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Standards and Guidelines

Recreation development may occur so long as the Scenic River characteristics are not adversely affected.

Keep the Verde River Runners map current.

Determine outfitter/guide service capacity as part of the detailed implementation schedule. Include provisions for monitoring and adjusting as necessary.

Habitat Access Controlled by Closures

Access is prohibited in the vicinity of nesting bald eagles between December 1 and June 15 (Closure Order 16-52, October 23, 1984). Should eagles occupy a nest territory earlier or later, the closure period will be adjusted.

Seed and plant woody species in riparian areas. Priority is given to riparian areas that do not meet Regional standards, see the Regional Guide.

Range Resource Planning and Inventory

No grazing capacity is assigned, however, existing watering gaps along the River are maintained or the River may used in emergency conditions.

Water Rights

Protect instream flow water rights in conjunction with the Prescott and Tonto National Forests.

Fire Management Planning and Analysis

Fires are managed with adjacent areas. Suppression objectives are the same as for the adjacent area until the implementation schedule is complete. It may give more specific suppression objectives. Choose suppression methods having minimum impact on resources.

MANAGEMENT AREA 3
Ponderosa Pine and Mixed Conifer, Less Than 40 Percent Slopes

Analysis Areas: 1-9, 11, 12, 57, and 59
Acres: **499,464**

Ponderosa Pine

The ponderosa pine vegetative type is the Forest's largest commercial timber zone. The ponderosa pine stand blanketing the Mogollon Rim is part of the largest contiguous ponderosa pine stand in the world. There are three major vegetation associations that occur in this Management Area:

- Ponderosa pine with a Gambel oak understory occurs on a wide variety of elevational and climatic ranges. It is most commonly found on warm dry slopes. The oak usually comes in after a site disturbance, such as fire or logging. New Mexican locust is often associated as another understory species.
- Ponderosa pine with intermingled groups of aspen is found mostly on the west and north sides of the San Francisco Peaks. These stands are an important tourist attraction and a source of preferred firewood.
- Ponderosa pine with a ponderosa pine understory is characterized by relatively pure stands of ponderosa pine regeneration with inclusions of Douglas-fir, white fir, and Gambel oak. The ponderosa pine regeneration is dominant and occupies more than 75 percent of the site.

Logging, grazing, firewood gathering, hunting, and recreation are historic uses. There are many roads. The area provides crucial and key habitat for many species of wildlife because of diversity of cover and food production. Deer, elk, turkey, and songbird nesting habitat are found in the area.

Ponderosa pine is often called a fire dependent species because fire is required for successful regeneration. The thick bark of the ponderosa pine provides more protection from fire than bark of some other species. Ponderosa pine productivity can be maintained through harvesting and use of fire. Intermediate harvesting improves the growth rates on the remaining trees by concentrating the site's growth potential onto fewer trees. Stocking level control early in the life of the stand, precommercial and commercial thinning, is important to the long-term stand growth rates.

Natural fuel accumulations are moderate, 15+ tons per acre, and fire occurrence is the highest in the nation (see EIS Chapter 3). Logging and precommercial thinning residues can add 10 to 30 tons per acre. These accumulations can produce sufficient heat (B.T.U.'s) and flame length to kill residual trees during wildfires. Dispersed recreation use is heavy and risk of person-caused fires is high.

Timber Land Use Class

Nonforest	0 acres
Forested Land withdrawn	
Ponderosa Pine/Mixed Conifer	0 acres
Pinyon-juniper	0 acres
Unsuitable (Pinyon-juniper)	0 acres
Unsuitable (physically unsuited or not capable)	**223**acres*
Forested Lands not appropriate for timber harvest	**6,990** acres
Suitable Timber lands	**492,251** acres
TOTAL	**499,464** acres

Standards and Guidelines

Recreation Management

Manage dispersed recreation at the Standard Service Level.

Prohibit camping between Lockett Meadow Trailhead and the Inner Basin. The access road is managed as a trail and closed to vehicles, except that the City of Flagstaff may periodically be authorized to use it for special vehicles such as drill rigs if determined appropriate through environmental analysis.

Manage the Mount Elden/Dry Lake Hills to maintain a semi-primitive nonmotorized ROS class. Build a trail system to make a loop trail from Buffalo Park over the Dry Lake Hills to the Mount Elden Trail, then through the Elden Environmental Study Area on the El Paso natural gas pipeline and back to Buffalo Park. The trails are for nonmotorized traffic only, except the Schultz Creek Trail which is open to motorized vehicles. The Mount Elden Lookout Trail and the portion of the Oldham trail between Buffalo Park and the El Paso natural gas pipeline are closed to horse and packstock. Trails in the system have standard level maintenance.

Schultz Tank and immediate vicinity will be day use only.

A primitive horse camp may be developed at either the Schultz Pass trailhead or the proposed Schultz Creek trailhead. Dispersed use will be monitored in these two locations to determine the most desirable site.

* *The management goal is to perpetuate aspen, a non-industrial species in this area, but the initial entries will remove some chargeable volumes in the form of the intermingled existing ponderosa pine and mixed conifer trees. The land has been classified in this table as to its classification at the end of Decade 1; it will take seven decades to remove all of the ponderosa pine/mixed conifer, averaging 173 acres per year.*

Standards and Guidelines

Schultz Creek trail will remain open to all types of use. Monitoring will be done to provide future information on development of any user conflicts. If conflicts develop, restrictions will be determined at that time.

Loading and unloading horses is not permitted at the Schultz Tank parking area. Livestock and pets are not permitted to water or otherwise use Schultz Tank because it is part of the water supply for the Doney Park Community.

Range Resource Planning and Inventory

Grazing allotments will generally be managed to Level C and D.

This MA is open to grazing. There are 623,222 acres of full capacity lands. Of these total acres, 46,740 acres are in less than satisfactory condition. Less than satisfactory range conditions are improved through completion of the development program contained in AMP's.

Range Forage Improvement Maintenance

Evaluate forage improvements and maintain forage improvement acres in satisfactory or better condition. Attain a balanced composition of cool and warm season forage species.

Broadcast seed immediately following natural or prescribed burns, with high production, shade tolerant, multi-growing season species unless the area is planned for timber regeneration.

Seed behind intermediate timber harvests with mixes tailored to fit the site where additional forage is needed. Emphasize high production, shade tolerant, multi-growing season species that will not inhibit tree regeneration. Do not seed after the last intermediate harvest if tree regeneration will be inhibited. Do not seed after seed cuts.

Where open meadows in the pine/mixed conifer type are to be maintained, eliminate invading overstory vegetation, stabilize gullies to raise the water table, scarify the soil, and seed with appropriate grass and forage species. Control livestock grazing through management and/or fencing to establish the revegetation.

Identify each terrestrial ecosystem and assess soil properties to determine:

- Soil limitations for soil scarification purposes.
- The method of soil scarification best suited for the soils of the project area.
- Soil potential for revegetation - Identify soils that are suitable or unsuitable for successful revegetation.

Standards and Guidelines

- Soil potential for reforestation - Identify soils that are suitable or unsuitable for successful reforestation. Adjust stocking levels and require specific resource management activities where successful reforestation is limited by environmental factors in the terrestrial ecosystem.
- Whether soils are suitable, unsuitable, or unproductive for timber management.
- Soil limitations for timber harvest activities.
- Soils with high potential to convert to another vegetative type such as oak, locust, or juniper as a result of timber management activities - Modify timber management activities in these terrestrial ecosystems to halt the type conversion by approved chemical or mechanical means or by prescribed fire.

Timber Harvest Administration

Administer timber sales, pulpwood sales, permits for forest products, firewood, and miscellaneous forest products sales. This activity includes the following:accountability, financial management, field inspections, and contract interpretation and enforcement. Aggressively protect non-designated trees, including firewood, through the enforcement of the timber sale contract.

Plan, prepare, administer, and sell or issue free-use permits for commercial and personal use, miscellaneous convertible and nonconvertible products (FSM 2462).

Generally, local roads are closed until the next entry by signing and physical obstruction such as gates or barriers. Temporary roads are obliterated and returned to production. If necessary to ensure protection, off-road driving restrictions are imposed until roads are fully revegetated.

Fire Management Planning and Analysis

Suppression objective is 100 acres or less.

Prescribed fire using planned and unplanned ignitions is used to meet resource objectives. Unplanned ignitions are not used as a management tool in the urban interface.

Annual average wildfire acreage burned shoul not exceed 750 acres per year on the average over a 10-year period.

Emphasize using slash for firewood. Unless there are documented resource or protection needs, leave slash for at least 2 years before disposal. Clearly identify free-use firewood areas to assist the public in removing wood residues and thereby reducing future slash disposal costs. Provide easy to follow maps and signing for designated firewood areas.

MANAGEMENT AREA 4
Ponderosa Pine and Mixed Conifer, Greater Than 40 Percent Slopes

Analysis Areas: 10, 10a, 13, 13a
Acres: **20,107**

Ponderosa Pine

A small part of this Management Area (MA) has been logged in the past, generally for short distances immediately above more gentle slopes. Steep canyons having no roads in them and a number of cinder cones have not been logged.

Many of the remaining overmature trees and large snags in the pine type are in this MA. The snags are important to snag dependent species of wildlife.

The area contributes very little to the range resource because of steepness. However, the south facing slopes do provide a significant amount of big game winter habitat.

Recreation use is concentrated on trails passing through the area because of the steepness and the amount of debris on the ground. In addition, some steep slopes are scenic backdrops for sensitive recreation viewpoints.

Refer to the description of MA 3 for a discussion of vegetation, fire, and fuels.

Mixed Conifer

The vegetative composition, fire history, and natural fuels are similar to MA 3. Little to no logging activity and road building has taken place.

The area's value to wildlife is much greater than to domestic livestock because of the inaccessibility to most livestock.

Recreation use is largely limited to hiking and hunting.

Management Emphasis

Emphasize wildlife habitat, watershed condition, and dispersed recreation. Management intensity is low.

Highlights include:

- Manage with emphasis on wildlife habitat and dispersed recreation. Total acres of any Recreation Opportunity Spectrum (ROS) class may change no more than ±15 percent in Decade 1 due to road or trail building and other activities.
- -VQO's in this area vary and are managed in accordance with the Forest-wide standards and guidelines.
- Manage for the following indicator species:
  - Turkey
  - Goshawk
  - Pygmy nuthatch
  - Elk
  - Abert squirrel
  - Red squirrel
  - Hairy woodpecker
  - Mexican spotted owl
- Manage the Dry Lake Hills-Mount Elden area for dispersed recreation and wildlife habitat and a semi-primitive nonmotorized ROS class.
- Manage at least 640 acres of the tentatively suitable timber lands for old-growth on a sustained basis to achieve at least 320 acres meeting old-growth conditions at all times.

Timber Land Use Classes:

Nonforest	0 acres
Forested land withdrawn	
Ponderosa Pine/Mixed Conifer	0 acres
Pinyon-juniper	0 acres
Unsuitable (Pinyon-juniper)	0 acres
Unsuitable (physically unsuited or not capable)	**14,092** acres
Forested lands not appropriate for timber harvest	5,359 acres
Suitable Timber lands	**656** acres*
TOTAL	**20,107** acres

** No harvest during first or second decade.*

Standards and Guidelines

Recreation Planning and Inventory

Manage the Mount Elden/Dry Lake Hills to maintain a semi-primitive nonmotorized ROS class. Build a loop trail system tying into trailheads at Schultz Pass, Schultz Creek, Flagstaff-Elden Ranger Station, and Buffalo Park. Trails are for non-motorized use, except in Schultz Creek adjacent to Forest Road 420 up to Road 789. Horses and packstock are allowed except on the Mount Elden Lookout Trail and the portion of the Oldham Trail between Buffalo Park and the El Paso natural gas pipeline. The trail system is maintained at standard service level.

Manage Mount Elden/Dry Lake Hills for visual quality objective of Retention.

Range Resource Planning and Inventory

The area is generally classified as no capacity range and is usually not fenced, but occasional livestock use does occur. No capacity is assigned.

Silvicultural Examination and Prescription

Conduct silvicultural examination and re-evaluate potential for suitability during first decade.

Mexican Spotted Owl and Bear Habitat:

Whenever possible, areas managed for old-growth, bear, and spotted owls are the same. Evaluate owl and bear habitat needs during project planning.

MEXICAN SPOTTED OWL

Please refer to the Mexican Spotted Owl Standards and guidelines in the Forest-wide direction on pages 65 through 65-6.

NORTHERN GOSHAWK

Please refer to the northern goshawk Standards and Guidelines in the Forest-wide direction on pages 65-7 through 65-11.

Fire Management Planning and Analysis

Standards and Guidelines for fire management planning and analysis are the same as for MA 3.

MANAGEMENT AREA 5
Aspen

Analysis Area: 14
Acres: **4,487**

Aspen is the dominant tree species, comprising 50 percent of more of stand stocking. Most of the aspen is on the west and north side of the San Francisco Peaks. Other stands of aspen are found on cool moist sites on the rest of the Forest.

There is an overstory of aspen with an understory ranging from forbs and grass to ponderosa pine and sparse conifer reproduction, usually white fir or spruce. Without silvicultural treatment, aspen stands with mixed conifer or ponderosa pine understories will convert to conifer type as the aspen overstories die. Aspen on the Forest is mostly seral.

The aspen type, especially those stands with forb-grass understories, is an important producer of forage for wildlife and livestock. Aspen sprouts are favored browse for elk, livestock, and deer.

Aspen stands are important aesthetically because of contrasting colors and changing leaves. Their leaves are a light green in summer and turn yellow in the fall. Their white trunks provide further accents.

Regionally, the commercial market for aspen wood products varies from firewood, excelsior, and pallet material to high grade paneling. Until recent demands for firewood, the demand had been relatively low compared to conifer species. The low demand resulted in little management. Aspen usually requires fire or harvesting, by clearcutting, for regeneration. Most of the existing aspen stands are a direct result of past wildfires. Successful fire control over many years has reduced the establishment of new stands and the total acreage of aspen dominated stands has decreased.

Aspen stands provide natural firebreaks that aid in stopping wildfires that originate in adjacent vegetative types.

Management Emphasis

Emphasize a combination of wildlife habitat, visual quality, firewood production, watershed condition, and dispersed recreation with other resources and uses managed to be compatible.

Highlights include:

- Manage for the following indicator species:
  Yellow bellied sapsucker
  Mule deer
- Manage for VQO of Retention and Partial Retention in designated foreground areas, as specified in MA 3, and all VQO's in middleground and background.
- Manage firewood on a sustained-yield basis.

Timber Land Use Classes:

Nonforest	0 acres
Forested land withdrawn	
Ponderosa Pine/Mixed Conifer	0 acres
Pinyon-juniper	0 acres
Unsuitable (Pinyon-juniper)	0 acres
Unsuitable (physically unsuited or not capable)	**4,487** acres
Forested lands not appropriate for timber harvest	0 acres
Suitable Timber lands	0 acres
TOTAL	**4,487** acres

Program Components	**Activities**	**Standards and Guidelines**
		Visual Quality
A2 Recreation	A02, E06	Review the VQO inventory as a part of project planning and make necessary refinements following the field checking. Clearcutting to enhance or maintain aspen in Retention and Partial Retention areas is permissible with limitations on size and distribution of openings. Clearcuts should be distributed over larger areas rather than confined to small areas. In Retention areas, openings may be up to 2.5 acres in foreground areas, 5 acres in middleground areas, and 20 acres in background areas. In Partial Retention areas, openings may be up to 15 acres in foreground areas, and 40 acres in middleground and background areas.
		Structural Wildlife Habitat Improvements
C3 Wildlife	C03	Fence to protect aspen regeneration from grazing or wildlife where necessary.
		Range Resource Planning and Inventory
D2 Range	D01, D02	Grazing allotments are generally managed at Level C or D. There are 3,864 acres of full capacity lands, all in satisfactory condition.

Unproductive Timber Land - Management Area 6

Analysis Areas: 15, 16
Acres: **54,566**

Unproductive timber lands are within the ponderosa pine vegetation types. They are unsuitable for timber harvest because they fall in at least one of the following two categories.

- They do not meet the minimum standards for productivity which is Site Index 40 and/or 20 cubic feet per acre per year.

- There is not reasonable assurance that such lands can be adequately restocked as required by section 219.27(c)(13) of the planning regulations.

Management Emphasis

Emphasize a combination of wildlife habitat, watershed condition, and livestock grazing. Other resources are managed in harmony with the emphasized resources.

Highlights include:

- Manage for the following indicator species:

  - Elk
  - Abert Squirrel
  - Mule Deer
  - Hairy Woodpecker

- Use prescribed fire as a tool to help meet desired resource objectives.

- Visual Quality Objectives (VQO) are managed in accordance with the Forest-wide Standards and Guidelines.

Timber Land Use Classes:

Nonforest	0 acres
Forested land withdrawn	
Ponderosa Pine/Mixed Conifer	0 acres
Pinyon-juniper	0 acres
Unsuitable (Pinyon-juniper)	0 acres
Unsuitable (physically unsuited or not capable)	**54,566** acres
Forested lands not appropriate for timber harvest	0 acres
Suitable Timber lands	0 acres
TOTAL	**54,566** acres

Program Components	**Activities**	**Standards and Guidelines**
		Range Resource Planning and Inventory
D2 Range	D01, D02	Grazing allotments are generally managed at the C or D level. Full capacity lands are assigned a grazing capacity. There are 74,651 acres of full capacity lands. Of this total acreage, 4,628 acres are in less than satisfactory condition. Less than satisfactory range conditions are improved through completing the development program contained in the AMP.
		Range Forage Improvement
D3	D03	Conduct an analysis immediately following natural and/or prescribed burns to determine the potential and need for broadcast seeding. Based on positive analysis results, increase forage production by attaining a balanced composition of cool and warm season forage species by broadcast seeding immediately following natural and/or prescribed burns. Where an open meadow is maintained, as determined in an environmental analysis, eliminate invading overstory vegetation, stabilize gullies to raise the water table, and seed with appropriate grass and forage species. Control livestock grazing through management and/or fencing to allow for adequate revegetation. Identify each terrestrial ecosystem and assess soil properties to determine: - Soil limitations for soil scarification purposes. - The method of soil scarification best suited for the soils of the project area. - Soil potential for revegetation - Identify soils that are suitable or unsuitable for successful revegetation, - Erosion hazard, and on-site soil loss - Soils with a potential erosion hazard rating of severe will require specific resource management activities in order to avoid severe impairment of soil productivity.
		Reforestation
E4 Timber	E04	Reforestation is limited to administrative study areas for the purpose of finding successful methods and will be conducted according to an administrative study plan. Lands not suited for timber production are examined at least every 10 years to determine if they have become suited. During the first decade, identify each terrestrial ecosystem and assess soil properties to determine: - Whether soils are suitable, unsuitable, or unproductive for timber management. Provide detailed soils input to administrative study plans for reforestation.

Silvicultural Examination and Prescription

E8 E03, C01 Implement Integrated Stand Management (ISM) to benefit other resources and to aid in Forest-wide monitoring.

Evaluate stand conditions, including insect and disease, and the health and vigor of stands.

Maintain diversity of tree species so that ponderosa pine, Gambel oak, and alligator juniper are maintained as a component of the vegetation where they are now present.

Snag Management:

Where necessary to meet multiple-use objectives, harvest recent dead and poor risk ponderosa pine in areas having excess snag densities and adequate recruitment for future snags. This may also be done where habitat evaluation indicates a surplus of snags and there is a determination that harvest will not cause future snag densities to fall below desired densities or cause other adverse effects on habitat.

Alligator Juniper:

Manage alligator juniper to maintain and enhance wildlife habitat by the following criteria:
- In areas where alligator juniper trees comprise less than 50 percent of the total basal area, retain live alligator juniper trees $\geq$ 12 inches d.b.h.
- In areas where alligator juniper trees comprise more than 50 percent of the total basal area, live trees $\geq$ 12 inches d.b.h. may be removed if < 25 percent of the crown is living.

In both of the above cases, some live trees $\leq$ 12 inches d.b.h. may be removed. Retain at least 40 percent of the trees $\leq$ 12 inches.

Turkey Habitat:

Manage to retain and/or develop an average of at least four turkey roost tree groups per section in identified turkey winter range.

Fire Management Planning and Analysis

P2 Protection 01 Suppression objective is to minimize cost and provide for personal safety.

Areas mapped as the urban interface have a suppression objective of 10 acres or less. In areas outside of the urban interface, the suppression objective is to hold fires to 100 acres or less. Prescribed fire using planned and unplanned ignitions is used to accomplish resource objectives except no provision for unplanned ignitions in areas included in urban interface.

Piñon-Juniper Woodland, Less Than 40 Percent Slopes - Management Area 7

Analysis Areas: 17, 18, 19
Acres: **254,033**

The pinyon-juniper woodland is comprised of an overstory of pinyon pine, Utah juniper, and one-seed juniper with a small portion of alligator juniper and Rocky Mountain juniper. There is a wide variety of grass, forbs, and shrubs in the understory.

Traditional uses have included hunting, firewood cutting, pinyon nut gathering, Christmas tree and juniper post cutting, big game winter range, and grazing. There are many two-track roads through the area.

Fire occurrence is low and potential for large fires is low. Ground fuels are less than 5 tons per acre except in stands that have been harvested for firewood.

The local public prefers juniper over pinyon for firewood.

The area contains a large number of archaeological sites.

Management Emphasis

Emphasize firewood production, watershed condition, wildlife habitat, and livestock grazing. Other resources are managed in harmony with the emphasized resources.

Highlights include:

- Manage the pinyon-juniper on a sustained-yield basis for firewood and miscellaneous convertible products, on 0-15 percent slopes.

- Wildlife habitat management emphasizes forage production on 0 to 15 percent slopes, in conjunction with firewood harvest using Integrated Stand Management (ISM). Old-growth, cover, and snags are generally provided on slopes greater than 15 percent. However, exceptions will occur if dispersion requirements for habitat components are not met on these steep slopes. Where necessary to meet 10K Block requirements or specific habitat needs, one or more of these components can be obtained through management emphasis on the gentler slopes.

- Manage for the following indicator species:

    - Plain titmouse
    - Mule deer
    - Elk

- Use prescribed fire to help achieve resource objectives.

- Manage for the visual quality objectives outlined in the Forest Visual Resource Management inventory and in the Forest-wide Standards and Guidelines, including a configuration and design of opening which is consistent with the characteristic landscape.

- Palatable grass and forb species may be seeded.

Timber Land Use Classes:

Nonforest	0 acres
Forested Land withdrawn	
Ponderosa Pine/Mixed Conifer	0 acres
Pinyon-juniper	0 acres
Unsuitable (Pinyon-juniper)	**254,033** acres
Unsuitable (physically unsuited or not capable)	0 acres
Forested Lands not appropriate for timber harvest	0 acres
Suitable Timber lands	0 acres
TOTAL	**254,033** acres

Program Components	**Activities**	**Standards and Guidelines**
		Wildlife Structural Improvements
C3 Wildlife and Fish	C03	Provide water where needed on key wildlife winter ranges. Use bubblers or other means to prevent freezing, where needed.
		Wildlife Nonstructural Improvements
		Areas needing additional forage for elk and mule deer are given first priority in scheduling firewood/wildlife habitat treatments. Treatments are usually done in areas remote from intensive development and high road densities.

Program Components	Activities	Standards and Guidelines
		Range Resource Planning and Inventory
D2 Range	D02	Grazing allotments will generally be managed at Level C or D. Full capacity lands are assigned a grazing capacity. There are 227,601 acres of full capacity lands, of which 29,702 acres are in less than satisfactory condition. Less than satisfactory range conditions will be improved through completion of the range development program outlined in the AMP.
		Range Forage Improvement Maintenance
D3	D04	Conduct an analysis immediately following natural or prescribed burns to determine the potential and need for broadcast seeding. Based on a positive analysis, broadcast seed immediately following natural or prescribed burns with a warm and cool season seed mix to increase production for the site. This is done where necessary based upon the Burned Area Rehabilitation Handbook. Evaluate and determine the need to maintain forage improvement acres in satisfactory or better condition. Some acres have been mechanically treated by using heavy equipment to remove individual trees, or "pushing," "chaining," or "cabling" as the practice is called. A portion of these lands have very low potential for revegetation and are allowed to proceed towards climax stage. In some areas other low density canopy lands with a higher potential for revegetation are rotated into management as seral grasslands if an environmental analysis indicates. Pinyon-juniper woodlands that have not been previously treated, but are in the 0-10 percent canopy cover class as a result of past fire and subsequent successional development, are evaluated through the environmental analysis process to determine if they are included among lands maintained as seral grasslands. The criteria used for physical/biological suitability are the rating of soil potential for revegetation and the erosion potential as outlined in the Terrestrial Ecosystems Survey Handbook (TESH, January 7, 1985). Lands showing a low potential for revegetation are not retreated to maintain a seral state. Lands suitable for revegetation to grasslands and determined to be desirable through the environmental analysis are put on the 25-year average retreatment schedule. Where seral grasslands are maintained in the pinyon-juniper woodland, eliminate invading vegetation through mechanical, chemical, or planned fire treatments on a maintenance schedule averaging once every 25 years. Consider firewood harvesting and Christmas tree harvesting as tree removal methods. Stabilize gullies, scarify the soil, and seed disturbed soils with a mix tailored for the site, emphasizing high production, shade

Program Components	**Activities**	**Standards and Guidelines**
E8	E06, F04	Restrict firewood harvest and hauling to soil moisture conditions that do not cause excessive soil compaction, displacement, or puddling. For each project area, identify each terrestrial ecosystem and assess soil properties to determine: - Soil potential for reforestation - Identify soils that are suitable or unsuitable for successful reforestation. - Soils that contain undesirable soil properties that determine regeneration or revegetation in an area as being difficult.
		Timber Harvest Administration
	E07	Administer contracts and permits for forest products, firewood, and miscellaneous forest products sales. This activity includes accountability, financial management, inspections, contract interpretation, and enforcement.
		Fire Management Planning and Analysis
P2 Protection	P01	Suppression objective is to minimize cost and provide for personnel safety. Areas mapped as urban interface have a suppression objective of 10 acres or less. In areas outside the urban interface, the suppression objective is to hold fires to 1,000 acres or less. Prescribed fire using planned and unplanned ignitions is used to accomplish resource objectives except no provision for unplanned ignitions in areas included in urban interface. Emphasize using slash for firewood. Unless there are documented resource or protection needs, leave slash for at least 2 years before disposal. Clearly identify free-use firewood areas to assist the public in removing wood residues and thereby reducing future slash disposal costs. Provide easy to follow maps and signing for designated firewood areas.

Pinyon-Juniper Woodland, Greater Than 40 Percent Slopes – Management Area 8

Analysis Area: 20
Acres: **12,273**

This area includes the pinyon-juniper woodlands on slopes over 40 percent. The description is the same as MA 7. Steep canyons and volcanic slopes make the area unsuitable for many uses such as firewood cutting and some kinds of recreation.

Most of the area is old-growth because it has not been cut and fire has been excluded.

Management Emphasis

Emphasize wildlife habitat, watershed condition, and dispersed recreation. Management intensity is low.

Highlights include:

- Manage for the following indicator species:
  - Plain titmouse
  - Mule deer
  - Elk
- Manage Visual Quality Objectives (VQO) in accordance with the Forest-wide Standards and Guidelines. VQO's vary significantly in this MA.

Timber Land Use Classes:

Nonforest	0 acres
Forested land withdrawn	
Ponderosa Pine/Mixed Conifer	0 acres
Pinyon-juniper	0 acres
Unsuitable (Pinyon-juniper)	**12,273** acres
Unsuitable (physically unsuited or not capable)	0 acres
Forested lands not appropriate for timber harvest	0 acres
Suitable Timber lands	0 acres
TOTAL	**12,273** acres

Program Components	**Activities**	**Standards and Guidelines**
		Wildlife Structural Improvements
C3 Wildlife and Fish	C03	During winter months in key wildlife winter ranges provide water where needed using bubblers to prevent freezing.
		Range Planning and Inventory
D2 Range	D01, D02	The area is classified as no capacity range. The area generally is not fenced, so occasional livestock use does occur.
		Integrated Stand Management
E8 Timber	E03, C01	The area is not managed for forest products. Timber activities take place only where needed to achieve management of other resources.
		Bear Habitat:
		Evaluate bear habitat needs during project planning
		Old-Growth:
		- At least 3,000 trees/100 acres of 9 inches d.r.c. or greater. - At least 100 snags/100 acres > 9 inches d.r.c. and 10 feet or greater in height. - At least two logs/acre of down woody material 9 inches in diameter or greater and 10 feet long. - Not less than 5 percent of the forested lands capable of producing old-growth in each 10K Block meets old-growth conditions at any time.
		Fire Management Planning and Analysis
P2 Protection	P01	Suppression objective 250 acres or less except where included in urban interface.
		Prescribed fire using planned and unplanned ignitions is used to accomplish resource objectives except no provision for unplanned ignitions in areas included in urban interface.

MANAGEMENT AREA 9
Mountain Grassland

Analysis Area: 25
Acres: **1,544**

Laying in a patchwork across the Colorado Plateau, the mountain grasslands are meadows varying in size from just a few acres to well over 1,000 acres. Natural meadows are located in frost pockets or have soil or moisture conditions not conducive to conifer growth. A wide variety of species of grasses and forbs characterize the vegetation which varies according to soil moisture and temperature. The grasslands contain some riparian areas too small to be mapped. Riparian areas are managed by the Standards and Guidelines for MA 12.

The area is important to elk, turkey, and small mammals. Meadows provide vegetation diversity needed by wildlife.

The meadows provide opportunities for breathtaking views and are themselves a highly attractive visual resource.

In some areas, the meadows are dwindling through channel erosion and subsequent dropping of the water table. This results in encroachment by conifers and other species. As the grasslands shrink, forage for wildlife and livestock is reduced and visual quality declines.

Management Emphasis

Emphasize livestock grazing, visual quality, and wildlife habitat. Other resources are managed in harmony with emphasized resources. The smaller mountain meadows in remote areas are managed mostly for wildlife habitat, especially for elk summer range.

Highlights include:

- Manage for the following indicator species:
  Antelope
  Elk
- Manage Visual Quality Objectives (VQO) in accordance with the Forest-wide Standards and Guidelines. VQO's vary significantly in this MA.

Timber Land Use Classes:

Nonforest	**1,544** acres
Forested land withdrawn	
Ponderosa Pine/Mixed Conifer	0 acres
Pinyon-juniper	0 acres
Unsuitable (Pinyon-juniper)	0 acres
Unsuitable (physically unsuited or not capable)	0 acres
Forested lands not appropriate for timber harvest	0 acres
Suitable Timber lands	0 acres
TOTAL	**1,544** acres

Program Components	**Activities**	**Standards and Guidelines**
		Recreation Planning and Inventory
A2 Recreation	A01, A02	Manage for VQO's of Partial Retention and Modification, with portions adjacent to major travel routes managed as foreground Retention. Closely monitor off-road driving. If damage is occurring or becomes imminent, apply and enforce appropriate restrictions, (see Forest-wide Standards and Guidelines - Recreation program component, for criteria). Focus media attention on off-road driving damage in these sensitive areas at least annually.
		Nonstructural Wildlife Habitat Improvements
C3 Wildlife and Fish	C02, F03	Evaluate in the first decade the need to maintain and improve meadows by eliminating competing conifers, stabilizing gullies to restore water tables, and reseeding with species desirable to wildlife.
		Structural Wildlife Habitat Improvements
		Evaluate need and, where necessary, construct fences to protect key meadows from grazing. When springs are developed in meadow communities, riparian areas, or other sensitive areas, protect these areas by piping the water to water developments in adjacent, less sensitive areas.

Program Components	**Activities**	**Standards and Guidelines**
		Range Resource Planning and Inventory
D2 Rangelands	D01, D02	Grazing allotments are generally managed at the D level. Full capacity are assigned a grazing capacity. There are 8,824 acres of full capacity land; of this total, 947 acres are in less than satisfactory condition. Less than satisfactory range conditions will be improved through completion of the development program in the respective AMP's.
		Range Forage Improvement
	D03	Maintain existing mountain meadows by removing invading overstory by cutting or other methods, gully stabilization to raise the water table, soil scarification, and seeding with appropriate grass and forage species. Control livestock grazing by management and/or fencing to allow adequate regeneration of grasses and forbs. Increase forage production by attaining a balanced composition of cool and warm season forage species.
		Water Resources Planning
F3 Watershed/ Soil/Air	F02, D01	Manage mountain grasslands to achieve 90 percent of potential ground cover to prevent accelerated surface erosion and gully formation. Areas that presently do not meet these standards are scarified and seeded to bring ground cover to the desired level by the second decade. Restricting livestock may be necessary until revegetation. Identify each terrestrial ecosystem and assess soil properties to determine: - Soil limitations for soil scarification purposes. The method of soil scarification best suited for the soils of the project area. - Soil potential for revegetation - Identify soils that are suitable or unsuitable for successful revegetation, erosion hazard, and on-site soil loss. Soils with a potential erosion hazard rating of severe will require specific resource management activities in order to avoid severe impairment of soil productivity.
	F03, C01	In areas capable of supporting woody riparian species, maintain and/or improve these species to standards in the Regional Guide, August 1983.
	F04	Plan and implement cost effective stream channel restoration projects to raise the water table in meadow areas where channel erosion has resulted in a lowering of the water table.
		Road Maintenance and Management
L2 Transportation	F01, L01	Generally, avoid construction of new roads. Relocate and reconstruct around this roads around this MA whenever possible.

Program Components	**Activities**	**Standards and Guidelines**
		Fire Management Planning and Analysis
P2 Protection	P01	Suppression objective is to minimize suppression costs and provide for personnel safety. Suppression objective of 10 acres or less in areas mapped as urban interface. In areas outside the urban interface the suppression objective is to hold fires to 100 acres or less. Suppression methods are chosen to minimize damage to the resource. Prescribed fire using planned and unplanned ignitions is used to accomplish resource objectives except no provision for unplanned ignitions in areas included in urban interface.

MANAGEMENT AREA 10
Grassland and Sparse Piñon-Juniper Above the Rim

Analysis Areas 26, 27
Acres: **144,275**

This area is made up of the grasslands and pinyon-juniper with less than 10 percent cover above the Mogollon Rim and a small portion of the transition zone (ecotone) between ponderosa pine and pinyon-juniper, primarily on Anderson Mesa. The area includes a few stringers of ponderosa pine and ecotones between grass and pinyon-juniper lands. The majority of the area is pinyon-juniper that has been treated and is in the seral grassland stage.

Fuel loading and fire danger are low. The area is important wildlife winter range, as well as year long antelope range, and is used primarily as grazing land for both livestock and wildlife.

Management Emphasis

Emphasize range management, watershed condition, and wildlife habitat. Other resources are managed to improve outputs and quality. Emphasis is on prescribed burning to achieve management objectives. Walnut Canyon National Monument entrance road is within this MA. The management and use of the 1000 foot right-of-way along the entrance road is directed toward the protection and maintenance of the cultural and natural resources of the area.

Highlights include:

- Manage for the following indicator species:
  Antelope
- Manage Visual Quality Objectives (VQO) in accordance with the Forest-wide Standards and Guidelines. VQO's vary significantly in this MA.
- Enforcement of the management restrictions and the day to day administration of the Monument entrance is the responsibility of the Park Service, as is the maintenance of the facilities. Major changes in the development, construction, or initiation of resource management projects are coordinated between the Park Service and the Forest.

Timber Land Use Classes:

Nonforest	**144,275** acres
Forested land withdrawn	
Ponderosa Pine/Mixed Conifer	0 acres
Pinyon-juniper	0 acres
Unsuitable (Pinyon-juniper)	0 acres
Unsuitable (physically unsuited or not capable)	0 acres
Forested lands not appropriate for timber harvest	0 acres
Suitable Timber lands	0 acres
TOTAL	**144,275** acres

Program Components	**Activities**	**Standards and Guidelines**
		Recreation Planning and Inventory
A2 Recreation	A01	Walnut Canyon National Monument Entrance Road - (displayed on the MA map as MA 10, although as seen from road more closely resembles characteristics of MA 7). - The VQO is foreground Retention. - Roadside signing is a part of the visitor experience, and is of high quality. Signing, interpretive, informative, or regulatory is done in a positive manner. - Speed limits are posted and maintained by the Park Service. - The fenced boundary is signed as "National Forest Land Administered by the Park Service." - The primary purpose of the roadway is access to the National Monument. Secondary uses are for public access to and from Forest Road 303 and adjacent Forest Lands. - Picnicking, walking, hiking, and similar non-impacting uses are encouraged. - Permit the gathering and collecting of edible plants, nuts, and berries for personal consumption. - Vehicle traffic permitted only on designated roadways, with the exception of access to fences (for repair), for maintenance of utilities, traversing the right-of-way, and for stock management by permittees of the National Forest. - The Park Service has the option to allow controlled firewood harvest by members of the public who have obtained personal-use permits from the Forest. - The Forest and the Park Service cooperate together in fire suppression activities. A joint agreement is annually prepared to describe in detail the nature of the cooperation. - Prescribed burning to reduce hazardous fuels is approved jointly by the Forest and the Park Service. Activities may be proposed by either agency.

Program Components	Activities	Standards and Guidelines
A2	A01	- The sliver of land on the north side of the Monument separated by the FR 303 is difficult for the Park Service to manage, and the triangle west of the entrance road and east of the Monument is difficult for the Forest to manage. These lands are designated for transfer between the agencies.
		Nonstructural Wildlife Habitat Improvement
C3 Wildlife and Fish	C02	Control invasion of undesirable plant species when necessary to improve and protect wildlife habitat values. Prescribed burning will be one specific practice used, especially where needed to improve wildlife habitat.
		Structural Wildlife Habitat Improvements
	C03	During winter months in key wildlife winter ranges, provide water where possible, using bubblers or other methods to prevent freezing where needed.
		Range Resource Planning and Inventory
D2 Range	D01, D02	Manage grazing allotments generally at Levels D and E. Full capacity lands are assigned a grazing capacity. There are 123,435 acres of full capacity land; of these, 24,278 acres are in unsatisfactory range condition. Unsatisfactory range conditions will be improved through completion of the range development program in AMP's.
		Range Forage Improvement Maintenance
D3	D04	Maintain a seral grassland state on pinyon-juniper lands where type conversions have occurred in the past, with the exception that corridors of cover for wildlife habitat, determined through environmental analysis, may be allowed to develop through regrowth of pinyon-juniper. Initiate a retreatment schedule of approximately 25 years. Retreatments are accomplished through one or all of the following methods (see Table 12): - Individual tree pushing or cutting; - Prescribed burning; - Chemical treatments. Depending upon plant composition and diversity, seed treated sites with a mix tailored to the site, emphasizing high production, multi-growing season species to achieve a balance between warm and cool season plants. The goal of retreatment is to maintain the seral grasslands in a savannah-like state that emphasizes a diversity of habitats to enhance forage for livestock and wildlife.

MANAGEMENT AREA 12
Riparian and Open Water

Analysis Areas: 32, 33
Acres: **36,868**

Riparian areas are wetland ecosystems that have a high water table because they are close to surface or subsurface water. Riparian areas usually occur in the transition between aquatic and terrestrial ecosystems, but have distinct vegetation and soil characteristics.

There are eight types of riparian areas on the Forest:

- Intermittent streams
- Perennial streams
- Wet meadows
- Marshes
- Rivers
- Ponds
- Lakes
- Seeps and Springs

This management area includes both mapped riparian areas and riparian areas which were too small to be mapped as discrete units during the analysis process.

Riparian areas provide very important wildlife and fish habitat and recreation opportunity because of the water.

There are over sixty named lakes and wetlands in the area, including Mormon Lake and Stoneman Lake, the two largest natural lakes in Arizona.

Riparian areas are extremely variable due to different types of water bodies such as lakes, streams, and ponds. The characteristics of the area in which riparian areas occur such as gradient, topography, soil type, elevation, and plant communities also affect the area type. Each different type has associated vegetation that is characteristic.

Definition: Riparian ecosystems are distinguished by the presence of free water within the common rooting depth of native perennial plants during at least a portion of the growing season. Riparian ecosystems are normally associated with seeps, springs, streams, marshes, ponds, or lakes. The potential vegetation of these areas commonly includes a mixture of water (aquatic) and land (phreatic) ecosystems.

Riparian areas are critical for multiple-use management because:

- Riparian areas are generally more productive per acre of biomass (plants and animal) than other areas.
- They provide large amounts of edge between life zones which adds significantly to the diversity of an ecosystem.
- Different species and age classes provide vertical edge for wildlife species.

- The three basic requirements of wildlife habitat (food, cover, and water) are met.
- The fisheries resource is associated with this area.
- Topography, high productivity, easy availability, and the presence of water attract livestock and they tend to concentrate here. Riparian areas are highly sensitive to overgrazing.
- Scenic values are very high.
- Stream channels and associated riparian vegetation are fragile components of good watershed condition.
- Most of the developed campgrounds and picnic areas are in or directly adjacent to the riparian area. Dispersed recreationists concentrate in the area because of the water, visual quality, and shade trees.
- The topography generally provides for less expensive road construction and serves as convenient wildlife travel corridors. These uses are often in direct conflict.

Management Emphasis

Emphasize wildlife habitat, visual quality, fish habitat, and watershed condition on the wetlands, riparian forest, and riparian scrub. Emphasize dispersed recreation, including wildlife and fish recreation, on the open water portion.

An interdisciplinary team approach will be used on management activities such as timber sales, allotment management plans, and other management activities to prescribe specific management practices to meet the goal of riparian area recovery by 2030. Manage riparian areas based on the potential to support riparian vegetation. Potential is determined through a consensus of an interdisciplinary review. In order to achieve certain aspects of recovery, such as establishing three age classes of woody riparian vegetation, implementing riparian Standards and Guidelines occurs in the first decade. Riparian areas provide a filter strip of vegetation, important for filtering sediments generated from upslope soil erosion. Eighty percent of the riparian recovery is expected by 2030. The remaining 20 percent will be significantly improved, but will not have all of the characteristics of a fully recovered riparian area. The goals and objectives for elk populations and for livestock grazing affect achievement of the full recovery.

Highlights include:

- Improve riparian areas through a combination of improvement projects and management activities.
- Manage for the following indicator species:
    Cinnamon teal
    Lincoln's sparrow
    Yellow breasted chat
    Lucy's Warbler
    Macroinvertebrates
- Manage for visual quality objectives of Retention, Partial Retention and Modification.

Timber Land Use Classes:

Nonforest	**17,501** acres
Forested land withdrawn	
Ponderosa Pine/Mixed Conifer	0 acres
Pinyon-juniper	0 acres
Unsuitable (Pinyon-juniper)	0 acres
Unsuitable (physically unsuited or not capable)	**19,367** acres
Forested lands not appropriate for timber harvest	0 acres
Suitable Timber lands	0 acres
TOTAL	**36,868** acres

Program Components	**Activities**	**Standards and Guidelines**
		Recreation Planning and Inventory
A2 Recreation	A01, A02	In the first decade develop specific management direction for open water areas on lakes and reservoirs having significant amount of over water recreation use, e.g., sailboating, motorboating, canoeing, fishing, and windsurfing. Consider, as a minimum, ROS class demand and distribution, wildlife and fisheries habitat needs, user safety and enjoyment, and cost-effectiveness of management practices. Coordinate with Arizona Game and Fish Department (AGFD) in this analysis. Where determined through environmental analysis, identify and implement specific management practices such as wakeless zones, traffic circulation patterns, presence and/or size of gasoline motors, and regulations on use of jet skis. Coordinate with AGFD in implementation. Do not issue outfitter/guide permits or permit use which causes significant change for the ROS social or managerial setting, e.g., airboats or seaplanes. Manage Stoneman Lake basin for dispersed day-use. Overnight camping in the basin is prohibited. MA11 contains additional management direction for a portion of West Clear Creek and Wet Beaver Creek.
		Wildlife Planning and Inventory
C2 Wildlife and Fish	C01	Complete inventory, survey, and evaluate riparian areas by end of first decade. Cooperate with AGFD to develop implementation schedules for Arizona Cold Water Fisheries Strategic Plan. The following applies to riparian areas, whether they are large enough to bemapped out or not. Wetlands and open water containing emergent vegetation which provide nesting habitat are protected from disturbing uses that will harass nesting birds, such as activities that are noisy or would damage nests or nesting habitat from May 1 to July 15.

Program Components	Activities	Standards and Guidelines
C2	C01	Meet the following Riparian Standards in the Regional Guide for 80 percent of riparian areas above the Rim and 90 percent below the Rim by the year 2030: - Maintain at least 80 percent of the potential overstory crown coverage. - Maintain at least three age classes of woody riparian species, with at least 10 percent of the woody plant cover in sprouts, seedlings, and saplings. - Maintain at least 80 percent of the potential stream shading from June to September along perennial cold and cool water streams. - Maintain at least 80 percent of the potential shrub cover in high elevation areas. - Maintain at least 80 percent of the potential emergent vegetation cover from May 1 to July 15 in key wetlands. - Maintain at least 80 percent of the spawning gravel surface free of inorganic sediment. - Maintain at least 80 percent of streambank total linear distance in stable condition. - Retain snags in riparian areas that are not a safety hazard. Measures such as fencing to exclude livestock, vegetation projects, and special management prescriptions will be undertaken until the affected areas are brought into satisfactory riparian condition. In addition, the remainder of the Forest's riparian areas will have some of these characteristics, but not all of them by 2030.
	C01, A01, D01, E00, F04, L01 P01	Coordinate with other resource functions to pursue instream flow rights to protect aquatic ecosystems, fish, and wildlife.
		<u>Nonstructural Wildlife Habitat Improvements</u>
C3	C02	Determine the need to rehabilitate riparian areas through seeding and planting woody species in areas that are in unsatisfactory condition, including those areas not mapped as discrete riparian areas, and then proceed to rehabilitate areas as determined. Attempt using unpalatable species where necessary to avoid wildlife browsing. Maintain or improve nesting cover and waterfowl forage on existing waterfowl islands and shorelines. In conjunction with construction of waterfowl islands seed herbaceous species unpalatable to large herbivores.
	L01	Cooperate with Arizona Game and Fish Department on fish population control of aquatic plants and fish stocking to meet State fisheries management goals.

Water Resource Improvement

F3	F03	Through coordination with other disciplines, maintain or improve, where necessary, riparian vegetation along streams for moderating water temperature and protecting bank stability. Accomplish promptly after the inventory phase is completed. Investigate and implement where necessary, cost effective structural measures to control channel erosion.

Minerals

G1, G2 Minerals	G03	Mineral material excavation with the riparian zone may be allowed after environemntal analysis. Authorized mineral activies will maintain or improve riparian conditions.

Special-Use Management

J3 LMP/Special-Uses/Lands	J01	New special-uses are normally not allowed in riparian areas unless they benefit riparian management. Exceptions which cannot be avoided, such as utility lines or roads crossing stream courses, are designed to minimize the amount of riparian affected and the degree of effects.

Land Exchange

	J13	Acquiring riparian areas through land exchange has a high priority.

Fire Management Planning and Analysis

P2 Protection	P01	Fight fire aggressively, if necessary, to prevent resource damage, using suppression methods that minimize long-term adverse impacts to riparian habitats.

Cinder Hills Off-Highway Vehicle Area – MA 13

Acres: **13,711**

Description

The northern boundary is south of Sunset Crater Volcano National Monument (Monument) and south of Forest Road (FR) 545, the eastern boundary is the Doney MA, (east of Fernwood subdivision), the southern boundary is the Doney MA (underground pipeline) and the western boundary is the Craters MA (large KV electric line). This MA is a portion of the San Francisco volcanic field with a field of large cinder cones sparsely covered by ponderosa pine trees and shrubs and covered with a deep layer of loose cinders. The landscape of impressive cinder cones in this MA provides world class ATV, sandrail, and motorcycle riding, dispersed camping, and spectacular scenery. Unique among southwestern forests, the Cinder Hills are the result of massive, recent volcanic activity around the San Francisco Mountain. NASA used a part of the area to train astronauts in the 1960's because of its moon-like surface. The unique nature of the cinder soils, combined with hills, cool summer temperatures, and other features make the Cinder Hills OHV area an extremely popular destination of OHV enthusiasts. Individuals and large groups enjoy the area year-round, with heaviest use occurring on summer weekends. Because of the deep cinders, only 4 wheel drive, ATV's, or sandrails can travel on the cindery roads. Other roads are travelable only because they have had other surface material brought in. Current improvements include improved main roads, trails, loading ramps, and signs. There is no private land within the MA; the communities of Fernwood and Doney Park are adjacent to the nearby Doney MA.

Portions of the Cinder Hills OHV area are viewed from overlooks in the Monument and as one drives along FR 545. As visitors look from the Cinder Hills Overlook, OHV activity can be seen and heard, especially on very busy weekends. The hills provide a scenic backdrop as seen from Highway 89. New information has shown that portions of the OHV area erupted along with Sunset Crater. The geologic ties of Gyp Crater and the rest of the volcanic "vent" and the Kana-a Lava flow, has lead to greater emphasis on protection of these features. Some of the landforms in the Cinder Hills hold religious and cultural significance to American Indians. This MA supports plant and animal species adapted to cinder landscapes. Plants adapted to the cinder soils include *Penstemon clutei*, a Forest Service Region 3[*] sensitive plant.

Management Emphasis

Emphasize OHV recreation opportunities and amenities. Monitor communities of plants such as *Penstemon cluteii* where and when they occur in the OHV area. Ensure continued existence of this endemic plant. Mitigate scenic integrity of areas seen from the Monument, Highway 89, and neighboring rural residential areas. Protect the Kana-a Lava flow and Gyp Crater geologic features associated with Sunset Crater.

[*] *Region 3 refers to the Southwest Region of the Forest Service including Arizona, New Mexico, and a portion of Oklahoma*

Highlights include:

- Per the Objectives for Recreation Opportunity Spectrum map, this MA is mostly Semi-primitive Motorized with Roaded Natural corridors along improved roads. On busy summer weekends there are more people than would usually be the case in a Semi-primitive setting, but other aspects of Semi-primitive settings occur and this is acceptable.
- Actively manage for OHV use by increasing facilities to match use, better signing and trail designation, more on-site presence, and road improvement. Coordinate administration/enforcement with the National Park Service.
- Management Indicator Species for this MA are mule deer, pygmy nuthatch, and hairy woodpecker.
- Manage for Visual Quality Objectives (VQO's) of Partial Retention, and Modification. The VQO's should be Partial Retention as seen from Doney Park, Highway 89, Sunset Crater Volcano National Monument vistas, and FR 545; and Modification from roads crossing the area.

Timber Land Use Classes	**Acres**
Nonforest	**2,865**
Forested land withdrawn	
Ponderosa Pine/Mixed Conifer	0
Pinyon-juniper	0
Unsuitable (Pinyon-juniper)	2,576
Unsuitable (physically unsuited or not capable)	**3,816**
Forested lands not appropriate for timber harvest	0
Suitable Timber lands	**4,454**
TOTAL	**13,711**

All of the following items are Guidelines

OHV Use

This MA is designated for off-road driving and is managed for two and four wheeled vehicles.

Manage off-road driving to provide recreational opportunities and coordinate with needs of other recreation users and other resources.

Make slight adjustments to the boundary of the OHV area where needed to ease administration of the site. These changes will improve enforcement of the boundaries, help users identify the area, and in combination with other access management activities will lessen encroachment into the Monument. Consider fencing or other physical barriers a means of boundary identification.

The boundary has been slightly revised on the southwest corner of the area for administrative identification. There is no significant change in the size of the area, but it is adjusted to roads

or features that are identifiable on the ground. The map in Appendix M has been revised to reflect what is currently posted on the ground.

See the *Objectives for Recreation Opportunity Spectrum* map (Appendix M) and manage uses to meet these objectives. On busy summer weekends, the number of encounters with other recreationists will likely be outside parameters set for Semi-primitive settings and this is acceptable.

Reference the *Cinder Hills Off-Road Driving Area Report* (Peaks Ranger District). This report is a detailed desired condition that will be validated or changed via subsequent site-specific NEPA analysis. This report includes a map of the desired improved roads, camping areas, specific slope designations, rehabilitation needs, sanitation facilities, signing, boundary management, information, and interpretation actions. The report will be updated as needed with involvement from off-road vehicle users, Native American tribes, and others concerned with Cinder Hills use. Requiring a permit and/or charging a fee may be considered in the future. Operation of the area by a concessionaire may be considered.

Portions of this MA will be open to unrestricted cross-country travel, portions will have use restricted to designated routes, and portions will be closed (some slopes).

Reasons for closing areas may include:

- Protection of geologic features tied to Sunset Crater
- Scenic integrity of steep slopes facing the Sunset Crater Overlook, the Doney Park communities, and Highway 89
- Presence of archaeological sites that could be damaged (usually located under a cinder layer) or other places of traditional cultural importance
- Maintenance of ground vegetation necessary for ecosystem function
- Sensitive plant locations, such as *Penstemon cluteii*
- Needs of off-road users
- User safety
- Manageability
- Excessive erosion resulting in cinder removal down to mineral soil and subsequent erosion or resulting bare tree roots exposed at mineral soil

Reasons for keeping areas open may include:

- Low visibility from communities or from the Monument (interior of this MA)
- Quality of the ATV/sandrail experience
- To provide for a variety of OHV experiences
- Proximity to camping areas
- Low or absent vegetative cover

Organized off-road driving events are considered on a case-by-case basis through the environmental analysis process.

Glass containers may be prohibited if the containers create a health, safety, and/or litter problem.

Pursue on-site patrols and more full time stewardship.

Partner with OHV community to benefit from volunteer contributions.

Pursue State[*] grants and other funding opportunities for improvements, rehabilitation, interpretation, and on-site presence. Other funding may include Fee Demo.[†]

Vehicle sound emissions will be required to meet State standards, or in the absence of State standards, industry or other standards.

Vehicles will meet Forest Service Region 3 fire equipment standards.

Recreation Signing

Improve and maintain boundary and interior signing. Cooperate with NPS to construct a physical barrier delineating the OHV area from the National Monument boundary if motorized incursions continue.

Camping and Roads

Improve or re-locate improved roads and locate camping in order to disperse riders, provide additional areas for enjoyment, and lessen use in sensitive areas. This includes limiting through traffic to the Sunset Volcano-Wuaptki Scenic Loop Drive (FR545), and improvement of roads in the interior of the area. Criteria for access and camping design include: location of riding areas, presence of *Penstemon cluteii* habitat, dispersing riders, improving visual quality, and protection and rehabilitation needs of impaired vegetation and soils.

Provide different camping levels and experiences. Provide more developed camping hubs along improved roads. Design and develop transportation routes at camping hubs for pulling off the road. These hubs will include sanitation facilities.

Provide quiet area camping sites. Quiet area restrictions are posted, and as funding becomes available, monitored by host and OHV users. Sanitation facilities are included at these sites as needed. All other areas of the OHV are open to primitive camping, unless specifically closed.

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[*] *Coordination with the State: We will continue to work with the State, to determine what grants are available and appropriate to apply for in relation to the proposed management, improvements, and rehabilitation needs of the area. In addition to exploring funding avenues, we will work with the State to determine other management partnerships that might be desirable to achieve the management objectives and enhance the OHV experience.*

[†] *Fee Demo: The District will be studying the concept of Fee Demo for the OHV Area. A District team will determine if fee demo is a desirable funding avenue, and if so, how a fee demo area would be implemented. We will visit other fee demo sites, talk to other managers, and work with the OHV community to determine if this is an appropriate and/or desirable action to take.*

Scenery

In closed areas, attempt actions to remove tracks and re-create natural cinder landscapes. Research techniques that may help the situation, but without causing large areas of additional ground disturbance. Examples of actions may include raking, dragging cinders up slope, mimicking needlecast or seeding.

Cultural/Historical

Provide signing informing the public about closure of astronaut training ground.

Close the astronaut training ground by adding a fence to exclude OHV's.

Continue active monitoring of cultural and historical sites to assess impacts from recreation. Changes in management can occur in response to demonstrated (through monitoring) negative impacts to archaeological resources. Cooperate with Park Service personnel to accomplish monitoring.

Rare Plants

Continue to monitor *Penstemon cluteii*. There is an ongoing status report[*] being developed for this plant. As this information is attained we will make any necessary adjustments to ensure continued existence of this endemic plant.

Forestry

Many acres within the Cinder Hills OHV area have low regeneration potential due to cinder soils and are currently classified as unsuitable for timber production.

Evaluate stand conditions, including insect and disease, and the health and vigor of stands. Where and when necessary to meet safety objectives, harvest recent dead and poor risk ponderosa pine.

Non-Native and Invasive Plants

There are known populations of non-native and invasive plants in this MA (examples are diffuse knapweed and camelthorn). Continue efforts to control or eradicate plants, especially along roadways.

Livestock Grazing

This area is currently closed to livestock grazing.

Prescribed Burning

Prescribed fire using planned and unplanned ignitions is used to accomplish resource objectives except there is no provision for unplanned ignitions in areas included in the urban interface.

[*] *Penstemon cluteii grows in cinder soils at various locations on the Peaks Ranger District. The status report covers the entire range for this plant, which includes the OHV area.*

Coordination with National Park Service

Protect areas that are directly tied to the Sunset Crater eruption for future research, and visitor interpretation of the geologic story. Coordinate with the NPS to inventory, map, and assess conditions of the geologic features.

For Gyp Crater: establish safety barriers, and/or warning signs around the exterior of the crater, establish and coordinate interpretive signing and programs with the National Park Service, close Gyp Crater to OHV access and camping, and rehabilitate tracks in Gyp Crater.

For the Kana-a lava flow, prevent off road vehicle use in the lava flow. Use proposed boundary adjustments in combination with access management. Roads leading north off of FR 244 should be closed and rehabilitated. These roads lead out of the OHV area and impact the Kana-a lava flow.

Work with and establish interpretive messages and programs with the National Park Service and volunteers from OHV users. Including improved signing, information kiosks, and interpretive message at the Cinder Hills Overlook. Provide signing and information aimed at the following objectives: to prevent lost riders, to show opportunities of where to ride, to clearly depict boundaries and eliminate encroachment into Sunset Crater Volcano National Monument, and to identify dangerous and/or closed areas.

Coordinate with Sunset Crater Volcano and Wupatki National Monuments in managing dispersed recreation use adjacent to the Monuments.

Environmental Study Areas – MA 18

Acres: **1,580**

Description

Mt. Elden ESA - Located at the base of Mt. Elden adjacent to the subdivisions of Shadow Mountain, Paradise Hills, Skyline Estates, and Swiss Manor, and adjacent to Buffalo Park. Originally a bird sanctuary, the Elden Environmental Study Area (ESA) serves a unique purpose. Trails provide for popular hikes that are convenient and easy to use. The area is available for study and recreation and has become an integral part of the Flagstaff Public School curriculum. In addition, the Elden ESA is popular daytime destination for hiking, dog-walking, mountain-biking, and horse riding. There are many formal access points developed along the edge of subdivisions providing public access. There are many informal access points and social trails as well. This ESA strengthens the opportunities for partnerships between the school, the Forest Service, and Arizona Game and Fish Department. A wintering deer herd provides an opportunity for wildlife viewing and monitoring by the students. The El Paso natural gas pipeline crosses the area.

Old Caves Crater ESA - Old Caves Crater is located north of Silver Saddle Road, east of Highway 89, and adjacent to Doney Park communities. This large volcanic cinder cone has diverse vegetation, provides scenic backdrops to surrounding residents, and contains archaeological sites and cultural values. Teachers at Cromer School have developed a curriculum for the area and students walk from the school to the site. There are trails in the area and high levels of non-motorized daytime dispersed recreation use.

Griffith's Spring ESA - Griffith's Spring is located south of Flagstaff on Highway 89A, adjacent to the Forest Highlands community and just south of Pine Dell. Among a variety of uses, local teachers have used the spring and its stream channel as an outdoor classroom. Visitors traveling Highway 89A stop here for picnics and daytime walks. Nearby residents also enjoy the area. There is a stream channel with riparian vegetation and aquatic species. A nearby wet meadow adds additional diversity.

Management Emphasis

Elden ESA now includes an area behind Christensen Elementary School. The area directly behind Christensen and the Peaks Ranger Station is adjacent to the current Elden ESA.

Emphasize environmental education opportunities for the Flagstaff Public Schools and the general public by maintaining the ecosystem and developing interpretive facilities. Since these areas fall within the Urban/Rural Influence Zone, emphasize fuels reduction and other techniques to reduce the risk of catastrophic wildfire. Non-motorized dispersed recreation is encouraged. Visual resource management and watershed condition are emphasized. Cultural resources are protected and where appropriate interpretation of cultural resources is provided. Low fire potential exists with fire's role re-established in the ecosystem. Meadows and drainages function properly and aquatic species are maintained.

Highlights include:

- In the Elden ESA implement tree thinning, prescribed fire or other activities that lessen risk of catastrophic wildfire and maintain shrubs, such as Arizona cliffrose, that provide winter food source for deer.
- Implement improvements in the Old Caves Crater that improve watershed health, protect fragile archaeological sites, restore vegetation to bare soil areas, close the area to motorized vehicles, and provide trails for non-motorized daytime recreation uses. Examples of improvements are**;** marking the boundary of the area with fenceline along private landlines, locate and adopt some trails and obliterate others, provide signing, change roads to trails or obliterate them, and locate a trail to the top of the Crater.
- Continue improvements to the Griffith's Spring area to provide for recreation and outdoor education and protects stream banks, riparian vegetation, aquatic wildlife species, and scenery. Examples of improvements are: parking areas, pole fences, interpretive and environmental education information, directional signing, and a vault toilet. The relocation and construction of trail and the closure and rehabilitation of two-track road are needed to prevent loss of vegetation, erosion and damage to streambanks, soil compaction, and excessive water turbidity. The construction of aspen/willow fences around a small area is needed to prevent browsing damage by elk and deer.

Timber Land Use Classes	**Acres**
Nonforest	**1,580**
Forest land withdrawn	
Ponderosa Pine/Mixed Conifer	0
Pinyon-juniper	0
Unsuitable	**0**
Unsuitable (physically unsuited or not capable)	**0**
Forest lands not appropriate for timber harvest	**0**
Suitable Timber lands	**0**
TOTAL	**1,580**

All of the following items are Guidelines.

Recreation

Develop the Elden ESA in accordance with the concept plan map prepared by the Recreation Resource Center for Environmental Education and Flagstaff Public Schools.

Plan and support uses and trails in conjunction with the curriculum needs of the Flagstaff Public Schools. Develop environmental education programs cooperatively with public schools.

Dispersed Recreation

Maintain fencing as needed for management.

The Elden ESA is open to the public for foot traffic and day use only. Use the El Paso Natural gas line as a trail in conjunction with the Mt. Elden/Dry Lake Hills trail system. Horses are allowed on the pipeline trail.

Enforce off-road driving closures. Make a special effort through the schools and the media to focus public attention on the importance of complying with the closure for all areas.

Special-Uses

New special-use authorizations or amendments to existing special-use authorizations that would or could adversely affect or change the character of the ESA are not allowed.

Forestry

Manage vegetation to meet management direction for this MA.

Livestock Grazing

The areas are not currently open to livestock grazing.

Prescribed Burning

Prescribed fires from planned ignitions are used to accomplish fuel treatment and other resource management objectives.

Mogollon Rim - Management Area 19

Analysis Areas: 1-9, 11, 12, 13
Acres: 12,554

The Mogollon Rim MA covers the area from the Rim north to the Rim road (Forest Road 300), the General Crook Trail, and the foreground VQO area adjacent to the boundary roads and trails. The MA extends from Arizona Highway 87 to the boundary with the Sitgreaves National Forest and includes Milk Ranch Point on the west and Knoll Lake on the east.

The Mogollon Rim forms the Forest's southern boundary. Dispersed recreation use is heavy and developed use is heavy at Knoll Lake and Kehl Springs Campgrounds.

Vegetation includes ponderosa pine, mixed conifer, and patches of aspen and bigtooth maple. There is a severe infestation of dwarf mistletoe in much of the ponderosa pine and mixed conifer.

While fire history has not been severe on the Coconino side, a number of large wildfires have started below the Mogollon Rim and made their way over the top and into the prime timber on the Sitgreaves National Forest to the east. For that reason, fire and fuels management are a constant concern.

The Mogollon Rim, both physically and historically, is the major division between the desert country in the south and the high timber of the Colorado Plateau. Its abrupt features make it an important scenic, historic, and recreational attraction.

Management Emphasis

Emphasize dispersed and developed recreation, visual quality, and wildlife travel corridors across the Rim, generally the heads of major canyons running to the northeast. Dwarf mistletoe is aggressively treated through ISM.

Highlights include:

- Manage for VQO of Retention in the foreground viewing area from the proposed General George Crook Trail, the Rim Road (300), Roads 218, 218A, 295, 295E, and 673A.
- Manage at least 1,281 acres in the tentatively suitable for old-growth on a sustained basis to achieve at least 640 acres meeting old-growth conditions at all times.
- The Rim Road is upgraded to double lane, aggregate surface with minimal realignment. It is scheduled to be completed in the second decade. Management of the resource and public safety, not speed, governs road standards.

Flagstaff/Lake Mary Ecosystem Analysis (FLEA) Area-Wide Goals, Objectives, Standards, and Guidelines

Introduction

The Goals, Objectives, Standards, and Guidelines in this chapter are additions to the Forest Plan and apply to the FLEA area only. Design of future projects will be based on four sources: 1) the current forest-wide direction, 2) the current management areas primarily based on vegetation and slope, 3) FLEA area-wide direction and 4) the new or updated FLEA Management Area direction. The management direction from the initial management areas that were identified primarily by cover type and slope, such as MA 3, 4, 5, 8, or 9, still applies to lands within the new place-based management areas of FLEA, such as Lake Mary Watershed or Doney. So if one is searching for management direction for a piece of land that is covered with ponderosa pine less than 40 percent slope and is located east of the Waterline Road, there would be direction from MA 3 and then also additional direction from the place-based Shultz MA; both locations would have information about desired conditions. If there is a conflict between management directions, the more place-based direction takes precedent. In the previous example that means the Shultz MA take precedent.

Goals are written as desired conditions in the present tense. Standards and guidelines are written in an active voice as direction.

Maps are located in Appendix M.

Zones

The Urban Influence Zone is located approximately ½ mile from the urban growth boundary as drawn in the *Flagstaff Regional Land Use and Transportation Plan* (RULTP).* The Rural Influence Zone is located approximately ½ mile from the rural growth boundary in the RLUTP, where it surrounds communities like Doney Park and Kachina Village. These zones are mapped as one area referred to as the Urban/Rural Influence Zone (U/RIZ). This zone provides a "fuzzy line" on the map that represents National Forest lands highly influenced by adjacent urban or rural residential communities. There are approximately 64,368 acres of National Forest Lands within the Urban/Rural Influence Zone.

Recreation Opportunity Setting (ROS)

Goals and Objectives

There is a range of recreational setting opportunities for people to enjoy the area's many scenic and aesthetic qualities.

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* *City of Flagstaff and Coconino County have been working on common planning direction for an area surrounding Flagstaff, that encompasses 524 square miles extending north to Sunset Crater, south to the communities of Kachina Village/Mountainaire, east to Winona, and west to Bellemont. It has been finalized for the county portions and was ratified by voters in May 2002 for the City of Flagstaff portions.*

The diversity and quality of recreation opportunities, settings, and experiences are within acceptable limits of change to ecosystem stability and condition.

Evidence of human activities and developments such as roads, trails, and facilities, is visually subordinate to the natural-appearing landscape.

Encourage cooperation among community, landowners, other land management agencies, and local governments to maintain trails, natural scenery, and healthy landscapes in the Urban/Rural Influence Zone.

Refer to the *Objectives for Recreation Opportunity Spectrum* map *for the FLEA Area* map (Appendix M) for the desired recreation opportunities and experiences.[*]

Guidelines

ROS objectives guide management.

Manage for social encounters, signing, scenery, and a sense of exploration that meets the ROS objectives.

Use ROS objectives to aid in determining appropriate types and numbers of individual, groups, outfitter/guides, and special uses.

Manage recreation use to stay within the capacity for ROS objectives with the exception of holiday weekend use levels that may temporarily on a short-term basis exceed capacity in some locations, such as the Cinder Hills OHV MA.

Management activities should generally comply with the requirements of the adopted ROS classes on the *Objectives for Recreation Opportunity Spectrum* map.[†]

Work towards a complete Scenery Management System (SMS) assessment.

Visitor Information Services

Goals and Objectives

Regulations are known and enforced. Visitors are properly informed about services, facilities, regulations, and environmental ethics such as "Leave No Trace."

Agencies communicate and work together with local organizations to achieve goals. There is ongoing communication among community organizations, interest groups, and homeowner associations.

Through a variety of interpretive efforts, people learn about biodiversity, ecosystem function, fire ecology, and riparian communities and will be motivated to practice careful stewardship.

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[*] *This includes an increase in opportunities for Semi-primitive Non-motorized and Semi-primitive Motorized ROS experiences to better manage the high demand for this type of recreation setting. (see Objectives for ROS map)*

[†] *For more discussion of ROS classifications please refer to* The Ideas for Change, *Appendix A.*

Recreation

Guidelines

Implement and use "meaningful measures" [*] to manage for dispersed recreation and user satisfaction.

Camping

Goals and Objectives

Dispersed campsites are maintained to protect forest resources and maintain visitor experience.

Impacts from dispersed camping do not result in unacceptable environmental impacts, interfere with day-use, or pose a threat to residents living next to National Forest lands.

Standards

Prohibit dispersed camping within 1 mile of developed campgrounds and developed day-use facilities.

The maximum camping stay limit is 14 consecutive days unless otherwise posted in a special order.

Guidelines

Implement the camping objectives outlined in the *Objectives for Camping* map. Emphasize daytime recreation activities in Urban/Rural Influence Zone. In portions of the FLEA area, change from general dispersed camping to designated dispersed camping only. Implement designated dispersed camping areas and any additional areas through subsequent site-specific analysis.

Inventory and monitor dispersed camping sites. This inventory will provide information about when sites should be closed and restored. The monitoring will provide information to help decide whether or not restored sites should be re-opened.

When designating dispersed camping, consider existing resource damage, closeness to riparian communities, degree of use, and ROS objectives. Campsites should be identified as candidates for closure, restoration, or relocation. Campsites that are identified to remain open will become designated campsites.

[*] *Meaningful Measures (MM) is a process that connects management of the recreation program to our users, to Congress, and to agency decision makers through the establishment of National Quality Standards and the determination of the costs to meet those standards. MM is responsive to changes in funding, priorities, and visitor preferences.*

Techniques for managing designated dispersed campsites include but are not limited to the following concepts, depending on site location and level of use.

- In general, locate designated dispersed camping sites up to 300 feet off a forest road.
- Designated campsites are identifiable by a marker, such as a sign or post. Some sites may be hardened and access improved. Allow camping within 50 to 100 feet of the marker on a first-come first-serve basis and once the sites are full the user would have to go to another area to camp. Site-specific environmental analysis may yield a greater or lesser distance.
- To protect sensitive natural resources, harden or close high-use recreation sites and initiate additional camping and campfire restrictions, depending on monitoring.

Compile, map in GIS, and file in an electronic corporate database information obtained from inventory and monitoring of dispersed camping sites.

Inform and enforce State regulations for no camping within ¼ mile of open water.

Outfitter/Guides

Goals and Objectives

Commercial activities are consistent with management area emphasis and ROS objectives.

Commercial activities support Forest Service goals and provide high quality outdoor recreation, interpretation, and education activities that complement the Forest Service mission.

Special-use proposals are consistent with desired conditions. New applications for commercial use are approved based on the ability and willingness of the applicant to meet the goals of the *Forest Plan.*

Standards

Manage outfitter/guide use to stay within capacities that meet ROS objectives.

Award new outfitter/guide permits competitively by soliciting applications/proposals. In general, reject unsolicited proposals.

Make outfitter/guide permits available based on a suitable mix of guided and non-guided public capacity. This mix may vary by type of activity and/or season of use.

Guidelines

Determine outfitter/guide service capacity for the FLEA area.

Review and adjust existing commercial uses to meet *Forest Plan* direction and ROS objectives.

The table below shows objectives for the number of social encounters within each of the ROS settings for Forest Service permitted commercial tour operators only. These objectives should apply to commercial tours.

ROS Setting*	**Social Encounters (All users)**
Roaded Natural	No objective
Semi-primitive Motorized	15 per day
Semi-primitive Non-motorized	15 per day
Primitive	6 per day

Reduce the use-level coefficients shown in this table as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide.

Use-level allocations will range from no allocation within some Primitive and Semi-primitive Non-motorized ROS areas to relatively high use allocations within some Roaded Natural areas. Other more site-specific resource concerns, such as the presence of significant archeological sites, threatened, endangered, or sensitive wildlife habitat, and areas with sensitive soils, will also influence outfitter/guide allocations.

Require current and future guiding (except hunting) to occur on Forest Service system roads and trails, or on designated routes mapped in an operating plan approved through an interdisciplinary analysis. In general, do not allow repetitive cross-country routes.

Generally, do not place additional outfitter/guide activities or group activities in the Mt. Elden/Dry Lake Hills Trail System, Pumphouse Wash, Deadman Wash, Walnut Canyon from Fisher Point east, any spring or perennial stream site, except in support of approved research and/or to improve safety or provide site rehabilitation.

If current outfitter/guides cease operations and the activity is considered to be desirable after review, conduct a solicitation process for replacement.

When a proposed use is not consistent with National Forest management direction and can be accommodated on private land, encourage recreation participants to use private land for their activities. Communicate and cooperate with other agencies and businesses to look for ways of providing for activities that are different from the Forest Service mission on properties managed by other agencies or businesses.

Outfitter/guide permits are administered to guidelines as defined by "Meaningful Measures".†

Before permitting outfitter/guides adjacent to National Monuments, contact the National Park Service for coordination. Outfitter/guides might also help meet the mission of the National Park Service in the National Monuments or on adjacent National Forest lands.

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* *Although social encounter criteria apply to all users, limitations based on social encounters will only pertain to commercial operations.*

† *Meaningful Measures (MM) is a process that connects management of the recreation program to our users, to Congress, and to agency decision makers through the establishment of National Quality Standards and the determination of the costs to meet those standards. MM is responsive to changes in funding, priorities, and visitor preferences.*

Group Use

Goals and Objectives

There are opportunities for environmentally responsible group uses of National Forest lands.

Standards

Noncommercial groups of 75 or more are required to obtain a permit. Follow standard interdisciplinary resource coordination when approving permits.

Require one portable toilet (or equivalent) to be supplied by permittee for every 25 participants that stay overnight and one portable toilet (or equivalent) for every 50 people staying for the day in a publicized and/or organized event, except for group use sites that have permanent restroom facilities.

Guidelines

In general, large groups of 74 or less, such as family reunions, weddings, club gatherings, occur within ponderosa pine and mixed conifer areas on less than 40 percent slopes. Avoid placing large group events in riparian and open water areas, ponderosa pine and mixed conifer areas greater than 40 percent slope, and the interior of mountain meadows unless facilities already exist. Direct large groups to pre-determined areas where resource damage is less likely to occur. [*]

Inform and enforce State regulations for no camping within ¼ mile of open water.

Other more site-specific resource concerns, such as the presence of significant archeological sites, threatened, endangered, or sensitive wildlife habitat, and areas with sensitive soils, will also influence group use allocations.

Evaluate sites used by groups and, based on monitoring results, implement appropriate group size adjustments.

Rock Climbing

Goals and Objectives

Rock climbing areas are managed and maintained for appropriate experience, natural settings, attributes, and conditions, considering ROS objectives, wildlife, heritage, and soil and water resources.

Rock climbing opportunities are provided, while protecting sensitive resources from unacceptable impacts.

Rock climbing areas are managed in partnership with local rock climbers, climbing organizations, and outdoor recreationists.

[*] *We will continue current National Forest Policy of requiring groups of 75 or more to obtain a permit. We will continue to encourage groups of 74 or less to enter into a letter of agreement. Both permits and letters of agreement spell out the location, type of activity, sanitation needs, and area clean up.*

Guidelines

Complete a management plan specific to rock climbing to tier from the *Forest Plan*. Climbing policy in the *Forest Plan* may be amended if the development of the climbing plan demonstrates the need.

The climbing plan will include, but is not limited to:

- Existing and new climbing routes
- Climbing implementation schedule identifying funding priorities for climbing management
- Closure measures when needed for threatened, endangered, and sensitive (TE&S) plants and animals and cultural resources
- Schedules for Limits of Acceptable Change (LAC) or other management strategies when needed
- Monitoring

Develop or realign trails into climbing areas as appropriate to provide for public safety and resource protection.

Inventory rock climbing areas to determine their resources, conditions, and significance. Upon evaluation, some other sites may receive short-term, long-term, or seasonal closures to climbing to limit disturbance to threatened, endangered, or sensitive species. Restrictions will be used on a case-by-case basis as determined necessary by wildlife biologists in consultation with U.S. Fish and Wildlife Service where appropriate.

Restrict human activities within approximately one-half (½) mile of occupied peregrine falcon nest sites March 1st through August 15th. The ½ mile protection distance may vary depending on local topography, potential for disturbance, and location of important habitat components. Monitor peregrine nesting success to determine if restrictions are effective.

Restrict human activities where active raptor nests are located. Species potentially impacted include the golden eagle, prairie falcon, Mexican spotted owl, and zone-tailed hawk. Protection distance will vary depending on the species, local topography, potential for disturbance, and breeding season for the species. Raptor surveys will be completed on site-specific areas to determine protection distance.

Provide interpretive information and education on climbing ethics, and resource protection through the use of brochures, signs, visitor contacts, and information stations.

Non-motorized Trails

Goals and Objectives

There are opportunities for a variety of trail experiences and challenges that are consistent with protection of sensitive resources, meet the needs of a diverse public, emphasize the natural environment, and meet ROS objectives.

Non-motorized and motorized trail opportunities provide a variety of challenges and experiences and meet ROS objectives.

There is a network of trails linked to other trail systems, such as City and County trail systems.

The Urban/Rural Influence Zone is actively managed to provide opportunities and lessen environmental impacts.

Trailheads are located in popular areas and provide adequate parking, signs, restroom facilities, public education, and resource management.

Standards

Implement and use the "Meaningful Measures"* process to manage trail guidelines.

Guidelines

Discourage proliferation of unneeded trails by 1) public education, 2) providing well-defined trails that encourage people to stay on designated routes, 3) designing trails that provide a reasonable degree of access, 4) installing trail markers and defining trail edges, 5) providing orientation maps, and 6) obliterating social trails that duplicate system trails and/or cause resource damage.

Relocate existing trails as necessary to protect resources.

For areas outside of the Urban/Rural Influence Zone, develop a primary system of trails and obliterate all trails outside of the primary system. New unplanned trails are also obliterated if they occur.

For areas within the Urban/Rural Influence Zone, create a primary trail system that serves as a collector for trails that originate in neighborhoods. In areas outside of the primary system, evaluate user-created (social) trail systems based on a checklist of criteria and in coordination with the nearby community. The criteria are similar to those listed for road management. Meet interested people around Flagstaff to develop site-specific trail plans. Focus trail planning first in areas with resource concerns, where high user conflicts occur, or in conjunction with other resource management activities.

Connect Forest Service trails to community access points, and use existing social trails where they make sense. Forest Service trail access points must be accessible by the public, which means no exclusive neighborhood entryways. Work with planning and zoning and developers while building plans are still under development. Some trails may provide special needs access.

Where social trails occur within Mexican spotted owl Protected Activity Centers (MSO PACs), delineate a system trail that provides for recreation use and lessens impacts to MSOs. Close and re-vegetate non-system trails in PACs not used for the designated trail.

Provide information and education about the shift in emphasis to more active trail management within the Urban/Rural Influence Zone.

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* *Meaningful Measures (MM) is a process that connects management of the recreation program to our users, to Congress and to agency decision makers through the establishment of National Quality Standards and the determination of the costs to meet those standards. MM is responsive to changes in funding, priorities, and visitor preferences.*

Inventory both Forest Service system trails and non-system trails and identify their desired maintenance levels. Track both motorized and non-motorized trail routes.

Use the ROS Objectives to match trail experiences with ROS objectives.

In rare cases, an exception to ROS objectives may occur in Semi-primitive Non-motorized areas if analysis shows a link is needed for a motorized trail route.

Develop or realign trails accessing climbing locations to well-engineered design that maintains resources.

Annually maintain and update Forest trail implementation schedules and the Forest Trails Inventory and Condition Survey. Perform trail assessments at least every 5 years.

Coordinate with State, County, and communities park departments to connect Forest trails with parks and green-belt corridors, when it is mutually beneficial, provides better public service and development is compatible with other resource management.

Motorized Trails

Goal

Outside of the Cinder Hills OHV area, motorized trails provide semi-primitive motorized experiences with connections to long distance opportunities. There are connections from communities to the secondary road system where feasible. Where community access is lacking, there are areas to trailer OHVs and park.

Guidelines

Identify some motorized trail routes.

Motorized trail opportunities provide long distance connections and meet ROS objectives. Evaluate trails based on the criteria for roads, access, recreation opportunity, and public input.

Convert some roads that are not needed for the road system into motorized trails and decrease to a width suitable for ATV's. Motorized trails will promote Semi-primitive Motorized experiences for individuals and small groups. Allow large group events or races on a case-by-case basis. Motorized trails are well engineered to avoid impacts. Some level II roads (high clearance vehicle use) may be used for portions of motorized trail routes.

Where possible, within the Urban/Rural Influence Zone, provide pass through corridors for vehicles and ATV/motorcycles that lead to separate motorized trails or to the secondary forest road system. Do not provide for unlicensed riders on 50-inch trails if the trails only lead them onto roads where it is illegal to ride. Coordinate trail locations near communities with local agencies and governments.

Scenery

Goals and Objectives

Developments such as roads, trails, camping, day-use sites, and trailheads mimic local materials and landscape characteristics to blend with the adjacent natural-appearing landscape.

Management activities, such as thinning and prescribed fire, result over the long-term, in alterations that appear natural to most visitors.

Guidelines

Provide fast clean-up from management activities and limit short-term visual impacts (1 to 3 years), while meeting fire potential reduction needs, design thinning for long-term scenic quality adjacent to homes and along major highways or near developed recreation sites.

Consider impacts to viewsheds of the three National Monuments, the Sunset Crater Volcano-Wupatki Scenic Loop Road (FR 545) and the Walnut Canyon entrance road (FR 622) and coordinate with Park Service personnel when designing or approving projects in these viewsheds.

State Highways 89A, 89, 180, and Lake Mary Road (FH3) provide a high-quality scenic experience. Provide input to ADOT and Coconino County, as appropriate, that highway improvements and maintenance should blend with existing natural appearing features except when there are safety concerns that cannot be mitigated. Provide input to ADOT and Coconino County to minimize the relative dominance of these highways to the extent possible/practical.

Roads and Off-Road Driving

Goals and Objectives

Consult the *Roads Analysis for the FLEA Area* report, for desired open road network. Reference this information when conducting project level (site-specific) NEPA analysis to close, obliterate, or upgrade roads.

Road conditions and the miles of road should meet ROS objectives as displayed on the *Objectives for Recreation Opportunity Spectrum* map.

The road system provides ample access and concentrates use on a well-designed road system, and maintains unroaded areas in between.

Encourage local, state, or county entities, or private organizations to sponsor a motocross site. Look for opportunities to exchange land for motocross if there is a willing sponsor.

Guidelines

Use the following criteria to evaluate roads and make decisions about their driving condition, their location, or existence.

Reasons for closure or obliteration may include, but are not limited to, one or more of the following criteria:

- Soils that are receiving, or are expected to receive, damage to the extent that soil productivity is or will be significantly impaired
- Slopes exceeding 40 percent where high probability for damage exists
- Riparian areas currently threatened or damaged
- Meadows likely to be or being damaged

- Poorly designed or maintained roads connected or adjacent to stream courses where potential for increased runoff and sedimentation is high
- Roads within stream courses or wetlands (permanently or intermittently wet) reducing hydrologic function
- Visual Quality Objectives (VQO) of Preservation, Retention, or Partial Retention are jeopardized
- Areas of important cultural resource sites vulnerable to damage that are being threatened or damaged
- Tree plantations less than 10 years old likely to be damaged
- Habitat for threatened, endangered, or sensitive species that is threatened
- Key wildlife areas being threatened or damaged
- Areas important to wildlife reproductions such as fawning or nesting areas, where disturbance is causing, or likely to cause, significant stress and reduction of reproductive success
- Areas within designated municipal watersheds
- Areas where user conflict must be resolved to ensure public safety
- Areas considered dangerous for winter off-road driving activities
- Areas within urban or rural residential influenced zones outside of designated motorized routes
- Semi-primitive Non-motorized ROS objectives as set through environmental analysis. See *Objectives for Recreation Opportunity Spectrum* map for the FLEA area in Appendix M.
- Semi-primitive motorized ROS objectives as set through environmental analysis. See *Objectives for Recreation Opportunity Spectrum* map for the FLEA area in Appendix M
- Roads where the level of use or maintenance thereof causes adverse levels of noise affecting wildlife or recreational experiences
- Areas where the road system modifies the surface and subsurface hydrology
- Roads, which cause the introduction or spread of exotic plant species, insects, diseases, and parasites
- Redundant roads
- Roads that foster illegal human activities
- Roads that contribute to the airborne dust emissions, which result in adverse human health concerns
- Roads that adversely affect the agency's direct costs, meaning there are more miles than we can afford to maintain
- Roads that contribute to incidents of high fire starts

Reasons for maintaining roads open may include, but are not limited to one or more of the following criteria:

- Roads that aid in the Agency's enforcement of laws and policies
- Roads required for access to treatment areas, range improvements, utilities, or minerals
- Roads that connect large blocks of land in other ownership
- Roads that provide access for fire suppression vehicles
- Roads that provide access to recreation use sites or areas
- Roads that provide access needs for research, inventory, and monitoring
- Roads necessary to meet peoples' needs and values for roads, such as Native Americans to gather traditional plants and access to traditional sites
- Roads necessary to manage special use sites
- Roads necessary to connect public roads
- Roads that if closed, would have an adverse impact on communities' social and economic health

Consider manageability as an important criterion when establishing boundaries of areas with restrictions and determining which roads will be open and maintained.

Keep the Pinegrove Seasonal Closure Area closed to vehicle access between August 15 and December 31.

Actual road closure or obliteration work occurs after site-specific NEPA and public involvement is complete. Such analysis will usually be accomplished concurrent with other project planning.

Conduct obliteration and re-vegetation work as funds become available. When choosing areas to conduct road maintenance and obliteration, focus efforts in Semi-primitive Motorized and Semi-primitive Non-motorized areas. Of the Semi-primitive Motorized and Semi-primitive Non-motorized areas, consider the Lake Mary and Oak Creek Watersheds as priorities for water quality reasons. Also focus work adjacent to the National Monuments.

Wildlife Habitat

Goals and Objectives

Habitats support diverse, healthy populations of native plants and animals. A natural variety of plant species, age classes, and structures are present.

The impacts of non-native plant and animal species are controlled and the introduction and maintenance of undesirable non-natives is discouraged.

Threatened, endangered, sensitive, and management indicator species are maintained or recovering in the majority of the habitat.

Maintain wildlife travelways to help animals travel between summer and winter ranges, feeding and nesting areas, maternity areas, and dispersal areas. Travelways help ensure genetic mixing necessary for healthy populations.

Mexican Spotted Owl

Guidelines

Do not identify target threshold stands within the Urban/Rural Influence Zone. The allocation of target threshold habitat within the Lake Mary Watershed and Shultz Management Areas would better provide for long-term management of roost/nest habitat for the Mexican spotted owl. Approximately 26 percent of the Shultz Management Area and 11 percent of the Lake Mary Watershed should be managed for target-threshold conditions in the future, due to not allocating target threshold conditions in the URIZ.

Within the FLEA area, survey habitat that potentially could be used for nesting, roosting, or breeding, and is within ½ mile of a proposed site-specific project boundary.

Northern Goshawk

Guidelines

In the Urban/Rural Influence Zone, where possible, limit human activities within the 30-acre goshawk nest stand during the breeding season. In general however, do not curtail human activity such as informal dispersed recreation activities within the Post Fledging Family Areas (PFA). Social trails are likely to occur within portions of PFA's in the urban and rural influenced areas. Locate Forest Service system trails to avoid nest sites within PFA's, within the Urban/Rural Influence Zone. Emphasize the need to control pets on Forest Service system trails through education and enforcement.

Bald Eagles

Guidelines

Bald eagle winter roosts and perch habitat will be evaluated for long-term viability. Silvicultural methods that encourage regeneration and growth of desirable trees may be used near roost sites. Groves of trees may be maintained to provide screening for roost and perch areas. Silvicultural practices will result in the growth of large diameter trees with open crowns in multi-layered stands. Prescribed fires to improve and protect roost areas may be used with effective protection of large trees and snags.

Human activities will be managed so that disturbance does not interfere with the eagles' ability to use the site.

Threatened and Endangered Species

Guidelines

Seek opportunities to add to our base of knowledge about human disturbance to T&E species. This could be a variety of methods that could include but are not limited to, monitoring, survey of habitat, survey of recreation uses, or trail counters. Consider options to gather information when planning, or implementing, or monitoring site-specific projects, or

approving special uses or outfitter guides. Consider partnership opportunities with organizations or agencies to gather information outside of site-specific project planning. A variety of methods could be used to gather information including, but not limited to, monitoring, survey of habitat, survey of recreation uses, or trail counters. Share results and data among resource personnel and line officers for consideration in future projects. with wildlife biologists and recreation staff to incorporate lessons learned into the next project. If analysis shows a need, mManagement changes that could include, but are not limited to, relocating roads or trails, limiting season of use, designating types of activities, or reducing numbers of users could result if analysis shows a need.

Land Ownership Planning/Land Classification

Goals and Objectives

In the FLEA area there are a few parcels desirable for the Forest Service to acquire. If a willing property owner comes forward entertain a land exchange or land acquisition. Desirable parcels are a ¼ section of private land in the Dry Lake Hills and there are some isolated, undeveloped parcels in the Lake Mary Watershed.

In addition, there are Arizona State Trust Lands that are desirable to retain as natural landscape. Coordinate the identification of these parcels with the city and the county planning processes. Look for avenues to purchase if the State is a willing seller. Should land exchange authority be granted to the State, consider land exchanges as well.

Guidelines

Lands offered by the United States in a land exchange are tentatively classified as base-in-exchange. Currently, the Forest has 21,133 acres classified as base-in-exchange. Because local and physical conditions may change during the life of this plan, other lands may be considered for exchange. They will generally meet one or more of the following criteria:[*]

- Lands needed to meet the needs of expanding communities;
- Isolated tracts or scattered parcels that cannot be efficiently managed;
- Lands that provide consolidation of the public lands;
- Lands that will improve management, benefit specific resources, or increase management efficiency;
- Lands that are necessary to meet overriding lo**c**al, regional, and national public needs;
- Lands within the boundaries of incorporated communities or annexed thereto **or land within locally approved growth management boundaries;**
- Review base-in-exchange plans when private land uses change from wildland and undeveloped uses towards more intensive uses.

If lands do not meet one or more the above criteria they should not be used as base-for-exchange lands. Because change occurs over time, re-visit the base-for-exchange criteria and

[*] *The following guidelines are repeated from page 86 of the Forest Plan. The only unique direction for FLEA is highlighted in bold. The additional text is provided for context and clarity. There is additional direction on or near page 86 that applies to the land adjustment program.*

map periodically and make adjustments based on new information such as updated City and County plans (examples are the *Regional Land Use and Transportation Plan*, and the *Flagstaff Area Open Spaces and Greenways Plan*). Consult with the Coconino County and City of Flagstaff about land adjustment proposals we plan to take forward into NEPA. Public input on land exchange occurs at the time a site-specific land exchange is proposed.

Forestry

Goals and Objectives

Grass, forbs, and shrubs on the forest floor contribute to biological diversity of the ponderosa pine forest.

Fire should continue to play a natural ecological role within the constraints of human health and safety.

The risk of and potential for destructive crown wildfire is reduced, especially in the Urban/Rural Influence Zone (U/RIZ) and the Wildland Urban Interface (1U) as depicted on the Fire Management Analysis Zones map.

Forest product removal (of any kind) is designed to maintain or restore ecosystem health and desired conditions. The use of National Forest land products, are primarily a means for achieving ecosystem management objectives.

Guidelines

Reduce crown canopy and ladder fuels where needed to reduce risk of stand replacing crown fires.

Reduce competition between closely spaced trees in some areas, to promote future large trees faster and to achieve desired tree sizes and canopy closures outlined in the *Forest Plan* (Mexican spotted owl and northern goshawk habitat guidelines). The parameters within which treatments should be designed are to be relatively assured that the future forest structure outlined in the goshawk guides is not precluded. No single treatment prescription is proposed. Examples of possible prescriptions include but are not limited to restoration models, uneven age models, even-age shelterwood, understory thinning, and prescribed fire.

Reduce competition between closely spaced trees in some areas to promote health and resistance to insects and disease.

Incorporate measures to control non-native and invasive plants into project design.

Maintain connected patches of denser vegetation that, along with topography, provide travel corridors for wildlife to move through the FLEA area. Maintain the two corridors that occur in the Urban/Rural Influence Zone. They are in the vicinity of A1 Mountain/Fort Valley, Naval Observatory, and along the Rio de Flag.

When designing treatment consider landowner wishes within the 150-foot area immediately adjacent to private land. Within the 150-foot area, more trees may be left based on landowner input.

For all the Management Areas in FLEA, Management Indicator species will be the same as they currently are for each original MA, which is based on vegetation type and slope. For

example, lands that are covered with ponderosa pine on less than 40% slope will have the Management Indicator Species described for Management Area 3 in the *Forest Plan*.

Where appropriate, design projects to accomplish fuels reduction and maintenance on cultural resource sites.

Within the Urban/Rural Influence Zone, and in the Wildland Urban Interface (1U) as depicted on the Fire Management Analysis Zones map, do not apply the hiding and thermal cover guideline that requires 30 percent cover within a 10K Block.

Distribute wildlife cover where needed within the FMAZ 1U without accruing unacceptable wildfire threat to nearby neighborhoods. Wherever possible, projects should retain cover conditions within wildlife travelways, MSO protected activity centers (PAC's), along canyon rims, and on steeper slopes. Projects within the FMAZ 1U, should attempt to retain 15 percent cover within a given section.*

Dense stand conditions on steep slopes and within MSO PAC's contribute to the targeted 15 percent cover condition. Cover conditions might exceed 15 percent per section due to the presence of steeper slopes or MSO PAC's. In the absence of steep slopes or MSO PAC'S site-specific projects could retain a maximum of 15 percent cover condition to maintain a wildlife travelway through a section. Projects do not have to retain cover conditions of 15 percent, if a given section poses a high fire hazard to nearby neighborhoods

Providing firewood is not an emphasis for oak management.

Non-Native and Invasive Plants

Objectives

The impacts of non-native plant and animal species are controlled and introduction of new non-natives is discouraged.

Guidelines

Refer to and follow the *Noxious Weeds Strategic Plan Working Guidelines, Coconino, Kaibab and Prescott National Forests* when implementing projects in for the FLEA area. This strategy lists "best known practices" for non-native and invasive plant control. This strategy is two fold: control or remove existing plants and take steps to lessen the spread of non-native and invasive weeds. This is especially important in the FLEA area, because of the major highways and roadways which provide corridors for plants to spread, and because many of the non-native and invasive weed species have the opportunity to increase after ground disturbing activities such as thinning, prescribed fire, and road obliteration

Assist in maintaining a database of non-native and invasive plant populations in cooperation with the USGS. Much of the FLEA area has yet to be surveyed and this should occur as part of project planning and implementation.

The location and type of species varies over time and place. Some species are mentioned in some of the Management Area descriptions, but additional species may be present within other Management Areas as well

* *The word "section" as used here, means a square mile in a legal description of township, range, and section. A section has 640 acres usually.*

Watershed

Goals and Objectives

The biological, physical, and human elements of the landscape sustain ecological processes, functions, and structures appropriate to the FLEA Area ecosystem. Natural disturbance patterns are conserved or restored consistent with human health and safety. Natural elements of the landscape are restored and protected.

Soil function and long-term productivity are sustained so that the soil can resist erosion, recycle nutrients, and absorb water.

Natural vegetative and fuels composition area restored so as to reduce susceptibility to large-scale watershed disturbances, such as large catastrophic wildfire.

The Lake Mary watershed is a high priority for watershed restoration and maintenance from an ecological and socio-economical standpoint. Upper and Lower Lake Mary are important municipal water sources for the City of Flagstaff.

Guidelines

Implement actions to ensure that water quality, and timing support domestic surface water supply needs. Specific items include: to improve wildlife and livestock grazing strategies, provide stream channel stabilization, construct proper drainage and perform maintenance on roads, relocate roads from meadows and other sensitive areas, obliterate unnecessary roads and manage recreation in a way that supports domestic surface water supply needs.

Implement actions to restore a natural vegetative and fuels composition, and ensure that soil condition objectives are met on a landscape scale to reduce susceptibility of large-scale watershed disturbances, such as a large catastrophic fire or insect/disease outbreak.

When implementing site-specific projects, choose Best Management Practices consistent with municipal values and this plan.

Cooperate with the City of Flagstaff and National Park Service to develop study proposals and projects designed to evaluate best management practices, reservoir modifications, and/or operational criteria to address the objectives of maintaining the quality of the municipal water supply and increasing the likelihood of flood flows and improvement of the inner-canyon environment in Walnut Canyon National Monument (per the Stipulation Between The City of Flagstaff and the United States on Behalf of the National Park Service and the Forest Service).

Mountain Meadows*

Goals and Objectives

Soil condition objectives are met and soil functions are sustained so that the soil can readily absorb, store, and transmit water both vertically and horizontally, accept, hold and release nutrients, and resist erosion. Soils are able to maintain resource values, sustain outputs, and recover from impacts.

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* *The additional direction below describes in more detail and with clearer language the existing management direction contained in MA 9.*

Mountain meadows located with the Lake Mary and Oak Creek Watersheds are improved to enhance soil productivity, biological diversity, and help maintain downstream water quality. Improvement measures include: stream channel stabilization, improved cattle grazing strategy, management of wildlife, recreation, and roads within these meadows.

The rate of water infiltration is increased, thereby minimizing surface runoff, reducing on-site sheet, rill and gully erosion, and subsequent sedimentation into connecting waters downstream.

Enhance soil organic matter content to improve physical condition and increase water infiltration, nutrient cycling, and soil productivity.

Vegetative species composition and diversity are increased and the distribution and diversity of vegetative ground cover is improved.

Guidelines

In general, do not locate open roads in meadows.

Provide media and public information focused on the importance of meadows and proper activities within meadows.

Increase and improve vegetative species composition and diversity in the surrounding landscapes to diffuse grazing pressure from elk and livestock.

Riparian and Open Water

Goals and Objectives

Riparian communities benefit riparian dependent resources and support diverse assemblages of aquatic and terrestrial species.

Stream channels have adequate and appropriate plant cover to protect stream banks and dissipate energy during high flows.

Stream flow is adequate to maintain aquatic communities and water sources for wildlife.

Wildlife viewing is recognized as a form of recreation and opportunity for environmental education.

Guidelines

Emphasis is placed on rehabilitation of high elevation riparian communities. Rehabilitation may include: wildlife and livestock grazing management, fencing, stream channel stabilization, road relocation, recreation management, and physical protection of revegetation work.

Ensure that riparian areas are in a condition that improves or maintains high quality water in the Lake Mary and Oak Creek watersheds.

Establish administrative exclosures on representative riparian areas to determine riparian habitat potential.

Follow the trail planning parameters set forth in the FLEA area-wide Guidelines. In addition, develop trails strategy that allows for water access while protecting the riparian community, wildlife habitat, and sensitive plants.

At certain locations provide wildlife viewing compatible with wildlife habitat.

Reduce impacts on water quality by such methods as placing toilets in strategic locations, and providing information about proper sanitation practices.

Follow FLEA area-wide criteria related to roads in riparian and open water areas.

Generally discourage off-road driving within ¼ mile of these sites.

Firewood

Guidelines

Consider restricting general firewood gathering for personal use in the Urban/Rural Influence Zone if such use is causing conflicts with other uses, or detracting from road management goals. However, designated firewood cutting areas may be provided under a managed setting as a tool for various objectives, such as removing slash generated by thinning and improving herbaceous understory.

Coordination with National Park Service

Guidelines

Update the Memorandum of Understanding (MOU) between the National Park Service and the Coconino National Forest. The MOU sets up 1) how the agencies communicate when situations arise, and 2) what criteria will be used to make decisions together. The current MOU is for Sunset Crater Volcano National Monument and Wupatki. The updated MOU should cover these Monuments and also include Walnut Canyon National Monument. For the Flagstaff Area National Monuments some of the items that need to be added to the MOU include considerations for: Native American access for traditional uses, law enforcement cooperation, personal use plant gathering, outfitter/guide parameters, commercial filming parameters, boundary management, fire management, location and management of NPS facilities on Coconino NF lands, National Historic Preservations Act (Section 106), National Environmental Policy Act and Endangered Species Act compliance coordination, shared services for monitoring, and cooperative efforts in managing interpretation and visitor services.

Continue cooperative law enforcement efforts with the National Park Service on lands adjacent to National Monuments.

Coordination with the City of Flagstaff and Coconino County

Guidelines

Continue coordination related to fire suppression and fire risk reduction. Continue collaborative efforts to control non-native and invasive plants. Stay alert to changes in land use status. Provide input to the design requirement of new developments (especially when they are adjacent to National Forest), participate as a government liaison in the City of Flagstaff's Open Space Coalition, continue linking City and County trails to Forest Service trails, share public outreach and education tools, and share information about future plans.

Coordination with Researchers

Guidelines

Consider ongoing research in project design both to avoid impacts to research plots and to gain knowledge provided by research results.

Create and maintain a spatial and tabular database of approved research sites.

Refer research proposals to appropriate areas based on FLEA area objectives.

Coordination with Other Organizations

Guidelines

Many different government agencies, individuals, and groups partner with the Forest Service to accomplish various projects on-the-ground. These projects usually result in long-term improvements for wildlife habitat, recreation, or forest health. Continue these activities that have resulted in site-specific actions such as, but not limited to, riparian area improvements, wildlife waters, forest restoration, and trail building.

Data Management

Guidelines

Use current technologies for data collection, data storage, analysis, and management of Forest Resources. Data collection and mapping needs within the FLEA area include user-created roads and trails, dispersed campsites, group use areas, noxious weed locations, and trailheads. Continue current efforts to track wildfires, vegetation condition, and threatened, endangered, and sensitive species habitats.

FLEA Management Areas

Proposed Management Areas

There are 10 different Management Areas in the FLEA area.

- Cinder Hills OHV MA is south of Sunset Crater Volcano National Monument and north of the Doney Park area
- Craters MA is west of Doney MA and south of Strawberry Crater Wilderness.
- Deadman Wash MA covers the lands from the northeastern boundary of the Forest to FR 545 that bisects Sunset Crater Volcano National Monument.
- Doney MA surrounds the communities in the Doney Park, Timberline, Fernwood, and Black Bill Park.
- Flagstaff MA contains national forest lands within the Urban Growth Boundary for the City of Flagstaff as described in the *Regional Land Use and Transportation Plan.*
- Lake Mary Watershed MA, which contains the Lake Mary watershed and also encompasses the Upper and Lower Lakes Mary and Marshall Lake.
- Schultz MA includes Dry Lake Hills and Mt. Elden, along with lands east of the Waterline road (the eastern boundary of the Kachina Peaks Wilderness) and west of the Doney MA.
- Environmental Study Area MA now includes three locations. Elden ESA is being expanded and two more areas are being added, Griffith's Spring, Old Caves Crater. .
- Walnut Canyon MA lies south of Flagstaff and includes lands surrounding Walnut Canyon between I-40 and FH3 (Lake Mary Road).
- West MA, which surrounds the communities from Hidden Hollow to Fort Valley, the communities of Kachina Village, Mountainaire, Forest Highlands, and Lake Mary Road, and also includes the lands encompassing Woody Ridge and Rodgers Lake.
- The Strawberry Crater Wilderness remains part of MA1 (Wilderness) and does not change from the current *Forest Plan*.

A mapping error occurred related to the boundary of the Cinder Hills Management Area. The boundary has been adjusted to reflect the current Forest Plan Off Highway Driving map. This caused acreage adjustments in the Deadman Wash, Cinder Hills, and Doney Management Areas.

The Timber Land Use Component charts are a feature of the current *Forest Plan* that was developed in the mid-80's. The classification of forest service lands as to its timber component is a requirement. Just because some piece of land has a suitable timber component does not mean that it will be harvested with timber as the main objective. Most forested lands on the Coconino NF are managed for wildlife habitat reasons as a result of Forest Plan Amendment 11. As a result of this Plan Amendment some lands will be focused on fire hazard reduction, another category of suitable timberlands.

Junk junk junk

[*] *Region 3 refers to the Southwest Region of the Forest Service including Arizona, Newe Mexico, and a portion of Oklahoma*

Junk junk junk.

[*] *Coordination with the State: We will continue to work with the State, to determine what grants are available and appropriate to apply for in relation to the proposed management, improvements, and rehabilitation needs of the area. In addition to exploring funding avenues, we will work with the State to determine other management partnerships that might be desirable to achieve the management objectives and enhance the OHV experience.*

[†] *Fee Demo: The District will be studying the concept of Fee Demo for the OHV Area. A District team will determine if fee demo is a desirable funding avenue, and if so, how a fee demo area would be implemented. We will visit other fee demo sites, talk to other managers, and work with the OHV community to determine if this is an appropriate and/or desirable action to take.*

[‡] *Penstemon cluteii grows in cinder soils at various locations on the Peaks Ranger District. The status report covers the entire range for this plant, which includes the OHV area.*

Craters Management Area - MA 31

Acres: 29,858

Description

The western boundary of this MA is the Cinder Hills OHV area and Doney MA (marked by a large KV electrical line). The northern boundary is the Strawberry Wilderness, the southern and eastern boundaries are the Forest boundary. A portion of the San Francisco volcanic field occurs here with a field of large cinder cones sparsely covered by ponderosa pine trees and shrubs and covered with a deep layer of loose cinders. The landscape of impressive cinder cones in this MA provides remote, dispersed recreation opportunities and there is a stay on designated roads policy. The southeast 1/3 of this MA is pinyon/juniper woodland and grasslands with sparse pinyon and juniper trees and the occasional large cinder cone. The pinyon/juniper areas provide remote dispersed recreation opportunities and supports uses such as livestock grazing and firewood. Maroon Crater is the largest cinder cone and is used for hang gliding. This entire MA is distant from the sites and sounds of urban areas. Two paved roads (FR 545 and Luepp Road) pass through the MA. There are no communities adjacent to this MA. Some of the landforms in the Cinder Hills hold religious and cultural significance to Native Americans. This MA supports plant and animal species adapted to cinder landscapes, pinyon/juniper woodland, and grasslands.

Management Emphasis

Maintain cinder ecosystems, un-tracked appearance of cinder cones, and remote recreation opportunities with a high sense of self-exploration. Continue opportunities for firewood cutting and livestock grazing in the pinyon/juniper woodland. Restore natural grasslands. Re-establish or maintain fire and other ecosystem processes in the pinyon/juniper woodland.

Highlights Include:

- Management Indicator Species (MIS) should be referenced by vegetation and landform type. For example, in pinyon/juniper woodland areas MIS are those listed for MA7.
- Maintain Semi-primitive Motorized ROS settings throughout the MA, with Roaded Natural corridors in between. Provide Semi-primitive Non-motorized settings on the large cinder cones.
- Retain an un-tracked appearance on the large cinder cones and maintain plants and animals adapted to the cinder ecosystem.
- Provide day and overnight-dispersed recreation opportunities with few developed trails or facilities.
- As stated in Management Area 10, of the *Forest Plan*, maintain and improve grasslands, including removing encroaching pinyon/juniper and re-introducing fire. Maintain or improve watershed conditions throughout the MA.
- Protect cultural resources.

- Continue motorized travel restrictions similar to the current Forest orders where motorized use occurs on designated open roads and trails only.

Timber Land Use Classes	**Acres**
Nonforest	7,484
Forest land withdrawn	
Ponderosa Pine/Mixed Conifer	0
Pinyon-juniper	0
Unsuitable	16,610
Unsuitable (physically unsuited or not capable)	4,356
Forest lands not appropriate for timber harvest	12
Suitable Timber lands	1,396
TOTAL	29,858

All of the following items are Guidelines.

Non-motorized and Motorized Trails

Provide low mileage of designated non-motorized trails in the MA and encourage self-exploration.

Consider motorized trail corridors in this MA. Consider routes along the secondary road system for multiple-use opportunities.

Discourage off-trail use of any kind on large cinder cones.

Recreation Signing

Clear signing and information should be provided to off highway vehicle drivers to make clear distinction between driving rules in the Cinder Hills OHV area the cinder cones outside of the OHV area.

Cultural/Historical

Continue active monitoring of cultural and historical sites to impacts from recreation, cattle grazing, firewood cutting, and other human uses. Changes in management can occur in response to demonstrated (through monitoring) negative impacts to archaeological resources. Cooperate with available Park Service personnel to accomplish monitoring.

Non-Native and Invasive Plants

There are known populations of non-native and invasive plants in this MA, such as camelthorn. Continue efforts to control or eradicate plants, especially along roadways

Deadman Wash Management Area – MA 32

Acres: 58,088

Description

The southern boundary of this MA is Sunset Crater Volcano National Monument, the Cinder Hills OHV area and Doney MA. The western boundary is Highway 89, the northern boundary is Wupatki National Monument, and the eastern boundary is the Forest boundary and Strawberry Wilderness. The southern portion contains portions of the San Francisco volcanic field with a field of large cinder cones sparsely covered by ponderosa pine trees and shrubs and covered with a deep layer of loose cinders. O'Leary Peak is the highest most prominent feature and is topped with a fire lookout tower. Bonito and O'Leary campgrounds are located adjacent to Sunset Crater Volcano National Monument.

The landscape of impressive cinder cones in this MA provides remote, dispersed recreation opportunities and there is a stay on designated roads policy. The center of the MA is pinyon/juniper woodland that provides remote dispersed recreation opportunities and supports uses such as livestock grazing and firewood. The northern 1/3 of the MA is grassland with sparse pinyon/juniper trees. Deadman Wash is a prominent drainage. In the grassland areas, large patches are unroaded and remote recreation experiences are found. Access to Strawberry Crater Wilderness is located in this MA. Most of this MA is distant from the sites and sounds of urban areas. Highway 89 is located on the west boundary and FR545 passes through the southernmost part of the MA. There are private land inholdings along the Highway 89 corridor. A large KV electric line passes through the center of the MA. Some of the landforms hold religious and cultural significance to Native Americans. This MA supports plant and animal species adapted to cinder landscapes, pinyon-juniper woodland and grasslands.

Management Emphasis

Restore and maintain grasslands and grassland adapted wildlife species, especially antelope. Provide large tracts of un-roaded landscape for disturbance sensitive species and remote recreation experiences. Protect cultural resources. Continue opportunities for livestock grazing, hunting, and firewood gathering. Balance recreation use demands on O'Leary Peak with sensitive wildlife species needs and Native American cultural values.

Focus on maintenance and/or improvement of soil condition and watershed function. System roads and trails should receive adequate maintenance so that accelerated soil erosion is minimal. Non-system roads will be rehabilitated and some poorly located roads will be re-located. Rate of implementation will be dependent on funding and Forest priorities for road maintenance.

Highlights include:

- Management Indicator Species (MIS) should be referenced by vegetation and landform type. For example, in pinyon/juniper woodland areas MIS are those listed for MA7.
- Progress towards the settings displayed on the *Objectives for Recreation Opportunity Spectrum* map. This includes expanding the current Semi-primitive Motorized areas, and adding Semi-primitive Non-motorized settings on O'Leary Peak and other large cinder cones. Maintain the Roaded Natural settings along passenger car road corridors and the large KV electric line.
- Roads that access the national monuments other than through NPS control points will be removed from the system. Other secondary roads that are not needed for administrative access will be removed from the system.
- Enforce the stay on designated roads policy.
- Retain an un-tracked appearance on the large cinder cones and maintain plants and animals adapted to the cinder ecosystem.
- Provide day and overnight dispersed recreation opportunities with few system trails or facilities, except for Bonito and O'Leary Campgrounds.
- As stated in Management Area 10, maintain and improve grasslands, including removing encroaching pinyon/juniper and re-introducing fire. Maintain or improve watershed conditions throughout the MA.

Timber Land Use Classes	**Acres**
Nonforest	4,828
Forest land withdrawn	
Ponderosa Pine/Mixed Conifer	0
Pinyon-juniper	0
Unsuitable	44,378
Unsuitable (physically unsuited or not capable)	5,434
Forest lands not appropriate for timber harvest	344
Suitable Timber lands	3,104
TOTAL	58,088

All of the following items are Guidelines.

Recreation

Discourage off-trail/road use of any kind on large cinder cones.

Outfitter/Guides

Before permitting outfitter/guides adjacent to National Monuments, contact the National Park Service for coordination. Outfitter guiding might also help meet the mission of the National Park Service in the National Monuments or on adjacent National Forest lands

Follow FLEA area-wide direction including generally, do not place additional outfitter/guide activities or group activities in Deadman Wash, any spring or perennial stream site, except in support of approved research and/or to improve safety or provide site rehabilitation.

Non-motorized Trails

Determine whether or not the O'Leary Peak road (currently gated) should be designated as part of a non-motorized trail system. Consider methods to discourage off-trail use into sensitive areas, such as wildlife and cultural resources. Continue administrative road use for the lookout.

Provide short loop trail opportunities at the base of O'Leary Peak adjacent to O'Leary campground to encourage recreation use at the base of the Peak and west of O'Leary Road.

Cultural/Historical

Continue active monitoring of cultural and historical sites to assess impacts from recreation, cattle grazing, firewood cutting, and other human uses. Changes in management can occur in response to demonstrated (through monitoring) negative impacts to archaeological resources. Cooperate with available Park Service personnel to accomplish monitoring.

Scenery

Consider impacts to viewsheds of the National Monuments and consider input from Park Service personnel when designing or approving projects in these viewsheds.

Forestry

Green firewood cutting is a tool for grassland restoration. Continue efforts to limit illegal firewood gathering and enforce firewood harvest regulations. However, if firewood cutting for personal home use causes impacts to sensitive areas, adjust firewood policy as needed. This policy is adjusted annually for the Forest.

Livestock Grazing

Take steps to ensure cattle do not concentrate on sensitive cultural sites. Techniques to meet this objective include: placing new improvements such as water sources and fences away from sites; no salting at these sites; change pasture graze period at these sites; and closing parts of pastures to grazing.

Non-Native and Invasive Plants

There are known populations of non-native and invasive plants in this MA, such as camelthorn. Continue efforts to control or eradicate plants, especially along roadways.

Coordination with National Park Service

See FLEA area-wide direction related to Memorandum of Understanding's (MOU's).

Specific coordination items related to this MA include FR 545, Bonito, and O'Leary campgrounds, O'Leary Peak, NPS administrative site, and the location of a potential future new visitor center.

Coordinate with Sunset Crater Volcano and Wupatki National Monuments in managing dispersed recreation use adjacent to the Monuments.

Additional topics include fencing placement/removal needs and proposed minor administrative boundary adjustments. Coordinate future changes in fencing as required by administrative boundary adjustments or to reduce the encroachment of users on to NPS national monuments.

Doney Management Area – MA 33

Acres: 40,831

Description

This MA surrounds the communities of Timberline, Fernwood, Doney Park, Cosnino, Winona, Rain Valley, Black Bill, and extends to the City of Flagstaff's eastern developed areas. The western boundary is Shultz Pass Road and the base of Mt. Elden, the southern boundary is I-40 and Walnut Canyon National Monument, the eastern boundary is the large KV electric line (Craters MA) and the northern boundary is the Cinder Hills OHV area. The City of Flagstaff Landfill is located in this MA.

Large tracts of private land occur with some inholdings of National Forest and Arizona State Trust Llands. These communities are rural residential and many residents raise animals such as horses, sled dogs, and llamas. ATV's are a popular mode of travel. The entire MA provides dispersed recreation opportunities and receives heavy use adjacent to private land. Activities include hiking, horse riding, mountain biking, ATV riding, and driving. Private land has developed quickly and public access to National Forest land is becoming scarce. Forest lands provide a scenic backdrop to residential areas. Many people have listed the forest as one of the quality-of-life items that drew them to Flagstaff. Nearby outdoor recreation opportunities and forest scenery are highly appreciated by residents and tourists. Some cinder cones and drainages in this MA hold traditional cultural values for Native Americans. Highway 89 passes through the center of the MA along with the Townsend Winona Road and I-40.

West of Highway 89 vegetation is ponderosa pine (most less than 40 percent slope). The remainder of the MA is pinyon/juniper woodland with patches of grassland near subdivisions. Cinder soils occur in the northern portion along with some large cinder cones, the most prominent being Old Caves Crater, and O'Neal Crater. The Rio De Flag winds through the MA, located on a mix of private and National Forest land. South of I-40 there are tracts of grasslands. There is deer winter range at the base of Mt. Elden. The Old Caves Crater Environmental Study Area (ESA) is located within this MA (see MA17 for more information). The Arizona Trail passes through the southern portion of this MA.

Management Emphasis

Most of this MA is within the Urban/Rural Influence Zone. Reduce the risk of catastrophic wildfire, especially within the Urban/Rural Influence Zone. Reintroduce fire's natural role as much as possible. Emphasize daytime recreation activities, both motorized and non-motorized. Balance recreation demands with protection of soils, water, and vegetation. Maintain public access to public lands. Restore natural grasslands, and promote healthy pinyon/juniper woodland. Ponderosa pine lands progress towards desired forest structure (goshawk habitat). Reduce instances of illegal activities and trash dumping. Maintain scenic quality. Opportunities for firewood or other forest products are rare, however, firewood sales may be used as a tool for management.

Highlights include:

- Per the *Objectives for Recreation Opportunity Spectrum* map, expand Semi-primitive Non-motorized settings on a few of the large cinder cones in this MA. Expand Semi-primitive Motorized settings in other areas and continue Roaded Natural corridors along major roads. In this MA, the Semi-primitive settings have higher numbers of people than occur in outlying MA's.
- This MA is a high priority for efforts to reduce the risk of catastrophic fire especially in the ponderosa pine lands. Reference FLEA area-wide direction and the *Forest Plan* related to vegetation and fire management.
- Per the area-wide FLEA direction: meet with specific communities and County officials and consider input for Forest road and trail management, discourage proliferation of unneeded trails, create a primary trail system that serves as a collector for trails that originate in neighborhoods, convert some roads that are not needed for the road system into motorized trails, and provide pass through corridors for vehicles and ATV/motorcycles that leads to a separate motorized trails or to the secondary Forest road system.
- MIS should be referenced by vegetation and landform type. For example, in pinyon/juniper woodland areas MIS are those listed for MA7.

Timber Land Use Classes	**Acres**
Nonforest	8,384
Forest land withdrawn	
Ponderosa Pine/Mixed Conifer	0
Pinyon-juniper	0
Unsuitable	14,419
Unsuitable (physically unsuited or not capable)	4,167
Forest lands not appropriate for timber harvest	86
Suitable Timber lands	13,775
TOTAL	40,831

All of the following items are Guidelines.

Outfitter/Guides

Before permitting outfitter/guides adjacent to National Monuments, contact the National Park Service for coordination. Outfitter guiding might also help meet the mission of the National Park Service in the National Monuments or on adjacent National Forest lands.

Non-motorized and Motorized Trails

When conducting trail planning as described in the FLEA area-wide direction, include discussions and input from the Coconino County trails coordinator and local groups, as well as community citizens. Complicated access issues and a multitude of recreation demands occur here.

Balance demands for non-motorized and motorized trails in this MA and provide opportunities for both.

Focus road and trail rehabilitation work on the large cinder cones, in meadows and grasslands where impacts are occurring to soils, plants, and cultural sites.

Scenery

Consider impacts to viewsheds of the National Monuments and consider input from Park Service personnel when designing or approving projects in these viewsheds.

Cultural/Historical

Continue active monitoring of cultural and historical sites to impacts.

Fire Suppression

In the ponderosa pine forests the potential for large fires should be low on flat to rolling areas and moderate to high on steep slopes and drainages. In the pinyon-juniper forests the potential should continue to be low to moderate. Very extreme conditions must exist in order for pinyon-juniper forests to support large fires. This area is at high risk for ignition but fire frequency is low.

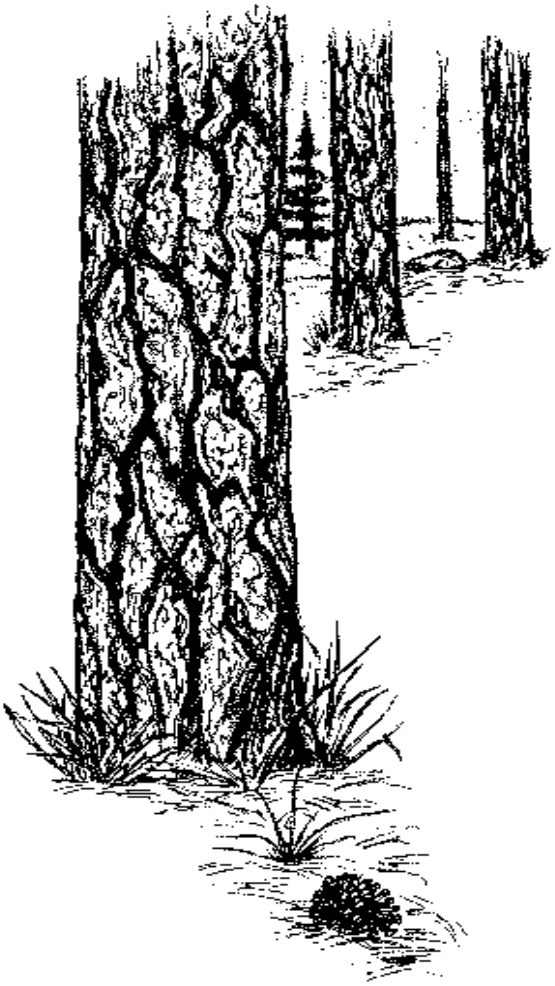
Coordination with National Park Service

See FLEA area-wide direction related to Memorandum of Understanding's (MOU's).

Specific coordination items related to this MA include the potential new location for a visitor center, coordinated prescribed fire activities, fencing of National Monument lands, and illegal access onto the Monument.

Coordination with Centennial Forest

Two Centennial Forest parcels are located in this MA. Coordinate with the Director of the Centennial Forest when conducting management activities on adjacent Forest lands.



Flagstaff Management Area – MA 34

Acres: 1,295

Description

There are approximately 1,295 acres of National Forest land within the proposed Urban Growth Boundary in the *Flagstaff Regional Land Use and Transportation Plan* (RLUTP). On the south side of Flagstaff there is an area north of the airport identified as a potential regional park. There are lands that surround the airport, which the City has an interest in obtaining for airport use, or office/business park development and there is a parcel near Weitzel School the City is interested in as a neighborhood park.

Management Emphasis

All of the lands not directly needed by the Forest Service for its facilities become low priority for retention in Forest Service ownership. In addition, we also are not planning new developments in these areas. As long as these lands remain in National Forest ownership, within the Urban/Rural Influence Zone (entire MA), reduce the risk of catastrophic wildfire, emphasize daytime non-motorized recreation opportunities and balance recreation demands with protection of the soils, water, wildlife and vegetation, and maintain public access to public lands. Reduce instances of illegal activities and trash dumping. Maintain scenic quality. Opportunities for firewood or other forest products are rare, however, firewood sales may be used as a tool for management.

Highlights include:

- Emphasize Roaded Natural ROS settings with few roads and trails or facilities.
- Continue efforts in partnership with the City of Flagstaff to treat forested stands to reduce risk of catastrophic wildfire.
- These lands are a high priority for treatment of non-native and invasive plants.

Timber Land Use Classes	**Acres**
Nonforest	241
Forest land withdrawn	
Ponderosa Pine/Mixed Conifer	20*
Pinyon-juniper	0
Unsuitable	0
Unsuitable (physically unsuited or not capable)	1
Forest lands not appropriate for timber harvest	39
Suitable Timber lands	994
TOTAL	1,295

Guidelines are the same as the West MA in the Urban/Rural Influence Zone

* *BIA dormitory.*

Lake Mary Watershed Management Area – MA 35

Acres: 62,492

Description

The northern boundary is the Walnut Canyon MA (including a section of FH3 - Lake Mary Road), the eastern boundary is the FLEA boundary generally located on the Lake Mary Watershed break, the southern boundary is also the edge of the FLEA area, including the north facing slopes of Mormon Mountain (watershed break), the western boundary borders the West MA near the community of Mountainaire. There are scattered parcels of private land mostly concentrated in the northwestern 1/3 of the MA. Communities include Elk Park Meadows, Lake Mary Meadows, Lake Mary store and trailer park, and the east side of Mountainaire.

The majority of this MA is a rolling landscape of ponderosa pine with Gambel oak intermixed. Steep slopes with mixed conifer and shrubs occur on portions of Mormon Mountain and in a few large drainages. Oak and pine provide habitat for Mexican spotted owls and other rare species. Elk are numerous. This MA covers the lake basins of Upper and Lower Lake Mary, including Marshall Lake. Unique and diverse sets of wildlife species use the lakes and shorelines. The eagle/osprey emphasis area is located here.

Along the Lake Mary Road (FH3) corridor there are numerous developed recreation sites including day-use picnic areas, boat ramps, campgrounds, and parking areas. Upper and Lower Lake Mary provide water based recreation such as motorized and non-motorized boating and fishing. Marshall Lake is located off of paved roads and provides non-motorized boating, waterfowl hunting, and fishing. Lowell observatory has facilities located on Anderson Mesa. The Arizona Trail passes by Marshall Lake. Beyond the Lakes, people appreciate dispersed camping, wildlife viewing, hunting, driving for pleasure, and many other kinds of forest recreation. Many campers come from the Phoenix metro-area in the summer months. Other uses include livestock grazing and firewood cutting.

Lake Mary provides water to the City of Flagstaff water system.

This MA includes areas that support high densities of suitable roost and perch trees adjacent to Lower Lake Mary, a heavily used eagle and osprey area given favorable prey conditions. Many existing roost and perch trees are threatened by possible mortality due to insect infestation and loss of vigor due to high stand densities, drought and by potential loss due to catastrophic fire. Current conditions for recruitment of future perch and roost trees (tall, large trees with open crowns) are not favorable due to higher stand densities. Other logical and important locations for future eagle perches and/or roosts adjacent to and south of Lower Lake Mary are omitted from the current emphasis area boundaries.

Management Emphasis

Focus on maintenance and/or improvement of soil condition and watershed function. Degraded meadows and stream channels will be improved through a variety of management activities designed to increase herbaceous ground cover and litter and

reduce soil erosion. System roads and trails will receive adequate maintenance so that accelerated soil erosion is minimal. Non-system roads will be rehabilitated and some poorly located roads will be re-located.

The northwestern portion of this MA is within the Urban/Rural Influence Zone. Reduce the risk of catastrophic wildfire, especially within the Urban/Rural Influence Zone. Reduce instances of illegal activities and trash dumping. Maintain scenic quality. Opportunities for firewood or other forest products are rare in the northwest portion; however, firewood sales may be used as a tool for management.

In the entire MA, re-introduce fire's natural role as much as possible, and ponderosa pine lands progress towards desired forest structure, including northern goshawk and Mexican spotted owl habitats.

In the lakes, maintain the variety of waterfowl, raptors, amphibians, and many different kinds of plants adapted to lake shore environments. Emphasize healthy shorelines adjacent to the water with ample ground cover, and less erosion or compaction. Turbidity is natural to these lakes. Minimize human disturbance to wildlife, where needed, during the critical times. Continue to provide general dispersed and water-based recreation opportunities. Improve wildlife viewing opportunities where wildlife viewing is compatible with wildlife habitat.

Highlights include:

- MIS should be referenced by vegetation and landform type. For example, in ponderosa pine lands less than 40 percent slope MIS are those listed for MA3.
- In the Urban/Rural Influence Zone, per the area-wide FLEA direction: meet with specific communities, interested people, City and County officials and consider input for Forest road and trail management, discourage proliferation of unneeded trails, create a primary trail system that serves as a collector for trails that originate in neighborhoods, convert some roads that are not needed for the road system into motorized trails.
- Maintain existing recreation facilities and improve signing, parking, and sanitation. Balance recreation demands with sensitive resources such as species habitats, fragile riparian vegetation, and erosive soils where they occur. Continue to focus high levels of use on the Lake Mary Road side of the lakes.
- Riparian communities should have adequate native plant cover to protect stream banks and dissipate energy during high flows.
- In the Lake Mary Watershed, high priority is given to minimizing soil erosion and sedimentation from Forest system roads and trails. Proper maintenance and drainage will be emphasized as well as relocation of roads from meadows and obliteration of unnecessary roads.
- Per the *Objectives for Recreation Opportunity Spectrum* map, expand Semi-primitive Motorized areas and maintain Roaded Natural corridors along major roads. New Semi-primitive Non-motorized patches should be created on Mormon Mountain in sensitive species habitat.
- Maintain or enhance rare plant populations where they occur. Examples are Flagstaff pennyroyal, Flagstaff penstemon, and Arizona leatherflower.

Timber Land Use Classes	**Acres**
Nonforest	6,953
Forest land withdrawn	
Ponderosa Pine/Mixed Conifer	309*
Pinyon-juniper	94
Unsuitable	2,107
Unsuitable (physically unsuited or not capable)	8,274
Forest lands not appropriate for timber harvest	40
Suitable Timber lands	44,715
TOTAL	62,492

All of the following items are Guidelines.

Recreation

Provide designated parking spots along Lake Mary Road where it borders Lower and Upper Lakes Mary. Limit parking to certain spots along the highway and/or in current paved parking areas. Techniques may include installing physical barriers and implementing enforcement policies that manage parking.

Provide additional sanitation facilities along the Upper and Lower Lakes Mary corridor, especially where large numbers of people tend to congregate.

Continue current seasonal motorized restrictions in the Pinegrove Seasonal Closure Area.

Recreation Signing

Informational signs and patrols will be similar to what they are today. The Forest Recreation Map is the primary information tool. These areas may be somewhat "advertised."

Near the lakes continue to provide brochures, signs, and other information about the site. In addition, endeavor to improve wildlife viewing and education opportunities.

Camping

Per the *Objectives for Camping* map, camping is designated dispersed camping sites in the Lake Mary and Marshall Lake areas. Continue the current developed campground opportunities and continue general dispersed camping in the rest of the MA.

Designated dispersed camping opportunities will be identified along the south shore of Upper Lake Mary for boat-in camping. Camping should occur in designated sites only on the south shore. Locate designated camping an appropriate distance from raptor nests. Sites will be closed, re-opened or rotated as needed for area rehabilitation. Foster good sanitation

* *Coulter plots for the 309 and 94 acres indicated as withdrawn.*

practices and encourage boaters to pack-it-out, or if needed design sanitation facilities so as not to create sources of human waste pollution.

Outfitter/Guides

Do not issue outfitter/guide permits or permit use that causes significant change for the ROS social or managerial setting, such as allowing airboats or seaplanes on the lakes.

Non-motorized and Motorized Trails

Continue the current non-motorized Arizona Trail corridor through the MA.

Outside of the Urban/Rural Influence Zone, adoption of user-created trails is unlikely. Provide low mileage of designated non-motorized trails in the remainder of the MA and encourage self-exploration.

Consider motorized trail corridors in this MA. The secondary road system should provide for multiple-use opportunities.

Wildlife

Take actions at Marshall Lake to continue use and enjoyment of Marshall Lake and to maintain important waterfowl nesting habitat. Continue maintenance of the Marshall Lake wetland in cooperation with the Arizona Game and Fish Department through such actions as matting, mowing or other actions that create waterholes in the reeds. Maintain the current boat ramp and enhance wildlife viewing opportunities. Consider making a portion of the lake and adjacent forested areas, an exclosure that prohibits dogs, people, and hunting during the waterfowl-nesting season of May 1 to July 15 to increase nesting success of upland game birds.

Refer to more recent management guidelines and conservation assessments that exist for bald eagle winter habitat management.

The designated bald eagle/osprey emphasis area should be expanded to include future perch and roost trees in key areas.

Watershed

This area is a high priority for fixing drainage culverts, relocating roads from meadows, and obliterating unnecessary roads so that erosion does not degrade water quality in Lake Mary.

Roads, trails, camping, and grazing will be managed to improve watershed condition particularly within mountain meadows, springs, and drainages.

Improve watershed conditions in Priest Draw.

Cooperate with the City of Flagstaff and National Park Service to develop study proposals and projects designed to evaluate best management practices, reservoir modifications, and/or operational criteria to address the objectives of maintaining the quality of the municipal water supply and increasing the likelihood of flood flows and improvement of the inner-canyon environment in Walnut Canyon National Monument (per the Stipulation Between The City of

Flagstaff and the United States on Behalf of the National Park Service and the Forest Service).

Fire Management

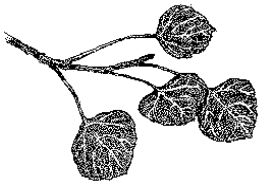
Per the FLEA Area-wide direction, reduce potential for catastrophic wildfire within the Urban/Rural Influence Zone. Because of prevailing winds, lands south and west of the Urban/Rural Influence Zone should be evaluated for wildfire risks and appropriate measures taken to reduce potential for catastrophic fire. Continue partnerships with city, county, and State fire departments to coordinate fire hazard reduction treatments, prevention, and suppression. Take steps to minimize wildfire losses to key wildlife habitat components such as eagle roosts, osprey nests, snags, yellow pines, oaks and rare plant habitat.

Rare Species

Follow approved management plans or other conservation documents.

Non-Native and Invasive Plants

There are known populations of non-native and invasive plants in this MA, such as diffuse and spotted knapweed, musk and bull thistle, and Mediterranean sage. Continue efforts to control or eradicate these weeds and coordinate with recreation and lands uses to prevent spread.



Schultz Management Area – MA 36

Acres: 21,285

Description

The west boundary is the West MA, the north boundary is the Kachina Peaks Wilderness boundary and a small portion of FR 418. The east boundary is the Doney MA, the northern boundary is FR 418, the west boundary is Kachina Peaks Wilderness, and the southern boundary is the Mt. Elden Environmental Study Area. Prominent landscape features include the Dry Lake Hills, Mount Elden, and the eastern slopes of the San Francisco Mountain.

Meadows and riparian sites are few and therefore are key parts of the landscape. Dense forests of ponderosa pine and mixed conifer, along with geologic features and stands of aspen, provide habitats for a diversity of wildlife, including raptors, bear, and turkey.

There are a very few small private land inholdings in the MA. A communication site and fire lookout are located on Mt. Elden and accessed via the Elden Lookout Road. A natural gas underground pipeline skirts the southern edge of the MA. The Mount Elden/Dry Lake Hills Trail system provides 47 miles of non-motorized trail opportunities. People enjoy extraordinary outdoor recreation and appreciate the developed trail system with easy access from the City of Flagstaff. Social values include scenic beauty; appreciation of wildlife such as bear, turkey, and raptors, and remote forest recreation opportunities. This entire MA holds important religious and traditional values to American Indians.

Management Emphasis

A small portion of this MA is within the Urban/Rural Influence Zone. Reduce the risk of catastrophic wildfire, especially within the Urban/Rural Influence Zone. Reintroduce fire's natural role as much as possible. Emphasize daytime recreation activities, primarily non-motorized in the Urban/Rural Influence Zone and provide designated camping sites in the Dry Lake Hills. Balance recreation demands with protection of the soils, water, vegetation, and sensitive species. This includes defining limits on recreation individual, group or outfitter/guide use if analysis shows a need.

Maintain drainages and meadows for watershed health and water quality. Ponderosa pine lands progress towards desired forest structure (goshawk habitat). Reduce instances of illegal activities and trash dumping. Maintain scenic quality. Opportunities for firewood or other forest products are rare; however, firewood sales may be used as a tool for management.

Highlights include:

- In the Mt. Elden/Dry Lake Hills area, people should be mostly on the trail system, leaving undisturbed patches of habitat in between. Wildlife habitat will be somewhat fragmented because of the extent of the trail system, but topography and dense mixed conifer vegetation reduce some of the effects.
- Per the *Objectives for Recreation Opportunity Spectrum* map, maintain the Semi-primitive Non-motorized setting in the Dry Lake Hills and expand the Semi-primitive Non-motorized setting below the Waterline Road. Expand Semi-

primitive Motorized settings in the remainder of the MA with Roaded Natural corridors along major roads.

- Maintain the Dry Lake Hills Trail system for non-motorized recreation trail opportunities. Few if any additions are needed to this system.
- Maintain the two Mexican spotted owl PACs.
- Management Indicator Species (MIS) should be referenced by vegetation and landform type. For example, in ponderosa pine/mixed conifer on slopes over 15 percent areas MIS are those listed for MA4.

Timber Land Use Classes	**Acres**
Nonforest	223
Forest land withdrawn	
Ponderosa Pine/Mixed Conifer	0
Pinyon-juniper	0
Unsuitable	1,066
Unsuitable (physically unsuited or notcapable)	8,130
Forest lands not appropriate for timber harvest	72
Suitable Timber lands	11,794
TOTAL	21,285

All of the following items are Guidelines.

Recreation

Identify designated parking spots along the roads of this MA where recreational uses are heavy.

Maintain the non-motorized status of the base of Mt. Elden to protect deer winter habitat and cultural sites and to provide for high levels of non-motorized recreation.

Recreation Signing

In the Mount Elden/Dry Lake Hills area there will be extensive signing, brochures, and patrols so that visitors can easily find trails and facilities.

In the area east of the Waterline Road informational signs and patrols will be similar to what they are today. Brochures or other information would be minimal. Recreation opportunities here will not be "advertised."

Camping

Per the *Objectives for Camping* map, designate dispersed camping sites in the Mount Elden/Dry Lake Hills area.

Monitor backcountry camping for impacts.

Outfitter/Guides

Per FLEA Area-wide direction, generally, do not place additional outfitter/guide activities or group activities in the Dry Lake Hills, any spring or perennial stream site, except in support of approved research, and/or to improve safety or provide site rehabilitation.

Non-motorized and Motorized Trails

Maintain the current trail system. Maintain and improve trailhead parking and identify designated parking spots. Relocate trailhead parking on the Elden Lookout Road to balance use with sensitive MSO habitat.

Discourage off-trail use.

Evaluate the Shultz Creek trail for conversion to a non-motorized trail.

Maintain the Waterline Road as a heavily used non-motorized recreation corridor. Administrative use is motorized.

Do not pursue motorized trails in the Dry Lake Hills or east of the Waterline Road.

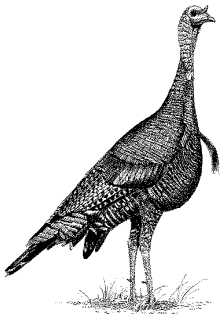
Between Timberline and other communities, consider a motorized connection. Use the secondary road system to provide motorized access.

Wildlife

Within the Semi-primitive Non-motorized ROS settings maintain large tracts of unfragmented habitat for disturbance sensitive species, such as turkey and bear.

Fire Management

Per the FLEA Area-wide direction, reduce potential for catastrophic wildfire within the Urban/Rural Influence Zone. Because of prevailing winds and steep terrain, lands north and east of the Urban/Rural Influence Zone should be evaluated for wildfire risks and appropriate measures taken to reduce potential for catastrophic fire. Continue partnerships with City, County, and State fire departments to coordinate fire hazard reduction treatments, prevention, and suppression.



Walnut Canyon Management Area – MA 37

Acres: 20,699

Description

Adjacent communities include: Fairfield neighborhood, Herold Ranch, and communities along Lake Mary Road.

The northern boundary is private land on the southeast side of Flagstaff (Flagstaff MA) and a portion of I-40. The communities of Fairfield Continental, Herold Ranch, and the new Fairway Peaks are nearby. The eastern boundary is the Walnut Canyon National Monument entrance road, a portion of the Monument boundary, and the FLEA boundary. The southern boundary is the Lake Mary MA and the western boundary is Lake Mary Road. Large tracts of private land border this MA. There are small inholdings of private land along Lake Mary Road, but little private land in the interior of the MA. Walnut Canyon National Monument and Arizona State Trust Land sections are located in the northern ½ of the MA. No paved roads or utility corridors occur except on the boundaries.

Walnut Canyon dominates this MA, running from the end of Lower Lake Mary to Fisher Point and turning east towards Winona. The scenery is spectacular. Cultural sites are numerous and the canyon holds Native Americans religious values. The steepest section of the canyon with the most archaeological sites is located within Walnut Canyon National Monument. The canyon itself supports a multitude of vegetation types and habitats from steep north facing mixed conifer, to riparian vegetation at the canyon bottom. Disturbance sensitive wildlife species occur in secluded portions of the canyon and along the rim. Lands outside of the canyon are ponderosa pine with Gambel oak understory, and some pinyon and juniper.

There are Forest system trails, including the Arizona Trail in the canyon itself and along the rim. Fisher Point is a popular destination for hikers, mountain bikers, and outfitter/guided horse trips. Canyon Vista is popular for climbing. North and west of Walnut Canyon the area provides dispersed recreation opportunities and receives heavy use adjacent to private land and Lake Mary Road. Activities include hiking, horse riding, and mountain biking. Major roads provide access and other areas are closed to vehicles. Walnut Canyon and its major side drainages are closed to motorized vehicles. The areas south and east of Walnut Canyon provide more remote dispersed recreation opportunities including motorized travelways.

Social values include scenic beauty, appreciation of wildlife such as bear, turkey, and raptors, and remote forest recreation opportunities. Despite increasing numbers of people in the greater Flagstaff area, this MA maintains large tracts of unfragmented habitat for disturbance-sensitive species such as owls, turkey, and bear primarily south of Walnut Canyon.

Management Emphasis

Provide Recreational Opportunities. Maintain the quality of the recreational experience throughout this MA. North and west of Walnut Canyon emphasize daytime recreation activities, primarily non-motorized. South and east of Walnut Canyon emphasize remote dispersed recreation (day and overnight) with motorized and non-motorized opportunities. Balance recreation demands with protection of the soils, water, vegetation, and sensitive species.

Manage to protect the values of Walnut Canyon National Monument and complement National Park Service goals for the Monument as described in the National Park Service's General Management Plan.

Maintain scenic quality.

Protect the community - A small portion of this MA is within the Urban/Rural Influence Zone. Reduce the risk of catastrophic wildfire, especially within the Urban/Rural Influence Zone. Reintroduce fire's natural role as much as possible. Opportunities for firewood or other forest products are rare north and west of the Canyon, however, firewood sales may be used as a tool for management.

Protect Walnut Canyon environs. Focus on maintenance and/or improvement of soil condition and watershed function. Degraded meadows and stream channels will be improved through a variety of management activities designed to increase herbaceous ground cover and litter and reduce soil erosion. System roads and trails should receive adequate maintenance so that accelerated soil erosion is minimal. Non-system roads will be rehabilitated and some poorly located roads will be re-located.

Maintain sensitive species habitat. Ponderosa pine lands progress towards desired forest structure, including Mexican spotted owl and northern goshawk habitats.

Reduce instances of illegal activities and trash dumping.

Emphasize the social values compatible with an urban interface that includes recognition of the area's opportunity for wildlife, recreational, and scenic values. Provide forage and security for a variety of game and non-game species of wildlife, provide conservation and environmental education opportunities, provide an area for recreational uses for the Flagstaff public, and manage a portion of the area to give a quiet, almost primitive recreation experience.

Highlights include:

- Per the *Objectives for Recreation Opportunity Spectrum* map, expand Primitive (Non-motorized) settings in and around the steepest portions of Walnut Canyon. Expand Semi-primitive Non-motorized settings on Campbell Mesa, around Walnut Canyon, in the Skunk/Fay Canyon area and northwest of Fisher Point. The Skunk/Fay Canyon areas and lands north of Fisher Point are classified as SPNM ROS settings with one or two SPM road corridors located to protect important habitat characteristics and soil and water needs of the canyon rim. Roaded Natural settings continue in some portions of the MA along the Lake Mary Road corridor.

- Balance recreation demands with sensitive resources such as sensitive species habitats, fragile riparian vegetation, and erosive soils on steep slopes.
- MIS should be referenced by vegetation and landform type. For example, in ponderosa pine lands less than 40 percent slope, MIS are those listed for MA3.
- Reduce the risk of catastrophic fire especially in the Urban/Rural Influence Zone. There is concern for wildfire losses to the National Monument from fires starting southwest of the park. Balance the need to reduce wildfire risk in these areas with desired conditions for Primitive and Semi-primitive ROS settings and disturbance sensitive species habitat. Reference FLEA area-wide direction and other the *Forest Plan* management direction related to vegetation and fire management.
- Per the area-wide FLEA direction: meet with specific communities, City and County officials and consider input for Forest road and trail management, discourage proliferation of unneeded trails, create a primary trail system that serves as a collector for trails that originate in neighborhoods, convert some roads that are not needed for the road system south and east of Walnut Canyon to motorized trails outside of SPNM areas.
- Formalize and recognize commitments by the various federal, State, and local government entities to manage the lands between the urban growth boundaries (UGB) and the national monument to retain its recreational and scenic values. Governmental commitments for the management of recreational and scenic lands between the Walnut Canyon NM and the UGB shall reflect the following objectives and intents:
    - Protect the natural and cultural resources in the urban/wildland interface and the lands surrounding the national monument.
    - Encourage the City and County to designate and require access points from developed or to be developed areas onto public lands.
    - Encourage the City and County to provide a transition zone of open space or low density from higher density development where adjacent to public lands.
    - Cooperate with NPS in its efforts to monitor the use of and impacts on the natural and cultural resources of the Monument.

Timber Land Use Classes	**Acres**
Nonforest	952
Forest land withdrawn	
Ponderosa Pine/Mixed Conifer	0
Pinyon-juniper	0
Unsuitable	4,305
Unsuitable (physically unsuited or not capable)	6,595
Forest lands not appropriate for timber harvest	0
Suitable Timber lands	8,847
TOTAL	20,699

All of the following items are Guidelines, with the exception of Land Ownership.

Recreation

High-quality daytime recreation will be available with few developed recreation facilities.

As signs need to be replaced, use the Walnut Management Area name to replace the Walnut Recreation Area name.

Outfitter/Guides

Before permitting outfitter/guides adjacent to National Monuments, contact the National Park Service for coordination. Outfitter guiding might also help meet the mission of the National Park Service in the National Monuments or on adjacent National Forest lands.

Follow FLEA area-wide direction including generally, do not place additional outfitter/guide activities or group activities in Walnut Canyon from Fisher Point east, any spring or perennial stream site, except in support of approved research and/or to improve safety or provide site rehabilitation.

Camping

Portions of this MA will be closed to camping as noted on the Camping Objectives Map.

Manage the Canyon Vista area to provide parking, day-use trails, and overnight camping for individuals and groups. Facilities at the site should be designed to limit resource impacts and provide a camping experience at the less developed end of the spectrum for developed campgrounds.

Non-motorized and Motorized Trails

Recreation use should be concentrated along main corridors with few roads, trails, and people in between.

Continue the current non-motorized status in the areas of Skunk and Fay Canyons, Canyon Vista, Fisher Point, and Campbell Mesa.

Within Walnut Canyon itself, discourage off trail use.

Scenery

Consider impacts to viewsheds of the National Monument and consider input from Park Service personnel when designing or approving projects in this viewshed.

Developments such as roads, trails, camping, day-use sites, and trailheads mimic local materials and landscape characteristics to blend with the adjacent natural-appearing landscape.

Provide fast clean-up from management activities and limit short-term visual impacts (1 to 3 years), while meeting fire potential reduction needs, design thinning for long-term scenic quality adjacent to homes and along major highways or near developed recreation sites.

Throughout the entire management area, activities, such as thinning and prescribed fire, result over the long-term, in alterations that appear natural to most visitors.

Do thinning with sensitivity to scenic values and recreation uses. Examples may include but are not limited to, feathering edges of thinning boundaries, careful placement and use of roads to access thinning areas, and creating a variety of tree densities, sizes, types and openings.

Watershed

Cooperate with the City of Flagstaff and National Park Service to develop study proposals and projects designed to evaluate best management practices, reservoir modifications, and/or operational criteria to address the objectives of maintaining the quality of the municipal water supply and increasing the likelihood of flood flows and improvement of the inner-canyon environment in Walnut Canyon National Monument (per the Stipulation Between The City of Flagstaff and the United States on Behalf of the National Park Service and the Forest Service).

Cultural/Historical

Continue active monitoring of cultural and historical sites to impacts from recreation, cattle grazing, firewood cutting, and other human uses. Changes in management can occur in response to demonstrated (through monitoring) negative impacts to archaeological resources. Cooperate with available Park Service personnel to assist with monitoring.

Wildlife

In the Primitive, Semi-primitive Non-motorized, and Semi-primitive Motorized ROS settings maintain large tracts of unfragmented habitat for turkey and bear.

Coordination with National Park Service

See FLEA area-wide direction related to Memorandum of Understanding's (MOU's).

Coordinate with the NPS concerning the fencing of newly acquired National Monument lands, access and interpretation of the "first fort" area, and protection activities, such as reduction of fuel hazard and closure of roads accessing the canyon rims.

Land Ownership Planning/Land Classification

Standard

National Forest jurisdiction will be maintained for all lands in the Walnut Canyon MA. No land exchanges will occur unless the purpose is to acquire land within this MA through exchange of national forest lands elsewhere.

Cooperate with other agencies and local governments to maintain the Arizona State Trust Lands[*] in Wildland/open space status. Pursue purchase or land exchange options for the purpose of conservation.

[*] *It is intended that the State sections are the same as those described in the City of Flagstaff's Arizona Preservie Initiative (API) petition sections 22, 28, and 30.*

West Management Area – MA 38

Acres: 36,663

Description

The northern boundary is the FLEA boundary (portion of the Kachina Peaks Wilderness boundary), the west boundary is the FLEA boundary just west of Fort Valley, and bordering Camp Navajo and portions of Woody Ridge. The southern boundary is the rim near the switchbacks on Highway 89A, and the eastern boundary is the Lake Mary MA near Mountainaire, private land on the west side of Flagstaff, and the Schultz MA.

Much of the land in this MA is either private land or Arizona State Trust land with interspersed National Forest land. Adjacent communities include or are nearby: Lowell Observatory, Museum of Northern Arizona, Fort Valley, Hidden Hollow, Cheshire, Fort Tuthill, WL Gore facility, Equestrian Estates, Pine Dell, Mountain Dell, University Heights, University Highlands, Forest Highlands, Kachina Village, Mountainaire, lands south of the Flagstaff Airport, Flagstaff Ranch Road, Old Route 66, Naval Observatory, Dry Lake, and The Arboretum at Flagstaff.

At the top of the switchbacks on Highway 89A, Oak Creek Vista currently receives over 300,000 visitors annually and is the busiest recreation site on the Coconino Forest. No other National Forest developed recreation facilities exist in this MA. Fort Tuthill is a Coconino County regional park and the Flagstaff Urban Trail system has segments that cross National Forest land. The Highway 89A corridor is popular for dispersed camping, that is frequently overflow from Oak Creek Canyon. Other highways in this MA include I-17, I-40, a small segment of Highway 180 and the lower 2 miles of the Snowbowl Road. Areas near urban/residential areas receive high levels of daytime use by nearby residents. Activities include horse riding, mountain biking, ATV riding, jogging, and hiking. There are equestrian centers nearby.

Prominent features include the southern slopes of the San Francisco Mountain, A-1 Mountain, Observatory Mesa, Dry Lake, Rodgers Lake, Woody Mountain, Woody Ridge, and the Oak Creek rim. Vegetation is mostly ponderosa pine with Gambel oak understory and mixed conifer on steep slopes and within drainages. There is a mix of disturbance sensitive and other wildlife species in the MA, and a wildlife travelway near A-1 Mountain provides wildlife access to the San Francisco Mountain and areas south. Areas support Mexican spotted owls and other sensitive species.

The Pumphouse Wash canyon supports a variety of vegetation types and habitats from steep north facing mixed conifer, to abundant riparian vegetation in the canyon bottom. The scenery is spectacular. Disturbance sensitive wildlife species such as peregrine falcon, Mexican spotted owls, turkey, bear, and mountain lion occur in the canyon and along the rim. Pumphouse Wash drains into Oak Creek and high quality water is emphasized.

Many people have listed the presence of the forest as one of the quality-of-life items that drew them to Flagstaff. Nearby outdoor recreation opportunities and forest scenery are highly appreciated by residents and tourists. People enjoy the scenery,

and nearby residents value outdoor recreation and scenic backdrops. The San Francisco Mountain holds significant religious and cultural values to Native Americans, along with some cinder cones and drainages.

Management Emphasis

More than half of this MA is within the Urban/Rural Influence Zone. Within the Urban/Rural Influence Zone, and along the Highway 89A corridor, reduce the risk of catastrophic wildfire, emphasize daytime recreation activities, both motorized and non-motorized, balance recreation demands with protection of the soils, water, wildlife and vegetation, and maintain public access to public lands. Reduce instances of illegal activities and trash dumping. Maintain scenic quality. Opportunities for firewood or other forest products are rare, however, firewood sales may be used as a tool for management. Maintain wildlife travelways.

In the remainder of the MA, re-introduce fire's natural role as much as possible, progress towards desired conditions described (MSO and goshawk guidelines), restore meadows, and promote healthy pine/oak forests. Minimize recreation impacts to disturbance sensitive species. Maintain wildlife travelways.

Take actions to help protect and maintain high quality water in Oak Creek.

Highlights include:

- Along Woody Ridge there are large tracts of unfragmented habitat and remote recreation opportunities including Semi-primitive Motorized and Semi-primitive Non-motorized ROS settings with Roaded Natural corridors. The challenge here will be to maintain remote characteristics as new residential development occurs on the west side of Flagstaff. Maintain Woody Ridge as a Semi-primitive Non-motorized ROS setting with walk-in hunting opportunities.
- Reference the *Fort Valley Ecosystem Management Environmental Assessment* and the "*A-1" 10K Ecosystem Management Environmental Assessment* for site-specific desired conditions and actions.
- Per the *Objectives for Recreation Opportunity Spectrum* map, maintain Semi-primitive Non-motorized settings on portions of Woody Ridge, A-1 Mountain and west of A-1 Mountain. In the remainder of National Forest lands, maintain patches of Semi-primitive Motorized habitat with Roaded Natural corridors along major roads or in smaller National Forest inholdings. In this MA, the Semi-primitive settings have higher numbers of people than occur in outlying MA's.
- The portions of this MA that lie southwest of developed lands are high priority for fire risk reduction efforts. This includes the Urban/Rural Influence Zone and the Wildland Urban Interface as depicted on the Fire Management Analysis Zones map. Reference FLEA area-wide direction.
- Per the area-wide FLEA direction: meet with specific communities and County officials and consider input for Forest road and trail management, discourage proliferation of unneeded trails, create a primary trail system that serves as a collector for trails that originate in neighborhoods, convert some roads that are not needed for the road system into motorized trails.

- MIS should be referenced by vegetation and landform type. For example, in ponderosa pine less than 40 percent slope, MIS are those listed for MA3.
- Maintain the major wildlife corridor that crosses Highway 180 and another corridor between Pumphouse Wash and Woody Ridge, south of Kachina Village.

Timber Land Use Classes	**Acres**
Nonforest	1,939
Forest land withdrawn	
Ponderosa Pine/Mixed Conifer	0
Pinyon-juniper	0
Unsuitable	173
Unsuitable (physically unsuited or not capable)	4,339
Forest lands not appropriate for timber harvest	59
Suitable Timber lands	30,153
TOTAL	36,663

All of the following items are Guidelines.

Recreation

Areas near to residential private lands may have large numbers of people on some occasions. Daytime activities are emphasized with some designated overnight camping opportunities. Encounters with other people are frequent here, but there will still be places to "get away" and enjoy solitude.

Recreation Signing

Adjacent to residential areas improve trailhead signing, brochures and directional signing. Recreation opportunities will be somewhat "advertised," but each residential area will need to provide input on the level of information provided.

In the Semi-primitive ROS settings, informational signs and patrols will be similar to what they are today. Brochures or other information would be minimal. Recreation opportunities Semi-primitive areas will not be "advertised."

Camping

Per the *Objectives for Camping* map (Appendix M) there should be designated dispersed camping along the Highway 89A corridor and the Freidlein Prairie Road. Expand the area where camping and campfires are prohibited. General dispersed camping should continue in the remainder of the MA.

Non-motorized and Motorized Trails

When conducting trail planning as described in the FLEA area-wide direction, include discussions and input from the County trails coordinator and local groups, as well as

community citizens. Complicated access issues and a multitude of recreation demands occur here.

Balance demands for non-motorized and motorized trails and provide opportunities for both.

Focus road and trail rehabilitation work in the steep drainages, such as Pumphouse Wash, that flow into Oak Creek Canyon and contain fragile plants and rare species. Locate trails and manage recreation use to reduce impacts of woody riparian vegetation and riparian habitat in Pumphouse Wash.

Coordinate trailhead parking with future development on adjacent private lands, in order to take advantage of the opportunity to be proactive in designing trails and trailheads to maintain access to public lands.

Special-Uses

Per the FLEA Area-wide direction, focus special use permits away from urban/residential areas. Generally, do not place additional outfitter/guide activities or group activities in Pumphouse Wash, any spring or perennial stream site, except in support of approved research and/or to improve safety or provide site rehabilitation.

Wildlife

In the Fort Valley and A-1 Mountain areas, maintain the wildlife travelway that connects A-1 Mountain, Observatory Mesa, and the slopes of the San Francisco Mountain.

Lands west of A-1 Mountain in Semi-primitive Non-motorized ROS setting maintain large tracts of unfragmented habitat for turkey and bear.

Watershed

In the Oak Creek watershed, high priority is given to minimizing soil erosion and sedimentation from Forest system roads and trails. Proper maintenance and drainage will be emphasized as well as relocating roads from meadows and obliterating unnecessary roads.

Where perennial stream flow is present, riparian communities should have adequate in-stream flows and adequate plant cover to protect stream banks and dissipate energy during high flows. Channel characteristics and water support natural biodiversity. Ensure adequate instream flow water rights to maintain aquatic communities and water sources for wildlife.

Rare Species

Avoid or limit human disturbance to rare species such as peregrine falcon and Arizona bugbane.

Non-Native and Invasive Plants

There are known populations of non-native and invasive plants in this MA, such as bull thistle in Pumphouse Wash. Continue efforts to control or eradicate these weeds and coordinate with recreation and lands uses to prevent spread.

Fire Management

Per the FLEA Area-wide direction, reduce potential for catastrophic wildfire within the Urban/Rural Influence zone. Because of prevailing winds and steep terrain, lands south and west of the Urban/Rural Influence zone should be evaluated for wildfire risks and appropriate measures taken to reduce potential for catastrophic fire. Continue partnerships with city, county, and State fire departments to coordinate fire hazard reduction treatments, prevention, and suppression.

Coordination with Centennial Forest

Some of the Arizona State Trust Land parcels in this MA are Centennial Forest. Coordinate with the Director of the Centennial Forest when conducting management activities on adjacent National Forest lands.

APPENDIX D
LAND SUITABILITY CLASSIFICATION - ACRE DISTRIBUTION BY MANAGEMENT AREA

	Nonforest	**Withdrawn PP**	**Withdrawn PJ**	**Physically Unsuitable/ (PJ)**	**Physically Unsuitable/ Not Capable**	**Not Approp**	**Suitable**	**Total**
MA1	59,729	26,058	70,136					155,923
MA2	1,167		1,028					2,195
MA3					**223**	**6,990**	**492,251**	**499,464**
MA4					**14,092**	5,359	**656**	**20,107**
MA5					**4,487**			**4,487**
MA6					**54,566**			**54,566**
MA7				**254,033**				**254,033**
MA8				**12,273**				**12,273**
MA9	**1,544**							**1,544**
MA10	**144,275**							**144,275**
MA11	25,689			202,422				228,111
MA12	**17,501**				**19,367**			**36,868**
MA13	**2,865**			**2,576**	**3,816**		**4,454**	**13,711**
MA14	646			3,709	1,477	414		6,246
MA15	1,532							1,532
MA16		838						838
MA17	1,432	1,629	1,736					4,797
MA18	**1,580**							**1,580**
MA19							12,554	12,554
MA20	328			1,121	279		5,607	7,335
MA21	967			4,541				5,508
MA22	1,587			924			668	3,179
MA23				785				785
MA24	4,045			11,158				15,203
MA25	1,630			1,994				3,624
MA26	2,532			2,738				5,270
MA27	20,329			19,062				39,391
MA28				2,287	1,016		1,778	5,081
MA29	974			1,912				2,886
MA30	**118**				**186**		**556**	**860**
MA31	**7,484**			**16,610**	**4,356**	**12**	**1,396**	**29,858**

APPENDIX D (Continued)
LAND SUITABILITY CLASSIFICATION - ACRE DISTRIBUTION BY MANAGEMENT AREA

Nonforest	Withdrawn PP	Withdrawn PJ	Physically Unsuitable/ (PJ)	Physically Unsuitable/ Not Capable	Not Approp	Suitable	Total	58,088
MA33	**8,384**			**14,419**	**4,167**	**86**	**13,775**	**40,831**
MA34	**241**	**20***			**1**	**39**	**994**	**1,295**
MA35	**6,953**	**309†**	**94‡**	**2,107**	**8,274**	**40**	**44,715**	**62,492**
MA36	**223**			**1,066**	**8,130**	**72**	**11,794**	**21,285**
MA37	**952**			**4,305**	**6,595**		**8,847**	**20,699**
MA38	**1,939**			**173**	**4,339**	**59**	**30,153**	**36,663**
TOTAL	**321,429**	**28,639**	**73,209**	**604,593**	**140,805**	**13,415**	**633,257**	1,815,347

* *Dorms*
† *Coulter Plots*
‡ *Coulter Plots*

APPENDIX B
MANAGEMENT AREAS

No.	Description	Analysis Areas	Acres
1	Wilderness	35-46	155,923[i]
2	Verde Wild & Scenic River	34	2,195
3	Ponderosa pine & mixed conifer < 40% slopes	1-9, 11, 12, 57, 59	**499,419**[ii]
4	Ponderosa pine & mixed conifer > 40% slopes	10, 10a, 13, 13a	**20,107**[iii]
5	Aspen	14	**4,487**
6	Unsuitable timber land	15, 16	**54,566**
7	Pinyon-juniper woodland < 40% slopes	17-19	**254,033**[iv]
8	Pinyon-juniper woodland > 40% slopes	20	**12,273**[v]
9	Mountain grassland	25	**1,544**
10	Transition, grassland & sparse PJ above Rim	26, 27	**144,275**[vi]
11	Verde Valley -- desert grass, sparse PJ, cypress, and chaparral	28, 29	228,111
12	Riparian and open water	32, 33	**36,868**
13	Cinder Hills	31	**13,711**
14	Oak Creek Canyon	30	6,246
15	Developed recreation sites (public & private) and Fairfield Snow Bowl	22-24, 58	**1,487**[vii]
16	Inner Basin	21	838
17	Special Areas -- RNA's (outside wilderness), Geologic, and Botanic Areas	48-51	4,797
18	Elden Environmental Study Area	52, part of 53	**1,580**
19	Mogollon Rim		12,554
20	Highway 180 Corridor	[viii]	7,335
21	Dry Creek Basin	NA	5,508
22	Gateway	NA	3,179

APPENDIX B (Continued)
MANAGEMENT AREAS

No.	Description	Analysis Areas	Acres
23	Lower Oak Creek	NA	785
24	Neighborwoods	NA	15,203
25	Red Cliff	NA	3,624
26	Redrock Frontcountry	NA	5,270
27	Savannah	NA	39,391
28	Schnebly Rim	NA	5,081
29	Transition	NA	2,886
30	Bellemont Shooting Facility	NA	860
31	**Craters**	**NA**	**39,858**
32	**Deadman Wash**	**NA**	**58,088**
33	**Doney**	**NA**	**40,831**
34	**Flagstaff**	**NA**	**1,295**
35	**Lake Mary Watershed**	**NA**	**62,492**
36	**Schultz**	**NA**	**21,285**
37	**Walnut Canyon**	**NA**	**20,699**
38	**West**	**NA**	**36,663**

The following will not be delineated as management areas but will be displayed on the map with an appropriate symbol:

- administrative sites and electronic sites (738 ACRES)
- non Forest Service lands and Experimental Forests (5410 ACRES)

The changes made on 8/86 reflect changes in boundaries of the Cinder Hills MA and the discovery of an error in the classification of 2,187 acres of suitable timber land in MA13 which should have been in unsuitable. The suitability change only shows in the individual MA listing of acres by land use classification.

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[i] Wilderness acres in plan were 150,180 originally, adjusted to match Wilderness Bill.
[ii] Acres do not match AA list because 12,233 acres removed from the AA's to make a portion of MA19
[iii] Acres do not match AA list because 321 acres removed from AA's to make a portion of MA19 and 375 acres left over from AA 53 added in here.
[iv] Acres do not match AA list because 44,952 acres removed to make a portion of MA11.
[v] Acres do not match AA list because 66,699 acres removed to make a portion of MA11
[vi] Acres do not match AA list because 27,279 acres were added from AA's 28/29 to adjust the acres for MA11
[vii] Includes existing and potential developed sites, both public and private (summer homes, organization sites, and concessionaire -- ski area and lodges). Only the acreage of selected potential sites will be included
[viii] Acres are from MA's 3, 5, 6, 7, 9 – as updated in Amendment 10