DECISION MEMO

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

Apache-Sitgreaves and Tonto National Forests
USDA Forest Service
Coconino, Gila, and Navajo Counties, Arizona

This decision is for the treatment of dead trees resulting from the Rodeo/Chediski Fire of 2002 that are within one-half mile of private land boundaries. This decision is made under the Forest Service Chief's Categorical Exclusion 31.2 (6), "Timber stand and/or wildlife habitat improvement activities." The Chief, in FSH 1905.15, established that projects proposed under the authority of 31.2 require documentation in a project file and a Decision Memo.

This project will reduce fuels on National Forest System lands adjacent to private lands. No new road construction will occur and livestock grazing within the burned area has been deferred until additional environmental analysis occurs. It does not have extraordinary circumstances that, individually or cumulatively, would have significant effects on the quality of the human environment. Therefore, we have determined this categorical exclusion is appropriate for our decision.

DECISION

The Rodeo/Chediski Fire burned more than 460,000 acres of forested lands, including over 176,000 acres of the Tonto and Apache-Sitgreaves National Forests. There were 470 structures destroyed by the fire, and 30 communities and subdivisions were threatened. This 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. Hazards from burned trees include significant fuel loading in proximity to private lands.

It is our decision to treat dead trees within the areas identified on the attached Project Map. Approximately 34,580 acres of National Forest System lands within one-half mile of private landlines were analyzed for treatments to provide defense zones against future wildfires (see attached Project Map). It is anticipated that about 56 percent of the area will be treated to reduce fuels. The remaining 44 percent will not be treated because areas were either unburned or burned at low severity levels, occurred on slopes exceeding 40 percent, or because impacts to environmental resources may occur. Large-scale maps of proposed treatments areas may be found in the Project File located at the Black Mesa Ranger Station, Apache-Sitgreaves National Forest in Overgaard, AZ.

The dead trees may be removed from the burn area or left on-site. Dead trees are defined as having no living green needles visible on the limbs or bole. All means of treatment

will be considered such as salvage logging, chipping, chunking, and making them available for firewood and other forest products. Site-specific resource conditions will dictate the type of treatment applied within the project area (see Exhibits 1 and 2, Mitigation Measures).

The treatment proposed in this action will reduce the amount of potential fuel loading down to an average of 11 to 72 tons per acre. In addition to this project, future fuel reduction and watershed improvement projects will be required to reduce fuel loading and remaining coarse woody debris to optimum levels of 4.8 to 7.8 tons per acre and will be addressed in additional NEPA documents.

RATIONALE

The Mogollon Rim area within the Apache-Sitgreaves and Tonto National Forests is, and has been, a high priority area for fuels reduction work as it has the second highest incidence of cloud to ground lightning strikes in the continental United States (second to Florida). The close proximity of WUI areas to structures on private lands, high incidence of ignitions, and increased fuel loading create an immediate need for treatments before the start of the 2003 fire season.

It is estimated that thousands of structures and approximately 50,000 people are located adjacent to the Apache-Sitgreaves and Tonto National Forest boundaries within the Rodeo/Chediski Fire perimeter. Many homes, structures, fences and private property improvements are within feet of the forest boundary.

Future impacts from heavy accumulations of dead and down material have been described well in research (see Fuels Report, Les Buchanan, October 31, 2002, Project Record). Heavy fuel accumulations contribute to very high and extreme fire intensity, extreme fire behavior, fire persistence, resistance-to-control, and fire burnout time. Soil and associated microorganisms receive major detrimental impacts from high intensity fires (Soils and Hydrology Report, Tom Subirge and Collis Lovely, November 15, 2002, Project File).

National Forest System lands within 150-feet of private land boundaries will be treated under a separate Categorical Exclusion document (see Decision Memo for Fences and Utility Lines, Project File). The rationale for treating dead trees outside of the 150-foot wide strip along private land boundaries and within one-half mile of these landlines is to provide for defense zones against future wildfires. Future estimated fuel loadings range from a low of 49 tons per acre to over 91 tons per acre and will be far outside the range of natural variability. Within the next five to 10 years, these dead trees will rot and fall down. Coupled with the regrowth of live vegetation, a significant fuel loading will result, exposing private land residents to a greater hazard than existed prior to the Rodeo/Chediski Fire.

A one-half mile defense zone (or safety zone) was chosen to allow suppression crews to remain in place and extinguish spot fires that would otherwise spread in receptive fuel

beds and threaten homes and communities. Without treatment within this zone, future fire suppression crews would not be able to remain in the area due to hot gases and intense radiant heat that can travel ahead of the main fire.

PUBLIC INVOLVEMENT AND SCOPING

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 and 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. Six letters expressed opposition to any action regarding salvage or rehabilitation, 21 letters were in agreement with actions proposed in the scoping request and two expressed a need for immediate treatment before values were lost. Suggestions ranged from thinning the entire forest to treating major stands in the Wildland/Urban Interface (WUI). Recommendations also included reducing erosion by falling trees parallel to slopes, crushing and chipping smaller trees, and developing fire plans that incorporate prescribed burns to reduce fuels.

Five respondents suggested that no roads be closed and one stated that roads should not be repaired. One individual and two groups suggested alternatives to salvaging timber and provided detailed information to be analyzed in an EIS. These suggestions included recommendations that the Beschta Report and other scientific reports be considered before undertaking any action (see Review of Scientific Literature, Jimmy E. Hibbetts, November 15, 2002, Project Record). The 188 e-mail form letters from members of the Center for Biodiversity state that the Forest Service should work to protect all WUI areas in the Southwest rather than treating them, and to study recovery of the burned area under natural processes (Analysis of Scoping Comments, Jimmy E. Hibbetts, October 10, 2002, Project File). After analysis of the burn area it was decided that some action was better than a no action alternative and more closely meets the purpose and need for this project (see Soils and Hydrology Report, Fuels Report, and Scoping Request, Project File).

Rehabilitation treatments for the remainder of the burned area on National Forest System lands will be addressed in separate NEPA documents. The decision to implement this project will help reduce future fuel loading adjacent to private lands, move toward creating defense zones needed to take action against future wildfires, and may capture the value of a small portion of dead trees that would otherwise be lost.

Providing opportunities for firewood and other forest products responds to public concerns about firewood and utilization of burned trees. This approach also allows private landowners to protect their property from future wildfires.

EXTRAORDINARY CIRCUMSTANCES REVIEW

Site-specific conditions were reviewed on the ground to determine if extraordinary circumstances were present:

- Steep slopes or highly erosive soils. A soils scientist and hydrologist have assessed conditions in the affected area (Soils and Hydrology Report, Tom Subirge and Collis Lovely, November 15, 2002, Project File). The criteria set forth in Exhibit 1 limiting treatment of dead trees on steep slopes and for use of equipment to limit soil compaction caused by this project will limit or eliminate slope and soil impacts. No significant impacts are anticipated from implementation of this project.

- Threatened or endangered species, or their habitat. Wildlife biologists have prepared a biological assessment for this action (Earl Klein and Henry Provencio, November 18, 2002, Project File). The criteria set forth in Exhibit 1 limiting treatment of dead trees within or adjacent to threatened or endangered species, or their habitats, during this project will limit or eliminate impacts. No significant impacts are anticipated from implementation of this project. The US Fish and Wildlife Service have informally reviewed and concur with the findings in the biological assessment (F&W letters, December 11 and 20, 2002, Project File).

- Flood plains, wetlands, or municipal watersheds. A soils scientist and hydrologist have assessed conditions in the affected area (Soils and Hydrology Report, Tom Subirge and Collis Lovely, November 15, 2002, Project File). The criteria set forth in Exhibit 1 outlining channel treatments, stream course protection measures, filter strip and buffer requirements, and Best Management Practices will limit or eliminate impacts. No significant impacts are anticipated from implementation of this project. Actions will not occur in wetlands, to FEMA identified floodplains or municipal watersheds.

- No actions will occur in congressionally designated wilderness, wilderness study areas or national recreation areas (Recreation Resource Assessment, Beth Dykstra, October 31, 2002, Project File).

- No actions will occur within inventoried roadless areas (Recreation Resource Assessment, Beth Dykstra, October 31, 2002, Project File).

- No actions will occur within Research Natural Areas (Recreation Resource Assessment, Beth Dykstra, October 31, 2002, Project File).

- 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.

OTHER FINDINGS

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. Based on our review

of the project record, the Forest Plans for both National Forests, the Record of Decision for Amendment of Forest Plans, and case law, Forest Plan standards and guidelines will be met in this project, (Analysis of Forest Plan Requirements, Jimmy E. Hibbetts, December 9, 2002, Project File).

This action does not disproportionately affect minority or low-income populations, and therefore does not require further Environmental Justice analysis (Executive Order 12898), (Social Analysis For Categorical Exclusion Documents, David Seesholtz and Julie Schaefers, November 12, 2002, Project File).

This project will 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. A timber sale administrator will be assigned to provide daily monitoring to ensure that mitigation measures specified for this project are adhered to should commercial sales occur. Resource specialists will provide other monitoring needs. Based upon our review, we found no conditions that may significantly affect the environment.

ADDITIONAL INFORMATION

Contact Jimmy E. Hibbetts, ID Team Leader at (928) 535-5979 during normal business hours to obtain additional information concerning this project.

IMPLEMENTATION DATE

Treatment of dead trees to create defense zones to protect private land boundaries against future wildfires is anticipated to begin in January 2003. The majority of this project will be completed by June 2003. This decision is not subject to administrative review or appeal, in accordance with 36 CFR 215.8(a)(4). Implementation may begin immediately.

JOHN C. BEDELL
Forest Supervisor, Apache-Sitgreaves NF

December 23, 2002
Date

KARL P. SIDERITS
Forest Supervisor, Tonto NF

December 23, 2002
Date

EXHIBIT 1

Wildland/Urban Interface CE
Rodeo/Chediski Fire

Mitigation Measures

Mitigation required to implement fuel reduction treatments within one-half mile of private land boundaries.

Soil and Watershed

Hill-slope Treatments:

- Contour felling of all non-merchantable dead standing trees.
- 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.
- Fall dead trees across swales and on small 1st order headwater streams without defined bed or banks.
- Spreading of all salvage logging debris and slash lopped to two-foot height. In areas of concentrated slash, mechanically treat to reduce flammability.

Channel Treatments:

- Clean dead and down debris in channels on a very selective as needed basis. Remove only that material which might be mobilized in flood events and end up in debris jams, lodging downstream in constricted channel reaches, culverts, bridges, and/or spillways.
- Fall dead trees on the edge of undercut or vertical stream banks away from the channel, rather than into or across it.
- Head cut treatments are recommended to stabilize discontinuous gullies and head cuts in or downstream from meadows and grasslands.
- Remove fences that cross watercourses to prevent accumulation of debris and damming or diversion of runoff flows.

Timber Salvage Operations

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.

- **Operating Season:** 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. This will reduce compaction and soil displacement (rutting) associated with timber harvesting activities on sensitive soils when they are wet or saturated.

- **Hauling and skidding** can be restricted at the descretion of the Contracting Officers Representative (COR) during wet periods to prevent damage to soils or road systems. See A/S Guidelines for Excessive Rutting, 6/10/92. These guidelines are applicable to any TES unit but particularly in 53, 187, 198 and 202.

- **Slope Limitations Logging:** The salvage and removal of trees is limited to areas with slopes less than 40% for ground based logging. Normal operations should be limited to 25% or less and operated on or near the contour, but can be extended upwards to reach logs to be endlined out. Operating on or near the contour allows for natural drainage of skid trails, minimizing gully formation within skid trails.

- Treatments for watershed stabilization such as felling trees on the contour and scattering slash is permissable and recommended on all slopes in areas of high and moderate burn severity for the purpose of increasing ground cover density. The effectiveness of such treatments is a function of the density of contour felled trees.

- **Machine Piling:** No piling within the buffer widths described below, and no piling at all in areas of high burn severity where all slash and debris is to be scattered. It is preferred to treat high concentrations of slash through means other than burning, such as chipping or crushing. This helps increase ground cover and simultaneously reduces fammability of remaining fuels.

- Designate types of equipment best suited for the types of ground to be logged. Track laying equipment is usually better suited for steeper ground than rubber tire skidders.

- Design, locate, and use designated skid trails (as needed or appropriate).

- Avoid "go anywhere" skid trails on cultural resource sites, sensitive soils or steep slopes. Designated skid trails should follow natural land contours and skidders should be restricted to stay on designated trails when possible to limit site disturbance and soil compaction.

- A "felling to lead" method should be used to complement skidding. This practice involves felling trees toward a predetermined skid pattern.

- Directional felling and end-lining (where appropriate) should be used to minimize damage to live vegetation, soils, etc.

- Landing locations and size should be selected which minimize vegetation and erosion loss.

Stream Channel Protection: The following guidelines apply to streamside management zones (filter strips).

- Minimum **Filter Strip Widths** in Streamside Management Zones: In areas with **"Slight" erosion hazard: 100 feet** (slope distance) on each side of the stream channel from the top of each bank. (TES Mapping Units 53, 178, 183, 186, 191, 193, 197, 198).

- In areas with **"Moderate" or "Severe" erosion hazard: 150 feet** (slope distance) on each side of the stream channel from the top of bank. (TES Mapping Units 52, 54, 55, 181, 182, 187, 192, 198, 189, 202, 206).

- **Permitted activities** within filter strips are limited to:
    - Directional felling of trees away from the channel, and not across it.
    - Ground skidding or end-lining logs out of the area.
    - Skidding perpendicular across channels at designated crossings.
    - Decking of logs and machine piling permitted only along existing roads that are already located within filter strips, and then only on the uphill side of the road away from the channel.
    - Lopping and scattering slash.

- **Activities NOT permitted** within filter strips:
    - Skidding up or down the filter strip or within the stream channel.
    - New road construction.
    - Piling or burning of concentrated slash.

The following guidelines apply to all stream channels:

- All drainages are to be crossed at designated crossings only. Roads and skid trails need to cross drainages perpendicular to the channel.

- There will be no decking within 100 feet of live stream channels**.**

- Leadout ditches and waterbars are to be constructed to avoid diverting runoff from the road directly into stream channels. Runoff should be discharged onto areas far enough away from streams so that sediment can be deposited before reaching a watercourse.

- Debris generated from product harvest activities will be removed from stream channels. Operating equipment within channels shall be avoided. Removal of material by hand or through end-lining is allowed. NOTE: Slash and debris can 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.

- Dead trees can be harvested from stream channels and along their banks. Trees must be directionally felled away from the channel, rather than across it.

The following guidelines apply to the protection of bottom areas, low points, swales, or depressions in headwater areas of ephemeral channels: (These areas may not have a well defined channel bottoms or banks).

- No skidding permitted up or down channel bottoms.
- No new road construction of any kind permitted within 75 feet of ephemeral channels.
- Maintain a minimum of 50 feet of an undisturbed filter strip of vegetation and litter between skid trails/log decks/roads and the channel.
- Minimize the number of skid trails and road crossings over drainages and keep them perpendicular to the channel.
- No piling of logging debris, except in areas designated by District watershed personnel. Scattering slash is preferred.
- Cut only dead trees within channels or swales. High stumping shall be allowed to facilitate catching debris during floods.
- No log decks permitted within ephemeral streams or swales

Fuels

No burning is being recommended at this time.

- WUI beyond 150 feet – Tops that are on slopes too steep for crushing will be lopped to within 24 inches of the soil surface. All dead trees that are not utilized as fuelwood or other forest products will be mechanically treated.

Heritage Resources

Various combinations of the following protection measures, presented here in checklist form, may be approved by the Forest Archaeologist to protect sites within the project area without additional SHPO consultation. The preferred action will be avoidance of all sites by all project related activities and those items checked below will be standards to be maintained in all instances. However, specific mitigation measures, such as falling all large diameter trees away from all features, will be selected on a case-by-case basis determined by the site type involved and individual site conditions which may warrant protective actions to preserve site features and/or significant site components.

___No thinning within site boundaries
___Allow thinning within site boundaries, provided:
    ___Hand thinning only

___Fell large diameter trees away from all features
___Hand-carry thinned material outside site boundary
_X__No use of mechanized equipment within site boundaries
_X__No staging of equipment within site boundaries
_X__No slash piles within site boundaries
_X__No ignition points within site boundaries
___Protect fire-sensitive sites:
___Exclude from project area
___Hand line
___Black line
___Wet line
___Foam retardant
___Structural fire shelter
___Remove heavy fuels from site by hand
___Prevent in-situ heavy fuels that cannot be removed from ignition (e.g., flush-cut & bury stumps)
___Implement same protective measures for future maintenance burns
___Protect selected other sites (option)
___Allow burning over other sites
___No fuelwood cutting or vehicles within site boundaries
___Allow fuelwood cutting within sites, but no vehicles within site boundaries
___Allow fuelwood cutting in areas of continuous, low-density scatters, with post-project inspections

The Forest Archaeologist may approve additional measures to further protect sites; however, if a lesser level of protection is recommended, or if it is likely that adverse effects cannot be avoided, the Forest shall consult with the SHPO on additional protection measures prior to approving Heritage Resources Clearance and prior to implementation of each phase of the project.

Engineering

Salvage activities will result in increased traffic for a short duration. The following are recommended mitigation measures to reduce safety issues with mixed traffic:

- Dust abatement to reduce hazards caused from poor visibility and minimize dust on road sections adjacent to private land.

- Signing - In accordance with MUTCD, Manual on Uniform Traffic Control Devices, 2000 edition.

- Construction of turnouts or double lane sections, in accordance with FSH 7709.56.

- One-way haul routes to minimize conflicts with haul vehicles.

- Speed limit of 25 M.P.H. through all owl habitats to prevent vehicle-owl collisions.

- Restrict activities on weekends and holidays on high use travel routes.

- Restrict hauling on un-surfaced roads to dry or frozen conditions.

- Radio communication and mile-posting to warn operators of traffic conditions.

- Road closures during logging and salvage activities.

- Additional signing on State 60 and 260, adding flag-people under extremely heavy traffic conditions should be considered.

- BAER emergency road maintenance has downgraded several roads from level 3 to level 2 road maintenance standards, additional work is needed to protect roadways from runoff damage. Signing and additional traffic control is recommended on these roads. i.e. "Passenger Cars Not Recommended" and "Drainage Dips Next ___ Miles".

On all roads within the proposed treatment areas where improvements are installed, the improvements should include the following criteria:

- 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.

- Improve or correct installations of 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 insure all flow from ditches or drainages is diverted across the road.

- Before re-installing any culverts removed by the BAER team, carefully evaluate their need. Culverts are costly to maintain and difficult to properly locate and install to avoid destabilizing effects on soils and channels and causing excessive erosion. Hardened drainage crossings are recommended installed at natural grade. Numerous rolling dips or water-bars are recommended in preference to culverts to divert water off roads and out of roadside ditches. New or replacement culverts will need to be sized for current watershed conditions. Sizing needs to accommodate debris and increased runoff from the burned area until pre-fire watershed conditions are restored.

- Replace ATV barriers on trails and reconstruct fences and barriers that closed areas to vehicle traffic previous to the fire.

Recreation

- No slash will be left within developed campgrounds. All dead trees, slash and debris will be removed.
- Stumps will be flush cut in developed campgrounds.
- Stumps within the 500 ft. buffer of developed campgrounds will be cut as follows: 12"dbh and greater will be cut to 1 ft, 12" dbh and less will be cut to 8" or less.
- Dead trees will be felled and limbed within Concentrated Use Areas. Tops and branches will be mechanically treated or scattered beyond the buffer zone.
- Dead trees along trails will be directionally felled away from trails. Slash will be removed and any damage to tread and drainage structures will be repaired.
- In areas where dead trees are felled and not removed, they must be cut into small enough pieces so they can be removed 10 feet from the trail prism and blocked.

Wildlife

Wildlife mitigation measures are specific to each species.

Chiricahua Leopard Frog

Surveys for the Chiricahua leopard frog will be completed prior to any activities that may impact potential habitat such as repairing or replacing culverts in wetted channels, felling trees adjacent to channels or stock ponds, or removal of materials from wetted channels. Should frogs be located, no dead trees will be removed within 500 feet of the occupied habitat until additional consultation is completed with the US Fish and Wildlife Service.

When removing material adjacent to streams, ponds, springs or lakes, trees must be felled away from the water. No mechanized equipment or skidding of logs will be allowed immediately adjacent to ponds, streams, springs or lakes. These restrictions include the dams or berms and the area encompassed by the high water marks. Water drafting will not be permitted in identified ponds. A team biologist must approve dust abatement chemicals or other treatments.

Mexican Spotted Owls

Mitigation measures for Mexican spotted owls are on a PAC-by-PAC basis, see Exhibit 2. In addition the following restrictions apply across the board:

- Speed limit of 25 M.P.H. through all owl habitats to prevent vehicle-owl collisions.

Northern Goshawks

Mitigation measures for northern goshawks are on a PFA by PFA basis, see Exhibit 2. These mitigation measures assume that treatments will only take place in medium and high severity burn locations.

Bald Eagles

Leave one standing snag every 150 feet around Black Canyon Lake and the Canyon Creek Fish Hatchery for wintering bald eagles.

EXHIBIT 2

Wildland/Urban Interface CE
Rodeo/Chediski Fire

Wildlife Mitigation Measures

Mitigation measures for Mexican spotted owls and northern goshawks are on an individual PAC or PFA basis. They are presented as follows:

Table 1. Mexican spotted owl mitigation measures. No treatments are proposed in PAC 201, 202, 204, 205, 206, 209 and 210.

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 503	No restrictions.
PAC 504	No restrictions.
PAC 508	Breeding season restrictions for treatments and hauling.
PAC 509	No restrictions unless survey identifies owls are still present.
PAC 510	No restrictions.
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 2. Northern goshawk mitigation measures. No treatments are proposed in the following PFAs: Chediski, North Blue Lake, Lons Canyon and Deep Tank.

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.
Blevins	No restrictions
Pig Pen	No restrictions
Bear Springs	Breeding season restrictions on implementation of treatment activities.
Willow Wash	No restrictions
Coal Canyon	No treatment within ¼ mile of 1997 and 1998 nests.
Gourd Flat	Breeding season restrictions on implementation of road and fence treatment activities, except that portion which borders the SE part of the PFA. Breeding season restrictions on implementation of WUI treatment activities.
Ashurst	No restrictions
South Cottonwood	No restrictions

PFA Name	Recommendations
Town Draw	No restrictions
Left Hand	Breeding season restrictions on implementation of trail and WUI treatment activities.
Lons Canyon	No restrictions
Lons Canyon 2	No timing restrictions
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 road, trail, powerline and WUI treatments in the northern portion of this PFA.
Bear Canyon	Breeding season restrictions on implementation of road treatment activities.