

Appendix D – Law, Regulation, Mitigation Measures, and Forest Plan Direction

Laws and Regulations Applicable to this Travel Management Project

The management of timber resources on National Forest System (NFS) lands is based on several Federal and State laws and regulations. The following table displays some of the laws and regulations pertinent to the travel management analysis.

Table 44. Laws and regulations pertinent to travel management

Laws and Regulations	Description	Authority
Federal Land Management and Policy Act 1976	Public lands to be managed to preserve and protect certain lands in their natural condition.	BLM
National Forest Management Act, 1976	Requires development of land and resource management plans and governs administration on national forests.	Secretary of Agriculture
Multiple-Use Sustained Yield Act, 1960	National forests are to be administered for recreation, range, timber, watershed, wildlife, fish, and to develop renewable surface resources.	Secretary of Agriculture
Clean Air Act, 1990 as amended	To protect air quality and promote public health by regulating emissions and requiring permits.	Arizona Department of Environmental Quality
Clean Water Act, 1977, 1982 as amended	Restore and maintain integrity of surface waters by eliminating pollutant discharge into water and achieve water quality levels to be fishable and swimmable.	U.S. Army Corps of Engineers
Executive Order 11988, 1977 as amended	Restore and preserve beneficial values of flood plains.	All Agencies
Executive Order 11990, 1977	Protect wetlands from destruction or modification.	All Agencies
Wild and Scenic Rivers Act, 1968 as amended	System for designating wild and scenic rivers.	All Agencies
Wilderness Act, 1964	Establishes National Wilderness Preservation System administered to leave unimpaired for future use and enjoyment.	U.S. Congress
Arizona Wilderness Act, 1984	Resulted in designation of three wilderness areas on the Apache-Sitgreaves National Forests.	State of Arizona
National Trails System Act, 1968	Establishes national system of recreation, scenic, and historic trails.	All Agencies
Federal Noxious Weed Act 1974, as amended and Executive Order 13112.	Designated certain plants as noxious weeds.	All Agencies
Endangered Species Act, as amended 1973	Section 7 governs conservation of ecosystems and populations of threatened and endangered plant and animal species.	U.S. Fish and Wildlife Service (USFWS)
Bald and Golden Eagle Protection Act	Protection of bald eagles.	All Agencies

Laws and Regulations	Description	Authority
Migratory Bird Treaty Act, 1918 and Executive Order 13186, 2001	Protection of migratory birds, nests and eggs. E.O. requires environmental analysis of actions on migratory bird species of concern.	USFWS
American Indian Religious Freedom Act 1978	Considers impacts of actions on tribal cultural practices.	All Agencies
National Historic Preservation Act, 1966, 1976, 1980, 1992 as amended	Section 106 governs treatment of cultural resources during project planning and implementation.	All Agencies
Antiquities Act, 1906	Cultural resources.	All Agencies
Archaeological Resources Protection Act, 1979	Cultural resources.	All Agencies
Executive Orders 11593 (1971), 13007 (1996), 13175 (2000)	Protection of cultural resources, Indian sacred sites, consultation and coordination with Indian Tribal governments.	All Agencies
Executive Order 13443	Governs expansion and enhancement of hunting opportunities and management of game species and habitats.	All Agencies
Executive Order 11644, as amended by 11989	Governs the use of off-road vehicles on Federal lands to protect natural resources, promote public safety, and minimize conflicts among uses.	All Agencies
Executive Order 12898 (1994) and 13045 (1997)	Environmental justice for environmental and health conditions in minority and low-income communities, and children.	All Agencies
The Travel Management Rule (2005)	Directs national forests and grasslands to establish a system of roads, trails and areas designated for motor vehicle use and prohibits motor vehicle use off the designated system.	Forest Service

Mitigation Measures Applicable to Alternatives B, C, D and E

The Council on Environmental Quality’s (CEQ) regulations for implementing NEPA define mitigation as measures that avoid, minimize, reduce, rectify, or compensate for impacts to the physical environment resulting from Federal actions (40 CFR 1508.20). Mitigation measures would be done as part of implementing the decision to lessen any potential damage to natural or cultural resources. In addition to the “Conditions Applicable to All Alternatives” section in chapter 2, forest plan requirements (standards and guidelines) as well as mitigation would be applied to all action alternatives. Mitigation measures applicable to alternatives B, C, D and E follow.

Cultural Resources Mitigation

The Apache-Sitgreaves National Forests would comply with the Standard Consultation Protocol developed by the USFS Southwestern Region identified as appendix I to the programmatic agreement with the SHPOs under any action alternative. This protocol provides a list of

protection measures the forests can draw from to ensure adverse effects to cultural resources are avoided or minimized. These measures include, but are not limited to:

- dropping proposed motorized road, trail or area designations to avoid or reduce direct or indirect effects on historic properties;
- re-routing or modifying designated roads or trails to protect historic properties. Rerouting or modifying roads will be subject to Section 106 compliance prior to ground disturbance, as provided for in the programmatic agreement;
- use of temporary emergency closures, if needed, while unacceptable effects on historic properties are addressed;
- revision of designations, if determined necessary to protect historic properties from adverse effects;
- monitoring to ensure that impacts to historic properties are not occurring or that protection measures are working; and
- leaving roads, trails, and/or areas off the MVUM map distributed to the public until after all Section 106 compliance needs are met.

Other protection measures effective to minimize impacts from motorized use to cultural resources include: plating the site surface with several feet of material or the intentional burying of sites; using barriers (boulders, vegetation, logs) or fencing and signage; patrolling; and public education.

General Crook National Trail: Use of motorized vehicles on any portion of the route not specifically designated and designed for motorized vehicle travel is prohibited. Emphasize protection for the historic value of the trail route. Manage a 200-foot corridor to preserve evidences of historic roadway and landscape character, including related historic trees, markers, gravesites, and water holes.

MVUM: The MVUM may not have all the roads, trails and areas shown in the record of decision. The cultural resource survey and clearance for roads and trails requiring review under appendix I of the “Programmatic Agreement: Standard Consultation Protocol for Travel Management Route Designation” in lieu of the council's regulations 36 CFR 800, may not be finished at the time a decision is made.

The cultural resource survey and clearance may determine that some proposed roads or trails would cause adverse affects to cultural resources. In such cases, the road, trail, or area would be closed to motorized travel and not be published on the map at all or until an acceptable strategy for mitigating the adverse effects (including but not limited to rerouting, barriers, temporary closures, eliminating the route, monitoring) was established. If protection measures cannot be applied or the proposed route, corridor or area will have an adverse effect on cultural resources, the forests will follow section VII of the programmatic agreement and will resolve adverse effects following the procedures in 36 CFR 800.6.

Wildlife Mitigation

All BAs/BEs will be completed prior to implementation on all site specific actions (gating or blocking roads or trails closed to motorized use) associated with this decision. There could be timing and season of use restrictions placed on site specific actions as a result of this review.

MVUM: Some proposed motorized routes and camping corridors on the Alpine, Springerville and Clifton Ranger Districts are located in threatened, endangered and sensitive fish and aquatic habitat. Prior to these routes being added to the MVUM, field review would be conducted and mitigation (including but not limited to timing and season of use restrictions) applied as needed.

Soils, Watershed, and Vegetation Mitigation

Under all action alternatives, the following standards and guidelines from the forest plan and best management practices (BMPs) from Forest Service Handbook (FSH) 2509.22, and Soil and Water Conservation Practices Handbook (USDA/USFS 1990), will be implemented.

1. Off-road vehicle (ORV) activities will be managed to minimize conflicts with other uses, prevent interference with the management of other resources, and prevent general environmental degradation while providing a range of ORV opportunities. The three wildernesses and the Blue Range Primitive Area are closed to ORV use. (forest plan)
2. Motorized roads and trails are closed to vehicle use unless signed open. (forest plan)
3. Motorized roads and trails will be closed to motorized use when damage from ORVs is likely to result in adverse effects and when one or more of the following situations or areas exist (forest plan and FSH):
 - a. soil groups having a high sensitivity rating, slope, erosion hazards, and runoff potential;
 - b. soils with surface textures of clay, clay loam, and heavy silt loam, or soils where such textures are within 6 to 8 inches of the surface;
 - c. effects to water quality, such as increased sediment and turbidity. Also, bacteriological and chemical problems due to heavy concentration of users and types of use occurring (chances of vehicle related contamination);
 - d. acres utilized for other recreation activities not compatible with ORV activities;
 - e. recently rehabilitated or reseeded areas;
 - f. areas where the forests have plantations with trees less than 4 inches diameter at breast height;
 - g. watercourses and wetlands permanently or intermittently wet;
 - h. municipal watersheds; and
 - i. in areas with watershed restoration projects.
4. Sediment production from roads may be minimized by methods such as (FSH):
 - a. out-sloping of road;
 - b. lead-out ditches;
 - c. energy dissipaters on culverts;
 - d. grass seeding; and

- e. rock riprap.
5. Maintain suitable filter/buffer strips between stream courses and disturbed areas and/or road locations to (forest plan and FSH):
 - a. maintain suitable stream temperature; and
 - b. maintain water quality standards.
6. Effectively close or obliterate roads causing intolerable resource damage (relocate roads as needed) (FSH).
7. Enhance watershed condition by obliterating roads causing resource damage that are unneeded for forest management (FSH).
8. Only one access road is approved to a parcel of private property whether there are one or many owners (forest plan).
9. Complete road maintenance plans annually for each district. Maintain roads to the maintenance level prescribed in the maintenance plans (forest plan).
10. Seasonally or permanently close existing roads that prohibit cross-country vehicle use or manage use when conflicts occur with wildlife and soil resource objectives. Generally limit closures to local roads in erosive soil areas, riparian areas, or wildlife areas that require specific management practices (forest plan).
11. Roads not needed for industry, public, and/or administrative use, which are uneconomical to maintain or causing resource conflicts will be obliterated. Obliteration will be accomplished by mechanically destroying the facility or by implementing management strategies to discourage, eliminate, or prohibit traffic to allow natural vegetation to return to the site. The road or trail shall be removed from the inventory when obliteration is complete (forest plan).
12. Emphasize road management in areas where resource/wildlife protection is dominant forest policy (seasonal closure orders).
13. Implement best management practices to prevent water quality degradation. Implement improvement action where water quality degradation does occur, except for special cases where temporary or short-term degradation is occurring from road crossing construction or similar situations (FSH).
14. Access will be strictly managed within Chevelon Creek as follows:
 - a. trails are closed to motorized use;
 - b. off-road travel by motorized vehicles is prohibited; and
 - c. motorized use within the corridor is restricted to the 504 Road. The road to Durfee Crossing will remain closed. Any vehicular access within the corridor other than the 504 Road must be authorized by the district ranger.
15. Roads will be located away from stream bottoms to minimize sediment delivery to the stream course whenever possible.
16. Erosion control measures will be included in road plans. Construct roads to keep sediment out of riparian and aquatic habitats. Minimize clearing widths and vegetative clearing. Permanent roads constructed/reconstructed in the critical wildlife habitat areas must meet the following criteria (forest plan):

- a. There is no feasible alternative to build the road outside the area, and the road is essential to achieve priority goals and objectives of contiguous management areas, or to provide access to land administered by other government agencies or to contiguous private land.
 - b. Roads are constructed/reconstructed to the minimum standards necessary to provide safety for the road use purpose.
17. Road survey design and construction engineering efforts will be commensurate with the value of the road(s) being constructed. Construct roads to minimum economical standards. Revegetate cut and fill slopes where feasible. Relocate or remove roads occurring within riparian areas. Do not align roads to pass through the long axis of narrow riparian strips (forest plan and FSH).

Scenery Mitigation

Under alternatives B, D, and E, construction of motorized trails would not include removal of trees. However, any type of slash generated from trail improvement will be removed within 1 year if within view of roadways or use areas in VQO of retention and partial retention foregrounds (forest plan, MA 1, p. 111) and within 2 feet of ground in modification/maximum modification (forest plan, MA 1, p. 112).

Transportation Mitigation

While most of the forests' maintenance level 3-5 roads are designed primarily for use by highway legal vehicles, two roads—NFSR 504, Heber Mormon Crossing and NFSR 169, Deer Lake Road—provide recreational access for all-terrain vehicles and other non-highway legal OHVs. Designating NFS roads for motorized mixed use involves special safety and engineering considerations. A mixed use study was completed on these two roads with the following mitigations:

- implementing the universal mitigation measures, especially improved signing and better communication will reduce crash probability;
- road mitigation should be prioritized regardless of mixed use, along with implementing a comprehensive communication, management, and enforcement plan. Associated implementation costs will depend on the designated allowed use for the road; and
- risk without mitigation: NFSR 504 and NFSR 169, crash probability is low and crash severity is high.

For all alternatives, the following mitigation measures apply:

- Clear communication and education to visitors on allowed uses, safe motor vehicle use, and natural resources (informational signing and kiosks, maps, Web site, etc.).
- Reduce “sign pollution” and separate cluttered signing and avoid unnecessary items.
- Clear brush and shape cut slopes along NFSR 504 to improve sight.
- Upgrade all signing on NFSR 504 and NFSR 169 to MUTCD standards, including recreation signing placed along the roadways. (An engineered sign study was performed on both NFSR 504 and 169. NFSR 504 has been resigned per the sign study in FY2008.

NFSR 169 will be resigned per the sign study in FY2010. The sign study was in compliance with MUTCD and does not include recreation signing or additional signing requirements for OHVs).

- Cleanup and eliminate vandalism stickers that can confuse forest visitors.
- Combine the appropriate enforcement measures with the allowed uses for the road.
- Utilize a monitoring program to better determine the appropriate management strategy for the types of use, new technologies, changes in visitor demands, and resource protection measures.

Some Pertinent Forest Plan Standards and Guidelines Applicable to Some Resource Areas

The Apache-Sitgreaves National Forests’ plan specifies the overall direction by which the forest resources are managed (USDA FS 1987). The forest plan consists of forestwide and area-specific goals, objectives, standards, and guidelines, which provide for land uses with anticipated resource outputs. There are many standards and guidelines pertaining to use of the forests’ motorized routes. Included here is some of the pertinent direction available for the following resource areas: cultural resources, fisheries, wildlife, air quality, soils and watershed, vegetation, recreation, and scenery. Refer to the forest plan for complete standards and guidelines.

Cultural Resources

- Establish ORV use areas and closures as needed to meet demand and other resource objectives. Manage ORV use to provide opportunities while protecting resources and minimizing conflicts with other users.
- ORV activities will be managed to: minimize conflicts with other uses, prevent interference with the management of other resources, and prevent general environmental degradation while providing a range of ORV opportunities.
- Existing, as well as additional, ORV closures are implemented when one or more of the following situations or areas exist and ORV use is likely to occur that would result in significant adverse effects:
 - Areas of cultural or religious significance with proven historical significance to Native Americans.
 - Areas with a high concentration of archaeological and historical sites or areas with especially significant sites.
- The preferred management of sites eligible, or potentially eligible, for the National Register of Historic Places will be avoidance and protection.
- Significant or potentially significant inventoried sites will be managed to achieve a “No Effect” finding in consultation with the SHPO and ACHP (36 CFR 800). Where resource conflicts make this impossible, management will achieve a “No Adverse Effect” finding. (forest plan: pp. 15, 34-35, 37, 39, 40)

Recreation

Direction for guiding management activities for outdoor recreation including, but not limited to motorized travel (p. 14-15). Management directives for outdoor recreation that relate directly to travel and recreation management:

- Manage the recreation resource to provide opportunities for a wide variety of developed and dispersed recreation opportunities. Provide for developed site and dispersed visitor use.
- Maintain a variety of trails, considering people's needs. Includes foot, motorized, and challenge adventure opportunities, as well as opportunities for the handicapped.
- Continue to integrate the recreation opportunity spectrum (ROS) system into the forests planning process to quantify recreation opportunity changes, guide forest management, and coordinate recreation with other resources.
- Establish ORV use areas and closures as needed to meet demand and other resource objectives. Manage ORV use to provide ORV opportunities while protecting resources and minimizing conflicts with other users (p. 15).

Fisheries

- Maintain habitat for viable populations of wildlife and fish species, and improve habitat for selected species. This is accomplished directly through habitat management, and indirectly through coordination of habitat management in conjunction with other resource activities.
- Improve habitat for listed threatened, endangered, or sensitive species of plants and animals and other species as they become threatened or endangered. Work toward recovery and declassification of species.
- Improve vegetation in riparian areas. This is an emphasis area for the plan. Improvements will be accomplished by reducing or, in some cases, eliminating adverse impacts from grazing, vehicles, and overuse by man.

Management Area 3 (Riparian): Recognize the importance and distinctive values of riparian areas when implementing management activities. Give preferential consideration to riparian dependent resources in cases of unsolvable conflicts. Manage to maintain or improve riparian areas to satisfactory condition. Other resource activities may occur to the extent they support or do not adversely affect riparian dependent resources. Management emphasis will be directed at areas with riparian dependent resources in this order of priority: (1) threatened and endangered species; (2) cold water fisheries; (3) warm water fisheries; and (4) all other riparian areas.

Management Area 3 Standards and Guidelines: For priority 1 and priority riparian areas for aquatic resources: (1) manage for and maintain at least 80 percent of near natural shade over water surfaces; (2) manage for and maintain at least 80 percent of streambank total linear distance in stable condition; (3) prevent siltation not to exceed 20 percent fines (<855mm) in riffle areas; (4) maintain 80 percent of the spawning gravel surface free of inorganic sediment; (5) manage for stream temperatures not to exceed 68 degrees F, unless not technically feasible; and (6) manage for and maintain at least an 80 biotic condition index on all perennial streams.

For priority 1 and 2 riparian areas for vegetation resource (where the site is capable of supporting woody plants): (1) manage for and maintain at least 60 percent of the woody plant composition in three or more riparian species; (2) manage for and maintain at least three age classes of riparian woody plants, with at least 10 percent of the woody plant cover in sprouts, seedlings, and saplings; (3) manage for and maintain at least 60 percent near natural shrub and tree crown cover; and (4) determine need and rehabilitate riparian areas through seeding and planting woody species in areas that are in unsatisfactory condition.

Manage for or maintain at least 60 percent of potential habitat capability for Apache trout, rainbow trout, brook trout, brown trout, loach minnow, and Little Colorado Spinedace.

Wildlife

Elk: Standards and guidelines expected to maintain or improve elk habitat components in timberland, woodlands, riparian areas, and grasslands - Amendment 1. Total road densities should average 3.5 miles per square mile or less. Open road densities should average 2 miles per square mile or less.

Aquatic macroinvertebrates: For MA3 riparian areas, manage for several indicator species with one of these being aquatic macroinvertebrates. The standards and guidelines for aquatic macroinvertebrates for priority 1 and 2 riparian areas are to manage for and maintain at least an 80 biotic condition index on perennial streams.

Antelope: Standards and guidelines to maintain or improve antelope habitat components in woodlands and grasslands – MA 4 grasslands managed to maintain existing antelope range.

Wild turkey: Standards and guidelines exist to maintain or improve turkey habitat components in timberland, woodlands, riparian areas, and grasslands.

Air Quality

Standards and guidelines:

- **Wilderness:** In fire management activities, give preference to using methods and equipment that causes the least: (1) alteration of the wilderness landscape; (2) disturbance of the land surface; (3) disturbance to visitor solitude; (4) reduction of visibility during periods of visitor use; and (5) adverse effect on other air quality related values.
- **Water Resource Improvement Maintenance Monitoring:** Monitor specific air pollutant and meteorological parameters necessary for the determination of air quality in the Mt. Baldy Class 1 area.
- **Air Management:** Comply with State and Federal air quality standards.
- **In the Class 1 air quality area (Mt. Baldy)** maintain high quality visual conditions. The form, line, texture, and color characteristic landscape will be clearly distinguishable when viewed as middle ground.

Soils and Watershed

Standards, guidelines, and goals for soils, watershed, and riparian areas:

- Maintain, or where needed, enhance soil productivity and watershed condition by 2020. Maintain a high quality sustained water yield for forest users and others. Identify and protect wetlands and flood plains (p. 16).
- Ensure compliance with Public Law 92-500, Federal Water Pollution Control Act, and amendments including the Clean Water Act. Implement best management practices to prevent water quality degradation. Implement improvement action where water quality degradation does occur, except for special cases where temporary or short-term degradation is occurring from road crossing construction or similar situations (p. 81).
- Provide adequate drainage to prevent concentrated flow and sediment laden runoff from entering watercourses (p. 81).
- Conserve soil and water resources, avoid permanent impairment of site productivity, and ensure conservation of soil and water resources. The minimum soil and resource management requirement is to control surface water runoff and erosion at not less than tolerance conditions (36 CFR 218.23 and 27) (p. 81).
- Erosion control measures will be included in road plans. Construct roads to keep sediment out of riparian and aquatic habitats (p. 104).
- Management Area 2: Plan/accomplish erosion reduction projects on areas disturbed by project activities where the site is not expected to stabilize within 2 years or when water quality degradation will occur (p. 153).

Scenery

The following visual quality objectives variations are allowed for a management area (p. 35-36):

- Preservation: No Change
- Retention: +2 percent foreground, +5 percent background, middle ground.
- Partial Retention: +5 percent foreground, +10 percent back and middle ground
- Modification/maximum modification: +10 percent in all zones
- One classification movement downward is all that will be allowed. Even acceptable variations must be coordinated through the forest landscape architect to mitigate the variation when possible (p. 35-36).
- Proposed General Crook National Historic Trail – Manage all resource activities to meet VQO retention foreground requirements, considering the historic qualities of the characteristic landscape (p. 37).
- Wilderness and Blue Range Primitive Area – Visual quality objective is preservation (MA 7, MA 8, MA 12, MA 13).
- Road construction in semiprimitive motorized areas will take into consideration that a natural appearing environment will be maintained. Most new roads should be closed following project completion. Roads left open will be managed at maintenance class 2 (p. 33).

- Off-road vehicle activities will be managed to: minimize conflicts with other uses, prevent interference with the management of other resources, and prevent general environmental degradation while providing a range of ORV opportunities. The three wilderness areas and the Blue Range Primitive Area are closed to ORV use (p. 34).
- Existing, as well as additional, ORV closures are implemented when one or more of the following situations or areas exist, and ORV use is likely to occur that would result in significant adverse effects (full list on p. 34-35).
- The following management areas (with page number references) have specific direction for scenery: MA 1 – p. 97; MA 2 – p. 117; MA 3 – p. 125; MA 4 – p. 130; MA 9 – p. 146; MA 11 – p. 161; MA 14 – Black River main stem – p. 169-170; MA 15 – East and West Fork of Black River p. 172-173; MA 16 – Chevelon Canyon p. 175-176; MA 17 – East and West Forks of the Little Colorado River; and MA 18 – Sandrock.