

Decision Memo

Airport Hazardous Fuels Reduction Project

USDA Forest Service
Tusayan Ranger District, Kaibab National Forest
Coconino County, Arizona

[T. 30 N., R. 2 E., Sections 14, 15, 21, 22, 23, 26, 27, 28, 33 and 34]

Background

The proposed action for the Airport Hazardous Fuels Reduction Project (November 2008) was developed by the Tusayan Ranger District to reduce forest tree densities and hazardous fuels conditions through a combination of noncommercial mechanical thinning and prescribed burning activities. The Airport Project is a continuation of the district's Wildland Urban Interface planning process to lower the risk of catastrophic stand-replacing wildfires on National Forest System (NFS) lands surrounding the community of Tusayan. The project area is identified as a top priority for fuels treatment under the National Fire Plan (2001) and tiers to the Tusayan Community Wildfire Protection Plan (2006). The potential for high-intensity wildfire within the project area is currently moderate, but increasing over time. Accumulations of dead and down woody debris, ladder fuels, higher than average tree densities, fire suppression, past grazing, and a long-term drought have all contributed to an increase in hazardous fuels conditions and the potential for stand-replacing wildfire. The proximity of these fuels to private property, the community of Tusayan, Grand Canyon Airport, Grand Canyon Railway, and Grand Canyon National Park make the Airport Project a priority for vegetation and prescribed fire treatments. Other critical resources at risk from catastrophic wildfire within the project area include wildlife and their habitats, soils and watershed, overstory and understory vegetation, heritage sites, scenic values, and recreation settings.

The Airport project area encompasses approximately 3,059 acres of NFS lands located approximately one mile west of State Route 64 and one-quarter mile south from the community of Tusayan (Figure 1). The project area is accessible from Forest System Roads (FSR) 306, 335, 2604, 2607, and 2608. The project area is within Ecosystem Management Area 8 as identified in the Kaibab National Forest Land Management Plan (Kaibab Forest Plan, as amended), Arizona Game and Fish Department's Game Management Unit 9, and a portion of the Rain Tank Grazing Allotment that is currently vacant.

Decision and Rationale

My decision applies to the area and activities analyzed under the proposed action for the Airport Hazardous Fuels Reduction Project (November 2008). Based upon the results of public scoping and the analysis documented in the project file, it is my decision to implement the activities described in the proposed action together with the most current list of mitigation measures. My decision falls within the scope of the analysis and the disclosed effects. This project was developed in consideration of the best available science. A comprehensive review of the relevant scientific information also informed my decision.

My decision is based on several factors:

- It is critical to continue the Tusayan District's hazardous fuels reduction projects in order to create a fuel altered zone that will protect the community of Tusayan and its infrastructure, private property, Grand Canyon Airport, Grand Canyon Railway, and Grand Canyon National Park from threats emanating from adjacent Forest Service lands. Prevailing wind direction in the local area during fire season is from the southwest making fuel hazard abatement projects in the area critical.
- Potential fire behavior within the project area will be lowered by reducing surface fuels, increasing the crown base height, decreasing crown density, and retaining larger diameter tree species. The hazard reduction benefits of prescribed fire and mechanical treatments have been demonstrated through quantitative and qualitative evidence. Nationally, wildfires that occur in fuel reduced areas tend to be smaller, lower in fire suppression costs, and more defensible with lowered risks to firefighters.
- The project will help restore the functionality of a fire-adapted ecosystem by reducing hazardous fuels and reintroducing managed fire into the area; thereby improving overall forest health and sustainability after implementation. The project area will be composed of more open vegetation with grassy openings that generally support the historic fire regime of more frequent and naturally occurring low-intensity wildfires.
- Treatments will move the area toward other desired conditions as stated in the proposed action: improved soil and watershed conditions; protecting and benefiting wildlife and their habitats; protecting heritage resources; enhancing scenic and recreation values; and offering a source of wood products to local residents and forest users.
- Two public comments were received concerning smoke impacts from burning activities and potential negative effects to motel guests in Tusayan and operations at the Grand Canyon Airport. The Forest Service and Tusayan community share a common interest and goal in minimizing smoke impacts. District personnel have conducted prescribed burns in this area for 15 years and have developed strategies over time to minimize negative effects. District personnel will work closely with the Tusayan community during burning operations. In addition to the common desire to prevent smoke-related negative impacts, I feel that mitigation measure #5 on page 4 also addresses these concerns.

The following activities are components of my decision for implementation:

Pinyon-Juniper cover type (2225 acres): The pinyon juniper type is highly variable in composition and structure. The primary intent of treatments is to re-create stand conditions created by mixed severity fire that likely created contiguous patches alternating between stand replacement and no fire effects. Treatment will consist of mechanical thinning from below to reduce ladder fuels and crown density. Thinning from below (cutting smaller diameter trees) retains the large, older trees. A few smaller diameter healthy trees will also be left. Trees will be retained in small groups with openings between these groups. Areas where grass currently exists will be the target location for these openings, as these areas were historically void of trees. This will also provide a seed source for additional grasses and forbs to develop. Thinning will be more extensive in areas dominated by small trees. Slash will be lopped and bucked or piled as deemed appropriate to meet objectives. After mechanical thinning, prescribed fire may be utilized to reduce hazardous slash, or slash may be left to decompose where risk of undesirable fire behavior is minimal. In areas where the potential exists for undesirable effects on the residual overstory, multiple entries with fire will be utilized. A first entry with fire under

relatively cool and wet conditions will aim to consume jackpots of slash. A second entry under hotter drier conditions would consume more of remaining slash. Densely treed areas will be mechanically thinned from below and followed by a burn after the slash has cured. If tree density is still not at the desired level, a second thin-burn cycle would occur.

Ponderosa Pine cover type (602 acres): This cover type consists of dense stands and more open stands. In relatively dense ponderosa pine stands where slash additions may cause undesirable mortality in the residual stand, treatments consist of three entries, burn-thin-burn. The first entry will be a broadcast burn to reduce surface fuels and raise the height of live crowns in areas that have enough surface fuel continuity to sustain fire spread. The primary objective of this initial entry with fire is to remove accumulated debris on the forest floor, reducing potential surface fire behavior. This initial entry is considered important due to the addition of surface fuels from subsequent mechanical thinning which will contribute to increased surface fire behavior and potentially undesirable fire effects on the residual canopy during the final entry with fire. The second entry will consist of mechanical thinning from below to reduce ladder fuels, lower crown density, and favor large trees. Thinning from below will be used so that larger, older trees will be retained along with a few higher quality, smaller diameter trees. The majority of slash will be lopped and bucked sufficiently to meet viewshed objectives and achieve desired consumption during the third entry. The third entry will consist of broadcast burning and jackpot ignition to reduce slash created from mechanical thinning.

Sagebrush- Grassland cover type (134 acres): Fire suppression and grazing have allowed encroachment of tree species into the meadows and drainage bottoms, effectively shrinking the size of these meadows that are considered important wildlife habitat. Treatments will return this vegetation type to its historic condition through the removal of encroaching trees. Encroaching trees will be thinned and removed, retaining all pre-settlement trees and retaining one to two post-settlement trees per nonliving pre-settlement tree evidence. Evidence generally consists of old stumps, old snags, and old fallen trees. Slash created from thinning encroaching trees will be jackpot burned. Jackpot burning will create small openings in the sage canopy and break up continuous fuels in the event of a wildfire. There will be no broadcast burning or sage mowing in these areas in order to preserve the diversity and value of this habitat for wildlife, protect heritage resources, and discourage the establishment of noxious weeds.

Project-wide Treatments: Cutting prescriptions will be developed to maintain and enhance Gambel oak due to its scarcity in the project area and its importance to wildlife. Portions of the project area may be opened to fuelwood gathering as long as there are no conflicts with other resource areas. The slash will be burned after an appropriate amount of time has passed for the fuels to cure. Allowable mortality from burning will be as follows:

- Less than 5% mortality in yellow pines; and
- Less than 5% mortality in large diameter oak.

Burning will be implemented when conditions are favorable for smoke management, consumption, control, and desired fire and resource effects. Ideally, additional maintenance burning should occur on a 5 to 15 year cycle to mimic natural fire frequency and maintain conditions that support the desired fire behavior.

Road Access: The existing forest road system provides adequate access for implementation of project activities. Therefore, a site-specific roads analysis process was not undertaken for this project.

There will be no significant negative effects from project implementation when the following mitigation measures are followed.

Mitigation Measures

Mitigation measures will be implemented in order to minimize potential negative impacts resulting from this action. There should be no significant negative effects resulting from project implementation when the following mitigation measures are adhered to:

Vegetation

1. Prior to prescribed burning, slash will be lopped to a height of two feet or less and bucked. (Exceptions are noted in mitigation measures #23 and #24, page 6.)
2. Mechanical thinning may try to avoid the time period of January 1st and July 1st to reduce the threat of *Ips* bark beetle outbreaks within and around adjoining stands where there is heavy thinning slash in the ponderosa pine cover type. This timeframe may be shortened by the zone silviculturist if drought conditions subside and/or monitored bark beetle populations decrease. Where it is determined necessary to reduce excess mortality of large trees during broadcast burning, thinning slash may be pulled back from designated large trees during thinning operations. This may include yellow pine, large pinyon pine, large juniper and large oak.
3. Timing of burning will be carefully considered in order to keep tree mortality within desired thresholds.

Prescribed Burning

4. Prescribed burning prescriptions will be designed to limit mortality in large old trees. Standard burn preparation will include such measures as lining snags, removing dead fuels near large oak and yellow pine, and reducing excessive duff layers around sensitive yellow pine.
5. Smoke management mitigation measures include allowing for fuelwood harvesting, avoiding direct ignition of stumps and large logs, burning smaller blocks of land, burning with adequate ventilation, and burning in the later afternoon/evening to take advantage of downslope/down valley airflow away from sensitive areas.
6. Power lines, cell tower, and railroad features will be protected from negative prescribed burn impacts.
7. Pre-burn preparation will be conducted around all fire sensitive sites as necessary to assure no adverse impacts.

Heritage

8. **Implementation of these activities may take place over several years.** Prior to the various project implementation phases, project managers must consult with archaeologists who will then flag or paint site boundaries for avoidance, as necessary.

9. If any unrecorded heritage resource sites are discovered during project implementation, work in the vicinity of the site must cease immediately and the Forest Archaeologist notified immediately.
10. If additional ground disturbing activities are proposed, project managers must first contact the Forest Archaeologist so an amendment to the heritage clearance can be drafted and submitted for review.
11. An archaeologist must be present at the pre-implementation tailgate safety meeting to discuss any archaeological concerns and any sites that must be avoided during implementation activities.
12. During all phases of project implementation, heavy equipment must avoid all known eligible or unevaluated heritage resource sites, except on existing roads.
13. *Pre-Commercial Thinning, Roundwood and Sawtimber Thinning*: According to the Programmatic Agreement between the Advisory Council, the Forest Service Region 3 and the New Mexico, Arizona, Texas and Oklahoma SHPOs (USDA 2004), these hand-thinning activities “have predictable effects and a very low likelihood of affecting historic properties.” No protective or mitigation measures are required. There will be no adverse effects to historic properties from these activities.
14. *Timber Harvesting*: Harvesting of pulpwood or other merchantable wood products with the use of mechanical equipment **must not occur** on any known eligible or unevaluated sites. Pursuant to the terms of the Airport Fuels Reduction pre-consultation report, mechanized thinning may only be conducted within previously surveyed areas. Should project planners decide to conduct mechanized thinning within currently unsurveyed areas, these areas must be surveyed in advance of project implementation and an amendment to the clearance drafted.
15. *Underburning*: Pursuant to the stipulations of the Airport Fuels Reduction pre-consultation report, burning operations will be conducted throughout the project area provided that all known fire-sensitive heritage resources are avoided. Heritage resource sites AR-03-07-04-1202, 1206, 1772, 1773, 1778, 1784, and 1790 contain fire-sensitive features that must be avoided by all burning activity. The remaining sites do not contain fire-sensitive surface features. Provided that underburning activities remain low-intensity, these sites will suffer no adverse effects from fire. **Fire managers must consult with archaeologists, prior to implementing burn activities, to ensure that on-site fuels are such that they will not burn with prolonged or extreme heat.** If necessary, excess fuels will be removed (by hand) from sites.
16. *Mechanical and Hand Piling*: Fuel piling must not occur on any known eligible or unevaluated heritage resource site. Pursuant to the terms of the Airport Fuels Reduction pre-consultation report, mechanized piling may only be conducted within previously surveyed areas. Should project planners decide to conduct mechanized piling within currently unsurveyed areas, these areas must be surveyed in advance of project implementation and an amendment to the clearance drafted.
17. *Sage Mowing and Agra-Axe Treatment*: Sage-mowing and agra-axe treatment may occur provided that all structures/features are completely avoided. All sage-mowing and agra-axe activities may only be conducted within previously surveyed areas. Should project planners decide to conduct sage-mowing and/or agra-axe treatment

within currently unsurveyed areas, these areas must be surveyed in advance of project implementation and an amendment to the clearance drafted.

18. *Fire Line Construction*: All planned fire lines must avoid known heritage resource sites. (In the event that emergency dozer fire lines are warranted, fire managers must contact the Forest Archaeologist immediately so that site avoidance and mitigation measures can be employed).
19. *Road Maintenance / Construction*: Routine road maintenance activities within existing prisms and features, *where no heritage resource sites are known to exist*, will require no protective or mitigation measures. If ground disturbing activities are proposed in areas of no prior disturbance, project managers must contact the Forest Archaeologist so that protective measures, if warranted, can be devised. New road construction may occur only in previously surveyed areas that contain no eligible or unevaluated sites. If new roads are proposed in unsurveyed areas, the project area must first be surveyed for heritage resources and an amendment to the clearance drafted.
20. *Pile Burning*: Piles must not be burned on any known eligible or unevaluated heritage resource sites.

Recreation and Scenic Resources

21. To meet Scenic Integrity Objective Level 3 (Moderate), all thinning in sensitive foregrounds should be done in a way so that residual trees are left clumped or in groups whenever possible (as discussed in planning meetings).
22. Along private property boundaries (Wolfe to the north and Apex to the southwest), thinning-generated slash will be pulled back 50 feet and piled in areas where it is not feasible to lop and burn without killing residual trees.
23. Thinning-generated slash along the Grand Canyon Railroad (the most sensitive viewing area in the project) will be lopped to within one foot of the ground and scattered in a way that residual trees will not be affected when burned. If this can't be achieved in areas of thicker vegetation, hand piles will be used. Stumps within the first 200 feet from the rail will be cut horizontally to the ground and will be no more than four inches high.
24. Thinning-generated slash along the west side of the Grand Canyon Airport boundary fence (including the VOR fenced area) will be limbed and lopped to within one foot in height for the first 200 feet.
25. The area around the communication tower is not visually sensitive, but thinning-generated slash should be placed so that residual trees and facilities are not affected when the slash is burned.
26. Slash throughout the project area will be scattered in such a way so as not to create ladder fuels for residual trees. If this can't be achieved in areas of thicker vegetation, then hand piles no larger than 6 feet by 6 feet and 5 feet high can be used.
27. Slash piles should be treated as soon as possible near sensitive areas, but generally within two years following treatments.
28. Visually sensitive boundaries will be clearly marked with flagging by the Contracting Officer's Representative (COR) and identified on the project map prior to beginning thinning operations. **Project thinning diameters and residual spacing along**

sensitive corridors will be reviewed by the Recreation Specialist and the COR prior to implementation.

29. Low stump heights are preferred throughout the Roded Natural area; however, stumps may be cut 6 inches or lower in height outside of sensitive areas.
30. All thinning unit boundary “marks” will be applied so that they are not noticeable by the average forest user. **Unit boundary marks should not be visible from the Grand Canyon Airport runway, private property owners, and the Grand Canyon Railway.**

Wildlife and Habitat

31. If an active goshawk nest is found within the project area at any time during project planning or implementation, silviculture, timber, and wildlife staff will coordinate to ensure that the proposed action and silvicultural prescriptions, as well as any existing thinning or timber sale contracts, are consistent with Forest Plan goshawk standards and guidelines.
32. If any other active raptor nest is found within the project area during project planning or implementation, minimize human activity and avoid the use of chainsaws or heavy equipment within a 1/4-mile radius (1,320 feet) of the nest tree between April 1 and August 31 unless cleared by the wildlife biologist.
33. Incorporate measures into the project burn plan to minimize prescribed fire loss of the following key wildlife habitat features:
 - yellow pines and other large-diameter pines (greater than 24 inches diameter at breast height or dbh);
 - large-diameter snags (greater than 18 inches dbh);
 - live or dead trees with cavities;
 - large oaks (greater than 8 inches dbh); and
 - large logs (greater than 12 inches diameter at midpoint and greater than 8 feet long).

Potential measures to minimize loss of these key habitat features include: 1) specification of burning prescription parameters designed to achieve low to moderate burn intensities; 2) avoidance of direct ignition of key habitat features; 3) reducing accumulations of fine fuels around key habitat features where practical; and 4) adjusting ignition techniques and patterns to minimize fire impacts in areas where key habitat features occur or are concentrated.

34. The following measures will be taken to minimize risk of a harmful interaction with any California condors that may occur near project-related activities: 1) project work sites will be cleaned up at the end of each day to avoid trash accumulation that may attract condors; 2) if a condor shows up near project-related activities, a Forest Service wildlife biologist will be contacted immediately and any project-related activity likely to harm the condor will halt temporarily until the condor flies away or is driven away by permitted personnel; 3) project workers will be instructed to avoid any interaction with condors; and 4) the wildlife biologist will be notified if any project-related vehicle fluid leak or spill occurs that could result in condor poisoning.

Rare Plants

35. The general project area will be surveyed before the project begins in order to locate suitable habitat and/or populations of rare plants.
36. If populations of any rare plant species are found before or during project implementation, the project manager will coordinate with the district rare plant coordinator in order to restrict negative impacts.
37. No work of any kind will be conducted within populations of sentry milkvetch, if populations are found.
38. Proposed locations of temporary roads, fire lines, and slash piles will be surveyed for rare plants before construction or piling begins if rare plant populations are known to exist nearby.
39. All slash will be hand piled in areas with rare plants. Slash will not be piled on top of populations of rare plants.
40. Prescribed burns will not be used within populations of sentry milkvetch or Grand Canyon rose.
41. Slash will be distributed effectively, so that prescribed broadcast burns occur mostly at a low intensity throughout the project area.
42. Broadcast burning will not be conducted in the spring within populations of Tusayan rabbitbrush.
43. Bulldozers and other heavy equipment will not be used off road to clear trees and slash or to build temporary roads or fire lines in areas with populations of rare plants.
44. Purchased seed or mulch will not be used after thinning or burning within populations of rare plants, in order to prevent the introduction of invasive species and to prevent attracting wild ungulates to the area.
45. Best Management Practices for the prevention and control of invasive exotic weeds will be implemented. These practices will follow guidelines in the *Final Environmental Impact Statement for Integrated Treatment of Noxious or Invasive Weeds; Coconino, Kaibab, and Prescott National Forests within Coconino, Gila, Mojave, and Yavapai Counties, Arizona; January 2005*.

Watershed

46. Heavy equipment and vehicles will not be used off road in the project area when soils are wet.
47. If staff and funding are available after any slash piles are burned, rip and rake the affected soil. Mycorrhizae and native seed may be obtained by spreading a layer of topsoil scooped from a nearby area. These measures help to promote native plant establishment and prevent soil erosion and colonization by noxious weeds such as Dalmatian toadflax. (Reference: "Managing Coarse Woody Debris in Fire-adapted Southwestern Forests", Working Paper 21, Northern Arizona University Ecological Restoration Institute, January 2008).

Reasons for Categorically Excluding the Decision

Pursuant to Forest Service Handbook (FSH) 1909.15, Chapter 30, Section 31.2, Category 6, this decision may be categorically excluded from documentation in an Environmental Assessment or Environmental Impact Statement. Category 6 provides for the categorical exclusion of “timber stand and/or wildlife habitat improvement activities which do not include the use of herbicides or do not require more than one mile of low standard road construction.” Based upon my review of the resource specialist reports and public comments received, I have determined that the categorical exclusion is appropriate in this situation because there are no extraordinary circumstances or significant issues potentially having effects that may significantly affect the environment.

Finding of No Extraordinary Circumstances

The following was considered in determining that no “extraordinary circumstances” exist related to the Airport Hazardous Fuels Reduction Project that would warrant further analysis and documentation in an EA or an EIS:

- **Federally Listed Threatened and Endangered Species; Forest Service Sensitive Species; Kaibab Management Indicator Species; Migratory Birds; and Other Species:** Potential effects of this project on species listed under the Endangered Species Act, animal species classified as Sensitive by the Southwestern Region of the Forest Service, Kaibab National Forest Management Indicator Species, migratory birds, and other species potentially affected were evaluated in the Wildlife Report and Biological Evaluation (Waters, J. 1/16/2009). In regard to Federally Listed Threatened and Endangered Species, the wildlife biologist made the determination that there is no designated Critical Habitat for any listed species on the Tusayan District. The Tusayan District is within the experimental nonessential population area designated for the reintroduced **California condor**. Project activities authorized by this decision would have no adverse effects on condors. Mitigation measure #34 (page 7) will minimize any possibility of adverse disturbance effects to condors during project implementation.

Ten **sensitive animal species** were identified and evaluated. The determination for the effects of the proposed action on the bald eagle, northern goshawk, spotted bat, Allen’s lappet-browed bat, and Townsend’s big-eared bat, Merriam’s shrew, and the Mogollon vole is *May Impact Individuals or Habitat, but Will Not Likely Contribute to a Trend Toward Federal Listing or Loss of Viability to the Population or Species*. There would be no effects from the proposed action on the northern leopard frog because there is no suitable aquatic habitat in the analysis area and there are no known populations on the Tusayan District. The determination for effects from the proposed action on the burrowing owl and peregrine falcon is *No Impact*. (Detailed explanations for these determinations are documented in Wildlife Report and Biological Evaluation).

Appendix 1 of the Wildlife Report and Biological Evaluation (in project file) identifies 18 animal species classified as **Management Indicator Species (MIS)** in the 2008 Kaibab National Forest MIS Report. A subset of this group is analyzed in detail in the report. The proposed action would not result in habitat loss for wildlife species evaluated, only changes in habitat quality. For some species, habitat quality would likely increase as a result of the proposed action (e.g., wild turkey, elk, mule deer, pronghorn), and for other species habitat

quality would likely decrease (e.g., hairy woodpecker, juniper titmouse, and pygmy nuthatch). Because direct and indirect effects of the proposed action on wildlife species would be of relatively low intensity (i.e., result primarily in changes to habitat quality, not habitat loss) and of limited spatial scale, the effects of the proposed action in addition to effects from other past, present, and reasonably foreseeable future actions would likely be insufficient to cause a population decline or threaten population viability for any of the species evaluated.

Migratory birds potentially affected are also evaluated in the Wildlife Report and Biological Evaluation. Other bird species not covered as MIS were considered, but no bird species whose population viability would potentially be adversely affected by the proposed action was identified. There are no known rare bird species with a limited geographic range that overlaps the project area. Priority species identified for pine habitat are northern goshawk, olive-sided flycatcher, Cordilleran flycatcher, and purple martin. Priority species for pinyon-juniper habitat are gray flycatcher, pinyon jay, gray vireo, black-throated gray warbler, and juniper titmouse. Priority species for cold desertscrub habitat (includes sagebrush habitats) are sage thrasher, sage sparrow, and Brewer's sparrow. None of these species has a limited geographic range within the general area of the project area (Corman and Wise-Gervais 2005). There are no designated Important Bird Areas located on the Tusayan District.

Other vertebrate wildlife species that occur on the Tusayan District and likely to be affected by the proposed action include various species of reptiles (lizards and snakes) and various small mammal species (e.g., desert cottontail, black-tailed jackrabbit, chipmunk species, ground squirrel species, Botta's pocket gopher, various species of mice, woodrat species). Habitat for larger mammals would also be affected (e.g., coyote, gray fox, raccoon, badger, spotted and striped skunks, mountain lion, bobcat). We know of no rare species with a limited geographic range whose population status would likely be affected by the proposed action.

Mitigation measures #31-34 on page 7 will be followed to lessen negative effects from the proposed action to wildlife and their habitats.

- **Threatened, Endangered, and Sensitive Plants:** Potential effects of this project on plant species were evaluated in the Specialist Report and Biological Assessment for Threatened, Endangered, Candidate, Conservation Agreement, and Forest Service Sensitive Plant Species (Huling, K.12/29/2008; review by Hydock, C. 1/16/2009). No Threatened, Endangered, Candidate, Conservation Agreement, or Forest Service Sensitive plant species are known to occur within the project area. Suitable habitat for Tusayan rabbitbrush (S), Arizona leatherflower (S), and Flagstaff beardtongue (S) exists in the project area, but no populations are known to exist. Suitable habitat for sentry milkvetch (E), Mt. Dellenbaugh sandwort (S), and Grand Canyon rose (S) may exist in the project area, but no populations are known to exist. These six rare plants were addressed in the effects analysis. The general project area will be surveyed before the project begins in order to locate suitable habitat and/or populations of rare plants. If populations of any rare plants are found before or during project implementation, the project manager will coordinate with the district rare plant coordinator in order to restrict negative impacts. See mitigation measures #35-45 on page 8. Implementation of the Airport Project will not create any direct or indirect effects on sentry milkvetch (E), so it will not add to the cumulative effects on sentry milkvetch within the

analysis area. The net cumulative effect of all human activities and natural events on Tusayan rabbitbrush (S), Arizona leatherflower (S), Flagstaff beardtongue (S), Mt. Dellenbaugh sandwort (S), and Grand Canyon rose (S) will be *May Impact Individuals or Habitat, but Will Not Likely Contribute to a Trend Toward Federal Listing or Loss of Viability to the Population or Species*.

- **Floodplains, Wetlands, or Municipal Watersheds:** There are no springs, perennial streams, intermittent streams, or wetlands within the project area. The project does include small ephemeral washes. The north and northwest boundaries of the project follow Coconino Wash, a major drainage. The project's southern boundary is less than one-quarter mile from Rain Tank Wash, another major drainage. Ephemeral washes flow only when the snow is melting or during and shortly after heavy rainstorms. The flow regimes are characterized as flashy with rapidly rising peaks in response to rapid snowmelt in the spring and in response to high-intensity short-duration rain storms in the summer. Ephemeral drainages contribute water and sediment to perennial streams, lakes, reservoirs, earthen ponds, and wetlands. The only water bodies found in or near the Airport project area are Coconino Wash Tank, Rain Tank, and the Tusayan sewage disposal ponds. A review of the 2008 State of Arizona Department of Environmental Quality 303 (d) list indicated that no TMDL limited segments or water bodies are found in or near the Airport project area. The Forest Service does not have any recent water quality monitoring data for water bodies on the Tusayan Ranger District. The largest potential issues facing water quality, related to forest fuels management, are exceedances related to turbidity and siltation. Forest thinning, slash piling, prescribed fire, and wildfire can result in decreased vegetative cover and increased erosion, thus contributing to turbidity and siltation. Best management practices will be followed in conjunction with mitigation measures #46-47 on page 8. The Airport Project will add a small amount of soil erosion and runoff to the cumulative effects area at various times throughout implementation, but following project completion, the rate of erosion and runoff should return to background levels.
- **Archaeological, Historic, or American Indian Cultural Sites:** There are no archaeological sites, or historic properties or areas that are listed on or potentially eligible for the National Register of Historic Places within the project area. This project is in compliance with the National Historic Preservation Act of 1966, as amended. Heritage clearance for this project was obtained on May 14, 2007 (Project File #68). There will be no adverse effects to known historic properties from project activities when mitigation measures #8-20 on pages 4 to 6 are followed.
- **Special Designations:** There are no wilderness, wilderness study areas, national recreation areas, inventoried roadless areas, or research natural areas that would be affected by this project.

Public Involvement

The proposal was listed in the Schedule of Proposed Actions (SOPA) on January 2006 and has been listed quarterly since that time. The proposal was provided to 65 various publics and other agencies on November 8, 2008 for initial scoping that was combined with the 215 Notice and Comment period. The 30-day Notice and Comment deadline was December 9, 2008. The legal notice for the proposed action notice and comment period was published in the *Arizona Daily Sun* on November 9, 2008. A companion legal notice was published in the local newspaper, the

Williams-Grand Canyon News, on November 12, 2008. A Kaibab National Forest press release dated November 6, 2008 was also distributed via e-mail to various media. A newspaper article titled "Burns proposed near Tusayan" was published in the *Arizona Daily Sun* on November 9, 2008. Two individual email comments were received on November 12, 2008 and December 9, 2008 from the scoping effort. The comments concerned smoke impacts from burning activities negatively affecting the Grand Canyon Airport and motel guests in Tusayan. The District Ranger responded to their concerns with written letters dated December 16, 2008. The concerns were noted and addressed by mitigation measure #5 on page 4. No significant issues were raised as a result of these comments.

District specialists worked closely with Arizona Game and Fish Department (AGFD) specialists in crafting the proposed action to ensure that activities would not negatively affect wildlife and their habitats. In particular, AGFD provided valuable input into the proposal for treating the sagebrush/grassland areas, a key habitat component for wildlife.

Tribal Consultation: Pre-consultation for the project was conducted with the Hopi Tribe on January 18, 2006 during the quarterly SOPA consultation meeting. At that time, the Hopi Tribe requested to postpone consultation for the project until the completion of the heritage resource survey. On January 24, 2007, the Havasupai Tribe, the Hualapai Tribe, the Hopi Tribe, the Yavapai-Prescott Tribe, the Navajo Nation, and the Bodaway/Gap, Cameron, Coalmine Canyon, Coppermine, Lechee, Leupp, and To'Nanees' Dizi Chapter Houses of the Western Agency of the Navajo Nation were sent a consultation letter regarding the Airport Project.

On February 5, 2007, representatives from the Kaibab National Forest and the Havasupai Tribe met in Tusayan, Arizona and the Tribe was provided with a draft copy of the initial heritage report. As a result, a mitigation measure was recommended (#5 on page 4) and added to the heritage report. Follow-up meetings on February 21, 2007 (Hopi Tribe) and March 2, 2007 (Hualapai Tribe) elicited no comments regarding the specific undertakings and mitigation measures outlined in the heritage report. No specific Traditional Cultural Properties have been identified in the area during previous consultations for past projects within the vicinity of the project treatment areas.

Findings Required By Other Laws

My decision is consistent with the **Kaibab National Forest Land Management Plan, as amended**. The project was developed in conformance with Forest Plan management direction and incorporates appropriate standards and guidelines for Ecosystem Management Area 8 where the project is located (Kaibab Forest Plan, pp. 55-58 and 69-87).

This decision is consistent with the goals and objectives outlined in the **National Fire Plan's Ten Year Comprehensive Strategy (2001)** to reduce the total number of acres at risk to severe wildland fire; ensure communities at risk in the wildland-urban interface receive priority for hazardous fuels treatment; and expand and improve integration of hazardous fuels management programs to reduce severe wildland fires to protect communities and the environment.

This decision is consistent with the **Final Environmental Impact Statement for Integrated Treatment of Noxious or Invasive Weeds: Coconino, Kaibab, and Prescott National Forests within Coconino, Gila, Mojave, and Yavapai Counties, Arizona; January 2005**.

Applicable Laws and Executive Orders

The laws, regulations, and policies applicable to this decision include the Federal Land Policy and Management Act of 1976, the National Forest Management Act of 1976, and the National Environmental Policy Act of 1969 (and their amendments). It also complies with the following:

- **Endangered Species Act of 1973, as amended.** This decision complies with the Endangered Species Act, and specifically with Section 7 of this Act, in that potential effects of the proposed action on listed species have been analyzed and documented.
- **National Historic Preservation Act of 1966, as amended.** Section 106 requirements for survey and evaluation have been met for all undertakings listed under this proposed action.
- **Smoke Management Plan for Tusayan and Grand Canyon (2001).** The project burn plan will adhere to guidance provided by this plan. Other best management practices identified by the Arizona Department of Environmental Quality will be used to lessen impacts.
- **Forest Service Manual 7700 – Transportation System Chapter 7710 – Transportation Atlas, Records, and Analysis (also known as the Roads Analysis Process or RAP)**
- **Clean Water Act, Sections 303, 319, 404 Section 303(d).** Directs states to list water quality impaired water bodies and develop total daily maximum loads to control the non-point source pollutant causing loss of beneficial uses. The designated uses for ephemeral surface waters in the State of Arizona are aquatic, wildlife, and partial body contact.
- **Section 319 of the Clean Water Act.** Directs states to develop programs to control non-point source pollution, and includes federal funding of assessment, planning, and implementation phases. At this time, no known Section 319 projects would be detrimentally affected by project activities.
- **Executive Order 11988 – Floodplain Management.** Direction to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.
- **State of Arizona Water Quality Criteria and Designated Beneficial Uses for Water**

Implementation Date

If no appeals are filed within the 45-day time period, implementation of the decision may occur on, but not before, 5 business days from the close of the appeal filing period and upon completion of rare plant surveys within the project area (mitigation measure #35 on page 8). When appeals are filed, implementation may occur on, but not before, the 15th business day following the date of the last appeal disposition.

Appeal Rights

This decision is subject to appeal for administrative review by written notice pursuant to regulations at 36 CFR 215. Individuals or organizations who provided comment or otherwise expressed interest in the proposed action during the comment period may appeal. Interest expressed or comments provided on this project prior to or after the close of the comment period do not have standing for appeal purposes. The appeal must be filed (regular mail, fax, email, hand-delivery, express delivery, or messenger service) with **Appeal Deciding Officer, Michael**

R. Williams, Forest Supervisor, Kaibab National Forest, 800 South Sixth Street, Williams, Arizona 86046, (Fax 928-635-8208). If hand-delivered, the appeal must be received at the above address during business hours (Monday – Friday 8:00 am to 4:30 pm), excluding holidays. Electronic appeals may be submitted to: appeals-southwestern-kaibab@fs.fed.us (.doc, .rtf, or .txt formats only). The appeal must have an identifiable name attached or verification of identity will be required. A scanned signature may serve as verification on electronic appeals. Please put the project’s title in the “subject” line. Names and addresses of appellants will become part of the project record.

Appeals, including attachments, must be in writing, fully consistent with 36 CFR 215.14, and filed (postmarked) within 45 days following the publication date of the legal notice of the decision in the *Arizona Daily Sun*. This publication date is the exclusive means for calculating the time period to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframes provided by any other source. It is the responsibility of appellants to ensure that their appeal is received in a timely manner.

Additional Information

For additional information regarding this decision or the Forest Service appeals process, please contact Heather McRae, Forester, Tusayan Ranger District, P.O. Box 3088, Grand Canyon, Arizona 86023; phone 928-638-2443 or 928-635-8232; email hmcrac@fs.fed.us.

/s/ Linda L. Wadleigh
LINDA L. WADLEIGH
Acting District Ranger
Responsible Official

February 19, 2009
Date

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