the fire intensity higher than what has occurred in the past.

Proposed Action

The proposed treatments would add ground cover to the soil. Adding ground cover would have a positive effect on reducing erosion in all soil types. Since only small areas are proposed for treatment, out of a much larger total burned area, only small gains can potentially be made in soil erosion reduction. Ground disturbance can help increase surface roughness that promotes infiltration and results in rebuilding soil A-horizons, and reducing erosion potential, runoff and flooding.

Runoff was modeled for the action alternatives in the DEIS. For all alternatives, the model showed reduced soil erosion and runoff, and a slight reduction of potential downstream flooding and sedimentation. The effects from the Wildland-Urban Interface project are expected to be similar to the model results. However, the potential treatment areas are small, compared to the size of the fire, so no substantial reduction in runoff is expected.

The cumulative effects analysis for the DEIS (including all past, current and foreseeable projects in the fire area) concluded that 1) the Rodeo-Chediski Fire had "profound impacts on the burned area watersheds," and that "future activities are more important than past activities" (p. 54). "The cumulative effects of the decision memo activities[4] would have a net effect of nearly zero" because "[l]ogging impacts on the severely burned areas would generally be offset by resulting ground cover from remaining slash of the harvested trees."

Vegetation

This section summarizes effects analysis described in the Project Record #24, Categorical Exclusion Areas 1, 2, and 3. These findings are also supported by vegetation analysis in the DEIS.

No Action

Moderately to severely burned areas within The Rodeo-Chediski Fire have little to no live vegetation remaining. With seed sources reduced or non-existent on the severely burned sites and few funds available for planting, the long term viability of these stands are at risk. Snags would be abundant across the analysis area, averaging 7.1 per acre. Downed logs would be

[4] The Decision Memo activities include the current Proposed Action.

deficient for the next several years but would gradually become abundant over the next 5-10 years as dead trees fall.

Proposed Action

No adverse effects on live vegetation are expected from the Proposed Action. Generally, slash would provide microclimates for vegetation re-establishment. All dead trees would be felled and removed or mechanically treated. Snags would be retained in adjacent low severity and unburned areas left untreated. Project Record 50, Analysis of Forest Plan Requirements For Snag Retention in the Wildland/Urban Interface Resulting from the Rodeo/Chediski Fire of 2002, discusses snag requirements and finds that these requirements would be met by the project.

Fuels and Air Quality

This section summarizes effects analysis described in the Project Record 25, Fuels Technical Report Addressing Areas Within The Rodeo/Chediski Fire Perimeter, Categorical Exclusion Areas 1, 2 and 3. These findings are also supported by fuels and air quality analysis in the DEIS.

No Action

Under No Action, acres that burned at a moderate-high and high severity will have an increase in fuels as trees fall down. The potential exists for severe fires to reoccur after dead trees fall and fine fuels develop from vegetation growth. This increase in fire hazard would put regeneration established since the fire at risk of burning up in future wildfires.

In the long-term (10 – 20 yrs.), fire killed trees will fall, accumulate, and create a continuous jackstraw layer two to three feet deep of large and small woody material intermixed with grass and shrubs. The fuel loading in high severity burn areas will be greater than the moderate burn because all the trees are dead and will eventually fall adding to the fuel loading. As the dead trees dry, they will become the main fire carrier. Where the slash is discontinuous, grass and shrubs will carry the fire to the next slash "jackpot". Large fuels (greater than 3 inches) will add to the fire behavior and fire effects.

Proposed Action

Fuel modeling was done to determine fuel loading once dead trees over 12 inches are removed and smaller diameter material is treated. Fuels would be reduced to an average of 11 to 72 tons per acre after treatment, a reduction from the predicted future levels of 49 to 91 tons per acre (with no treatment). Reduced fuels would help moderate future fire behavior. The effectiveness in moderating future fire behavior is not precisely known, because of the many factors affecting fire behavior. However, all other things being equal, models predict that reduced fuel loading reduces flame length and fire intensity.

Fuel reduction treatments are intended to protect human communities from wildland fires as well as minimize the spread of fires that might originate on private property. The management objective in the urban wildland intermix zone is to enhance fire suppression capabilities by modifying fire behavior inside the zone to provide a safe and effective area for possible future fire suppression activities.

In the short term, some increased fuel hazard could occur if trees are felled and left untreated. This project proposes to treat slash through lopping, scattering, crushing and/or chipping. These treatments will reduce fuel hazard to acceptable levels (see Project Record 25 for details).

The cumulative effects of all fuels reduction and salvage logging in the Rodeo-Chediski Fire is addressed in the DEIS. Treatment throughout the fire area would further break up the fuel continuity and reduce the fuel loading in the fire area and provide a safer area for firefighter safety and prevention efforts.

No air quality impacts are anticipated because no burning is proposed and dust abatement would occur.

Species of Concern

This section summarizes effects analysis described in the Project Records #44 (Biological Assessment and Evaluation) and #55 (Wildlife Report). These findings are also supported by wildlife analysis in the DEIS.

No Action

Under No Action, no direct or indirect impacts would occur to wildlife. Over a long time, natural recovery of habitats would occur.

Proposed Action

No significant impacts on proposed, threatened, and/or endangered species are anticipated from implementation of this Proposed Action. The US Fish and Wildlife Service informally reviewed and concurred with the findings in the biological assessment (F&W letters, December 11 and 20, 2002,). The design features and mitigation measures summarized in this EA and discussed in detail in the record limit or eliminate significant adverse impacts.

Sensitive plant, insect, animal and fish species and management indicator species were also considered (see Appendix A to Project Record #55 for a full listing of species and a determination of effects). For all species considered, no significant adverse effects are expected from falling and/or removing dead trees. The project would not jeopardize the viability of any species. Sufficient numbers of standing dead trees will remain in areas adjacent to the project.

Heritage Resources

Archeologists have reviewed the affected area for Native American religious or cultural sites, archeological sites and historical properties or areas (Determination of No Adverse Effect To Cultural Resources, Linda Martin, October 31, 2002, Project File). No impacts to significant heritage values will result from the proposed action. Concurrence from the State Historic Preservation Officer was received November 8, 2002.

Economic Effects

The Proposed Action would cost approximately 4.7 million dollars while generating $200,280 in the sale of the salvage timber. Approximately 186 jobs would be generated through the implementation of this proposed project, of which 36 jobs would be a result of the harvesting of the timber. The remaining 150 jobs would be a result of implementing the improvement projects, such as road maintenance, thinning, lopping, and chipping the slash material. The

majority of the jobs will be seasonal in nature and will be dependant upon the federal government to fund improvements associated with this project (see Project Records #31 and 34 for more information).

Public Health and Safety

Under No Action, public health and safety could be compromised over the next few decades. This is because people can be hit by falling trees at any time during this period. In the future, the re-burn potential creates additional hazards.

The Proposed Action is intended to increase public health and safety by reducing the likelihood of injury or death due to falling trees. It would also increase future public safety by reducing future flammable fuels (see Fuels and Air Quality discussed previously). Several mitigation measures are in place to help protect public health and safety.

Recreation and Visual Quality

The Rodeo-Chediski Fire affected recreation opportunities and visual quality. The Proposed Action would improve recreation opportunities by improving public safety and allow the re-opening of areas currently closed to public use due to the hazardous conditions. Visual quality would recover over time, however in the short term some people may prefer to see standing dead trees rather than a salvaged area.

Environmental Justice

Areas adjacent to developments within the wildland urban interface will be treated in similar manners regardless of demographics or income of the development's population, thus there does not appear to be a disparate impact to any particular population.

Roads

No new permanent or temporary roads are planned with this project. Existing roads within the Wildland-Urban Interface area would be impacted by the project (Project Record #32). Several mitigation measures are in place to maintain road quality. No roadless areas would be entered with this project. Long-term rehabilitation efforts will be considered in future NEPA analysis. Under No Action, no roads would be maintained beyond normal scheduled maintenance. This could result in further decline of the roads.

CONSULTATION AND COORDINATION

This section lists the primary Interdisciplinary Team members who prepared this analysis, along with the Federal, State, and local agencies and tribes consulted during the development of this project analysis.

ID Team Members

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Federal, State and Local Agencies Consulted

City/Municipal/Local Government

City of Show Low
Clay Springs Fire Department
Forest Lakes Fire Department
Heber-Overgaard Fire Board
Heber-Overgaard Fire Department
Heber-Overgaard Sanitation District
Heber-Overgaard School Board
Heber Water Company
Linden Fire Department
Town of Springerville
Pinetop Fire Department
Show Low Fire Department
Show Low Irrigation District
Silver Creek Irrigation District, Snowflake
Timberland Acres Road Improvement District, Show Low
Timberland Acres Water Improvement District, Show Low
Town of Eagar

County Government

Apache County Board of Supervisors, St. Johns
Coconino County Board of Supervisors, Flagstaff
Eastern AZ Counties Organization, St. Johns
Natural Resources Conservation Service Center, Holbrook
Natural Resources Conservation Service, Little Colorado River Plateau, Holbrook
Navajo County Board of Supervisors, Holbrook
Navajo County Cooperative Extension Services, Holbrook
Navajo County Development Services, Holbrook
Navajo County Parks and Recreation Department, Holbrook
Northern AZ Council of Governments, Flagstaff

Federal Government

Bureau of Indian Affairs, Phoenix Area Office, Phoenix
Bureau of Indian Affairs, Fort Apache Agency, Whiteriver
Bureau of Indian Affairs, San Carlos
Senator Jon Kyle, Phoenix
Senator John McCain, Phoenix
USDA, Forest Service, Apache-Sitgreaves Supervisor’s Office, Springerville
USDA, Forest Service, Black Mesa RD, Overgaard
USDA, Forest Service, Lakeside RD, Lakeside
USDA, Forest Service, Tonto Supervisor’s Office, Phoenix
USDA, Forest Service, Pleasant Valley RD, Pleasant Valley

USDA, Forest Service, Southwestern Region, Albuquerque, NM

USDI, Fish and Wildlife Service, Phoenix

State Government

AZ Congressman J.D. Hayworth, District 6 Representative, Mesa
AZ Department of Environmental Quality, Phoenix
AZ Department of Public Safety, Holbrook
AZ Department of Transportation, Show Low
AZ Department of Water Resources, Phoenix
AZ Game and Fish Department, Clay Springs,Mesa, Pine, Pinetop, Phoenix
AZ State Land Department, Phoenix, Prescott, Pinetop
AZ State Parks, Show Low
AZ State Representative Jake Flake, Phoenix

Tribal Contacts

Fort McDowell Indian Community, Fountain Hills
Hopi Tribe, Kykotsmovi
Navajo Nation, Window Rock
Ramah Navajo Chapter, Ramah, NM
San Carlos Apache Tribe, San Carlos
Salt River Pima-Maricopa Indian Community, Scottsdale
Tonto Apache Tribe, Payson
White Mountain Apache Tribe, Whiteriver
Yavapai-Apache Nation, Camp Verde
Yavapai-Prescott Tribe, Prescott
Zuni Pueblo, Zuni, NM

PRIMARY REFERENCES

References for each resource discussed are published in the DEIS and incorporated by reference.

APPENDIX A

Appendix A provides specific information about the owl activity centers and goshawk post-fledgling areas where operations may be restricted. Mitigation measures for Mexican spotted owls and northern goshawks are on an individual PAC or PFA basis. PACs and PFA's with no restrictions are not listed.

Table A -1. Mexican spotted owl mitigation measures.

PAC No.	Recommendations
PAC 203	Breeding season restriction for treatments and hauling.
PAC 207	Breeding season restriction.
PAC 208	Breeding season restriction. Cut down trees, but leave in PAC. NOTE: Restrictions assume use of Roads 9555Y, 9562 and 9221E. If different roads are used for access, re-initiation of consultation will be required.
PAC 214	No salvage along FR 300 from Gentry Tower and one mile west.
PAC 502	For roads, treatment within the PAC under breeding season restrictions.
PAC 508	Breeding season restrictions for treatments and hauling.
PAC 509	No restrictions unless survey identifies owls are still present.
PAC 511	Breeding season restrictions for treatments and hauling.
PAC 512	Breeding season restrictions for treatments and hauling.
PAC 513	Breeding season restrictions for treatments and hauling.

Table A -2. Northern goshawk mitigation measures.

PFA Name	Recommendations
Upper Canyon Creek	Breeding season restrictions on implementation of treatment activities.
Jersey Horse	Breeding season restrictions on implementation of treatment activities. This includes both sides of FR 86 immediately south of PFA.
Baca	Breeding season restrictions on implementation of treatment activities.
Heber Hollow	Breeding season restrictions on implementation of all treatment activities. No treatments to trail.
Bunger	No restrictions at this time, but based on future field visit may impose restrictions within ¼ mile of remaining habitat.
Outlaw	Breeding season restrictions on implementation of all treatment activities including hauling.
Dead Horse	Breeding season restrictions on implementation of all treatment activities including hauling.
Bear Springs	Breeding season restrictions on implementation of treatment activities.
Coal Canyon	No treatment within ¼ mile of 1997 and 1998 nests.
Gourd Flat	Breeding season restrictions on implementation of treatment activities.
Left Hand	Breeding season restrictions on implementation of treatment activities.
Danish Hollow	Timing restrictions on a ¼ mile buffer around the 2000 alternate nest and the 1999-2001 nest tree.
Colbath	Breeding season restrictions on implementation of treatments in the northern portion of this PFA.