

# APPENDICES

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# Appendix A

## Analysis Area Index

Analysis Area Number	Land Designation	Grazing Capacity	Vegetation	Slope
1100/1600	Wilderness	Yes	Riparian	0-15
1200	Wilderness	Yes	Desert	0-40
1201	Wilderness	Yes	Desert	41-80
1204/1205	Wilderness	No	Desert	0-80
1206	Wilderness	No	Desert	81+
1300	Wilderness	Yes	Chaparral/Pinyon-Juniper	0-40
1301	Wilderness	Yes	Chaparral/Pinyon-Juniper	41-80
1304/1305	Wilderness	No	Chaparral/Pinyon-Juniper	0-80
1306	Wilderness	No	Chaparral/Pinyon-Juniper	81+
1505/1511	Wilderness	Yes	Ponderosa Pine/Mixed Conifer	0-80
1529/1532	Wilderness	No	Ponderosa Pine/Mixed Conifer	0-80
1541	Wilderness	No	Ponderosa Pine/Mixed Conifer	81+
3100	Rivers and Lakes	Yes	Riparian	0-15
3200/3201	Rivers and Lakes	Yes	Desert	0-80
3204/3205	Rivers and Lakes	Yes	Desert	0-80
3206	Rivers and Lakes	Yes	Desert	0-40
3600	Rivers and Lakes	No	Lakes/Channel/Sandbar	0-15
4100/4600	Wild and Scenic River	No	Channel/Sandbar	0-15
4200/4201	Study Corridor	Yes	Desert	0-80
5100	All Other Lands	Yes	Riparian	0-15
5200	All Other Lands	Yes	Desert	0-40
5201	All Other Lands	Yes	Desert	41-80
5204/5205	All Other Lands	No	Desert	0-80
5206	All Other Lands	No	Desert	81+
5300	All Other Lands	Yes	Chaparral/Pinyon-Juniper	0-40
5301	All Other Lands	Yes	Chaparral/Pinyon-Juniper	41-80
5304/5305	All Other Lands	Yes	Chaparral/Pinyon-Juniper	0-80
5306	All Other Lands	No	Chaparral/Pinyon-Juniper	81+
5505	(Unregulated Component)	Yes	Ponderosa Pine/Mixed Conifer	0-40
5506	All Other Lands	Yes	Ponderosa Pine/Mixed Conifer	0-40
5511	(Unregulated Component)	Yes	Ponderosa Pine/Mixed Conifer	41-80
5512	All Other Lands	Yes	Ponderosa Pine/Mixed Conifer	41-80
5529	(Unregulated Component)	No	Ponderosa Pine/Mixed Conifer	0-40
5530	All Other Lands	No	Ponderosa Pine/Mixed Conifer	0-40

# Appendix

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## Analysis Area Index (continued)

Analysis Area Number	Land Designation	Grazing Capacity	Vegetation	Slope
5535	(Unregulated Component)	No	Ponderosa Pine/Mixed Conifer	41-80
5536	All Other Lands	No	Ponderosa Pine/Mixed Conifer	41-80
5541	(Unregulated Component)	No	Ponderosa Pine/Mixed Conifer	81+
5542	All Other Lands	No	Ponderosa Pine/Mixed Conifer	81+
5600	All Other Lands	No	Channel/Sandbar	0-15
6001	All Other Lands	No	FS Developed Recreation Sites	0-40
6002	All Other Lands	No	Private Sector Recreation Sites	0-40

## Appendix B

### Activity Code Index

Primary Code	Code Description
A01	Recreation Planning and Inventory
A02	Cultural Resource Management
A03	Visual Resource Inventory and Planning
A04	Visual Resource Improvement
A05	Recreation or VIS Site Construction and Rehabilitation (A10)
A06	Recreation Rehabilitation
A07	Visitor Information Services and Management (A08, A09)
A11	Developed Recreation; Management; Public (A13)
A14	Dispersed Recreation Management (A15)
A16	Recreation Management; Private and Other Public
A18	Cooperative Technical Assistance for Dispersed Recreation (S&P)
A21	Visual Resource Planning
B01	Wilderness Area – Management (B02, B03)
B02	Wilderness Area – Planning Management (B03)
C01	Fish and Wildlife Planning
C02	Habitat Improvement – T&E Animals
C03	Non-Structural Wildlife Habitat Improvement
C04	Habitat Improvement -- Wildlife
C05	Habitat Improvement -- Fish
C06	Habitat Maintenance -- Fish
C09	Wildlife Habitat Maintenance
C10	Wildlife and Fish Cooperation
C12	Wildlife and Fish Cooperation (NFS & S&PF)
D01	Range Resource Planning
D02	Range Resource Management (D01)
D03	Range Forage Improvement (D04)
D05	Range Structural Improvements
D06	Maintenance of Range Structural Improvements
D07	Wild Horse and Burro Management
E00	Timber Resource Management Planning and Inventories (E03)
E04	Reforestation
E05	Timber Stand Improvement
E06	Timber Sale Preparation
E07	Timber Harvest Administration
E09	Genetic Tree Improvement Program
F01	Water Resource Planning (F03, F04)
F02	Water Resource Inventory
F05	Water Resource Improvement
G01	Mineral Management (G02, G03, G04, G05, G06, G07, G08, G10)
G09	Mined Area Reclamation

# Appendix

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## Activity Code Index (continued)

Primary Code	Code Description
H02	Youth Conservation Corps Program (H03, H07)
J01	Special Use Management (Non-Recreation)
J02	Right-Of-Way Grants for Roads and Trails
J04	Withdrawals, Modifications and Revocations
J05	Land Status Maintenance
J06	Property Boundary Location and Maintenance (J07)
J10	Encroachment
J11	Land Ownership Adjustment Management (J12, J13, J15)
J14	Land Exchange-Equalization
J18	Rights-Of-Way Acquisition (J02)
J29	Wild and Scenic Rivers Study (S&P)
K01	Soil Resource Inventory
K03	Soil Resource Management (K04)
K04	Soil Monitoring
K05	Soil Resource Improvement
K06	Soil Resource Improvement Maintenance
L04	Road Construction and Reconstruction (L01 through L18 and L29)
L19	Road Maintenance and Management
L20	Trail Inventory and Planning
L21	Trail Construction and Reconstruction
L24	FA&O Construction/Reconstruction
L25	Building and Facility Maintenance
P01	Fire Management Planning and Analysis
P02	Fire Prevention
P03	Fire Detection
P04	Primary (Initial) Attack Forces
P05	Secondary Attack Forces
P06	Fire Reinforcements
P07	Forest Fire Support and Facilitating Services
P08	Initial Attack Fire Suppression Action
P09	Escaped Fire Suppression
P10	Fuel Management Inventory
P11	Treatment of Fuels (P12, P13, P14)
P15	Vegetation Treated by Burning
P16	Air Resource Management
P24	Law Enforcement (P25)
P34	Integrated Pest Management
P35	Insect and Disease Suppression

# Appendix C

## Decision Unit Index

<u>Element</u>	<u>DU</u>	<u>Description</u>
A. Recreation	1	Dispersed recreation operation, administration, and maintenance.
	2	Visual resource inventory and planning.
	3	Cultural resource management.
	4	Non-wilderness trail construction or reconstruction.
	5	Developed recreation site operation, administration, and maintenance.
	6	Recreation site construction.
B. Wilderness	8	Wilderness management, including trail maintenance.
	9	Wilderness trail construction or reconstruction.
C. Wildlife and Fish	10	Wildlife and fish plans and management.
	11	Habitat maintenance.
	12	Threatened and Endangered habitat improvement.
	13	Fish habitat improvement.
	14	Game habitat improvement.
	61	Wildlife K-V.
D. Range	16	Range management operation, maintenance, and protection.
	17/18	Range improvement.
E. Timber	19/20/21	Timber sale administration and related fuel treatment.
	22-25/29	Reforestation.
	27	Genetic tree improvement.
	28-31/60	Timber stand improvement.
	32	Timber management and plans.
F. Water	33/63	Water resource improvements.
	34	Water resource operations, maintenance, and protection.
G. Minerals and Geology	35	Geologic and mineral resource planning.
	36	Management of mining activities.
	37	Mined area reclamation.
H. Human and Community Development	38	All human resource programs.
J. Lands	39	Land classification.
	40	Land management planning.
	41	Special use management (non-recreation).
	42	Lands administration.
	43	Landline location.
	44	Rights-of-way.
	65	Land Management Plan monitoring.
K. Soil	45/62	Soil resource improvements.
	46	Soils management operation, maintenance, and protection.

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## Decision Unit Index (continued)

<u>Element</u>	<u>DU</u>	<u>Description</u>
L. Facilities	48	Road maintenance for arterial and collector roads.
	49	Trail construction/reconstruction.
	50	Trail system management.
	51	Road construction.
	52	Fire, administration, and operation (FAO) facility construction.
	53	FAO facility maintenance.
	54	Dam administration and management.
P. Protection	56	Fire, aviation, air quality management, and fuel management planning.
	57/64	Fuel treatment and maintenance.
	58	Cooperative search, rescue, and law enforcement.
T. General Administration	55	General administration.

## Appendix D

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### Description of Range Resource Management Levels

Level Identifier	Description
A	Management excludes livestock grazing to protect other values or eliminate conflicts with other users.
B	Management controls livestock numbers so that livestock use is within present grazing capacity. Improvements are minimal and constructed only to the extent needed to protect and maintain the range resource in the presence of grazing.
C	Management seeks full utilization of forage allocated to livestock. Cost effective management systems and techniques, including fencing and water development, are designed and applied to obtain relatively uniform livestock distribution and use of forage, and to maintain plant vigor.
D	Management seeks to optimize production and utilization of forage allocated for livestock use consistent with maintaining the environment and providing the multiple use of the range. From all existing range and livestock management technology, practices may be selected and used to develop cost effective methods for achieving improved forage supplies and uniform livestock distribution and forage use. Cultural practices such as brush control, type conversion, fertilization, site preparation and seeding of improved forage species may be used to improve quality and quantity of forage. Cultural practices may be combined with fencing and water developments to implement complex grazing systems and management methods.

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# Appendix E

## Recreation Opportunity Class (ROS) Characterization

ROS Class	Characterization
Primitive (P)	Area is characterized by essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and control. Motorized use within the area is not permitted.
Semi-Primitive Non-Motorized (SP)	Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restriction may be present, but are subtle. Motorized use is not permitted.
Semi-Primitive Motorized (SPM)	Area is characterized by a predominantly natural or natural-appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restriction may be present, but are subtle. Motorized use is permitted.
Roaded Natural (RN)	Area is characterized by predominantly natural-appearing environments with moderate evidences of sight and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities.
Rural (R)	Area is characterized by substantially modified natural environment. Resource modification and utilization practices are to enhance specific recreation activities and to maintain vegetative cover and soil. Sight and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate densities are provided for away from developed sites. Facilities for intensified motorized use and parking are available.
Urban (U)	Area is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Resource modification and utilization practices are to enhance specific recreational activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans, on-site, are predominant. Large numbers of users can be expected, both on-site and in nearby areas. Facilities for highly intensified motor use and parking are available, with forms of mass transit often available to carry people throughout the site.

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## Road and Trail Maintenance Levels

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### Road Maintenance Levels

#### Level 1

Rocks are not open to traffic; they are maintained to protect the road investment and its surrounding resources. These roads may be opened for a specific activity and returned to Level 1 upon completion of the activity.

#### Level 2

Roads are maintained open for limited passage for traffic. Roads in this maintenance level are primitive type facilities intended for high clearance vehicles. Passenger car traffic is not a consideration.

#### Level 3

Roads are maintained open and safe for travel by a prudent driver in a passenger car. However, user comfort and convenience is not considered a priority.

#### Level 4

Roads are maintained to provide a moderate degree of user comfort and convenience at moderate travel speeds.

#### Level 5

Roads are maintained to provide a high degree of user comfort and convenience. These roads are normally two-lane with aggregate or paved surfaces.

More specific information regarding each maintenance level is found in FSH 7709.15 and FSM 7700.

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### Trail Maintenance Levels

#### Level 1

Trails maintained for primitive experience level with custodial care only. No tread maintenance. Drainage is functional and not likely to fail. Trail sides not brushed but tread is kept passable. Small aides remain except for those with erosion potential. Structures maintained as needed.

#### Level 2

Trails maintained for near-primitive experience level. Tread maintained for public safety. Logs or similar rustic structure may be provided at stream crossings. Drainage same as Level 1. Signing at a minimum level commensurate with level of trail use.

#### Level 3

Trails maintained for intermediate experience level. Tread maintained for public safety and user convenience. Drainage same as Level 1. Trail sides brushed out at Handbook standards. Structures maintained to original design standards. Signing same as Level 2.

#### Level 4

Trails maintained at relatively high standards to provide for public safety and convenience. Tread relatively smooth, firm, and may require stabilization. Signing at high level, all other elements same Level 3. These trails are generally maintained for family or senior citizen use.

#### Level 5

Trails maintained for high use and experience levels, including special purposes such as VIS trails, bicycle trails, trails to major vista points, trails for the handicapped, etc. Basic care same as Level 4 but patching of paved tread may be needed annually. Trail sides maintained to meet high visual quality standards by brushing and clean up of debris beyond the trail limits. Vistas are maintained.

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# Appendix G

## Management Indicator Species

Management Indicator Species were selected to adequately monitor the effects of implementation of the Forest Plan on wildlife habitat and species diversity. The following is a listing of Management Indicator Species and what they are intended to monitor:

### Ponderosa Pine/Mixed Conifer Vegetative Types

Elk	General forest conditions
Turkey	Vertical diversity – general forest mix
Pygmy Nuthatch	Old growth Ponderosa Pine
Violet-Green Swallow	Cavity nesting habitat
Hairy Woodpecker	Snags
Goshawk	Vertical diversity
Abert's Squirrel	Successional stages of Ponderosa Pine

### Pinyon-Juniper (Woodland) Vegetative Type

Ash-throated Flycatcher	Ground cover
Gray Vireo	Tree density
Townsend's Solitaire	Juniper berry production
Plain Titmouse	General woodland conditions
Common Flicker	Snags
Rufous-sided Towhee	Successional stage of Pinyon-Juniper

### Chaparral Vegetative Type

Rufous-sided Towhee	Shrub density
Black-chinned Sparrow	Shrub diversity

### Desert-Grassland and Vegetative Type

Savannah Sparrow	Grass species diversity
Horned Lark	Vegetative aspect

### Desertscrub Vegetation Type

Black-throated Sparrow	Shrub diversity
Brown Towhee	Ground cover

### Riparian – Low Elevation (1500-3500 feet)

Bald Eagle	General riparian
Bell's Vireo	Well-developed understory
Summer Tanager	Tall mature trees
Hooded Oriole	Medium-sized trees

### Riparian – High Elevation (3000 feet plus)

Hairy Woodpecker	Snags, cavities
Arizona Gray Squirrel	General riparian
Warbling Vireo	Tall overstory
Western Wood Pewee	Medium overstory
Black Hawk	Riparian streamside

### Aquatic

Macro-invertebrates	Water quality and fisheries habitat
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# Appendix

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The comprehensive package of documentation regarding the rationale and process of selection of Management Indicator Species (MIS) is on file in the Forest Supervisor's Office in Phoenix, Arizona. A brief excerpt of that package is given here. Over 25 persons representing many agencies and groups including the Arizona Game and Fish Department have been involved in the selection process. Species considered for selection included:

1. Endangered and Threatened animal species identified on Federal and State lists.
2. Species with special habitat needs that may be influenced significantly by planned management activities.
3. Species commonly hunted, fished, or trapped.
4. Animal species selected because their population changes are believed to indicate effects of management activities on other species of a major biological community, or on water quality.

Other considerations in the selection process were: 1) How easy the species is to census, 2) what would the presence or absence of the species mean in terms of habitat condition, and 3) can relative amounts of one species to another be used to indicate habitat quality.

In addition to the selection of MIS, the planning regulations call for a description of the Desired Future Condition (DFC) of fish and wildlife habitats. It was assumed that MIS and DFC are conceptually related. DFC is the management objective, and MIS will indicate progress in terms of achieving the DFC.

Using the Brown and Lowe vegetation type map of the Forest, it has been determined that there are 13 major plant communities on the Tonto. Using the RUNWILD animal species listing by vegetation types, an initial pick of MIS was made for each plant community.

After several meetings, reviews, and discussions, the DFC was described, and candidate MIS were finalized. Using the DFC descriptions, the final selection of MIS was made.

Elk and turkey have been included on the MIS list. Other commonly hunted species (mule deer, white tail deer, javelina, quail, and dove) are not included. They are considered and eliminated because their habit needs are better represented by the requirements and population changes of other game and non- game species. These other species appearing on the MIS list provide better indication of effects of management activities on habitat conditions.

## Cultural Resources Objectives And Priorities

### INVENTORY

#### Objectives

1. Analyze the existing inventory coverage data for each management area to identify which portions of the area are completely surveyed, sample surveyed, or un-surveyed.
2. Conduct complete or sample surveys, as appropriate, for all un-surveyed portions of each management area according to the inventory priorities identified below.
3. Assess the existing cultural resource inventory to determine the adequacy of the site data it contains. Create a computerized inventory file and enter those sites for which adequate data are available or can be obtained. The initial computer file will follow USDA-Forest Service Southwestern Regional standards. Cross filling in a statewide inventory will be undertaken as time and funding permits.

#### Priorities

1. Project areas.
2. Areas currently experiencing high to moderate levels of use.
3. Areas subject to the future developed but for which no specific proposals have been formulated.
4. Areas known or predicted to contain a high density of cultural resources and/or National Register eligible properties. Such areas without adjacent inventory data or predicted to contain sites of types considered to be under-represented in the existing inventory will have a higher priority than those for which greater quantities of data are available.
5. Areas known or predicted to contain a low density of cultural resources and/or properties not eligible for the National Register.

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### EVALUATION AND NOMINATION

#### Objectives

1. Evaluate the existing inventory data for each management areas to identify known cultural resources eligible for inclusion in the National Register of Historic Places.
2. Evaluate cultural resources located by inventory activity in each management area to identify those resources eligible for inclusion in the National Register according to the evaluation priorities identified below.
3. For each management area, nominate to the National Register those cultural resources determined to be eligible according to the nomination priorities identified below.
4. Initiate action to develop a Forest cultural resource overview, in order to provide an analytical framework for evaluation and nomination, as well as for management, protection, scientific study, interpretation and enhancement. (Overview should be completed within three years.)

#### Evaluation Priorities

(From Forest Service Manual 2361.23.2 – FSM 9/80 R-3 SUPP 49)

1. Properties threatened by proposed land management activities.

# Appendix

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## Evaluation Priorities –(continued)

2. Priorities undergoing deterioration due to vandalism, public use, erosion, or other forces.
3. Properties of known significance, e.g. those recommended for evaluation in Forest cultural resource overviews.
4. Other cultural resources.

## Nomination Priorities

(From Forest Service Manual 2361.21 July 74, AMEND.62).

1. Archeological, historical, or other areas classified under [36 CFR 294.1 - suitable areas of National Forest land, other than wilderness or wild areas, that should be managed principally for recreation use].  
(Wilderness or wild areas are managed to protect and preserve wilderness character rather than being managed principally for recreation use.)
2. Other sites, areas and objects that have substantial significance in the history or the prehistory of the Nation or area.
3. Other historic and archeological areas.

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## MANAGEMENT AND PROTECTION

### Objectives

1. In each management area, manage all cultural resources so as to protect them from project impacts and other forms of disturbance until the appropriate inventory and evaluation processes have been completed. This involves administrative activities necessary to ensure adequate management and protection, such as administration of cultural resource permits, National Historic Preservation Act compliance documentation, and review of NEPA compliance documentation (Environmental Assessments, Findings of No Significant Impacts, Decision Notices and Environmental Impacts Statements).
2. Continue to manage and protect the area's cultural resources that are listed on the National Register of Historic Places and those determined eligible for nomination, as well as others as appropriate. Suitable management and protection measures will be developed on a case-by-case basis, but may include strategies such as avoidance, monitoring, data recovery, stabilization and enhancement.
3. Provide special protection to cultural resources being subjected to looting and/or vandalism. Appropriate protective measures should be developed in consultation with law enforcement personnel, but may include patrol, surveillance, signing, and/or fencing.

### Priorities

1. Cultural resources on, or eligible for, the National Register of Historic Places as well as those that are potentially eligible but have not been evaluated, especially if they are subject to or likely to be subject to any form of disturbance.
2. Cultural resources that have not been evaluated but are unlikely to be subject to disturbance.
3. Cultural resources evaluated and determined not to be eligible, providing that further management and protection are deemed appropriate.

# Appendix

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## SCIENTIFIC STUDY, PUBLIC INTERPRETATION AND ENHANCEMENT

### Objectives

1. For each management area, identify the cultural resources that have public interpretation and enhancement potential. Also identify those that have scientific study potential only. (NOTE: Resources with scientific value will not always have interpretation and enhancement potential.)
2. Integrate analysis of those resources with scientific study potential with the development and refinement of the Forest cultural resource overview and with any cultural resources research activities involving a management area or areas of the Forest as a whole.
3. For those resources with the public interpretation and enhancement potential, develop plans for these activities in consultation with the Forest Public Information Officer. Appropriate measures may include brochures, slide shows, on-site developments, interpretive signs and trails, exhibits in administrative sites, and education and VIS programs (as per Forest Service Manual 2361.27, FSM 9/80 R-3 SUPP 49).
4. Develop non-site specific Forest-wide interpretive and enhancement programs for public consumption, such as synopses of the Forest's prehistory and history, in written and slide-tape module formats, a cultural resource exhibit in the Supervisor's Office and others as deemed appropriate in consultation with the Forest Public Information Office.

### Priorities

1. Cultural resources on, or eligible for, the National Register Of Historic Places that have outstanding scientific significance and/or special interpretive and enhancement potential.
2. Other cultural resources on, or eligible for, the National Register.
3. Resources not necessarily eligible for the Register, but which have some scientific value.

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## WILDERNESS OPPORTUNITY SPECTRUM OBJECTIVE DESCRIPTIONS

Opportunities Classes represents a spectrum of wilderness experience opportunities within the complex. These classes describe areas within the complex having different resource and social objectives and also identify management actions that are acceptable within each class. Inherent in the definitions are different levels of resource and social conditions acceptable for each class in the spectrum.

Three components are used to describe opportunity classes: resource, social, and managerial settings. Each component has several elements that are used to describe differences between opportunity classes. These descriptions provide managers, researchers, and users with common definitions for terms used to describe areas within the complex.

The following are definitions of each class including descriptions of the objectives for the resource, social, and managerial settings. Also included is a table to allow the reader to compare differences between classes.

### I. OPPORTUNITY CLASS I

#### A. Resource Setting

Characterized by an unmodified natural environment. Ecological and natural processes are not measurably affected by the actions of users. Environmental impacts are minimal, restricted to temporary loss of vegetation where camping occurs and along some livestock travel routes, typically recover on an annual basis and are subtle in nature and generally not apparent to most visitors.

#### B. Social Setting

Provides an outstanding opportunity for isolation and solitude free from evidence of human activities and with very infrequent encounters with users. The user has outstanding opportunities to travel across country utilizing a maximum degree of outdoor skills, often in an environment that offers a very high degree of challenge, self-reliance and risk. Inter-party contacts will be very few while traveling and rare to non-existent at the campsite.

#### C. Managerial Setting

Management will strongly emphasize sustaining and enhancing the natural ecosystem. Direct onsite management of visitors will be seldom. Necessary rules and regulations will be communicated to visitors outside the area, such as at trailheads or boundary portals. Contact of visitors within this class by Forest personnel will be mostly reactive and by invitation, with discussion items limited to what visitors want to know. Formal and informal user education programs will be initiated to inform users about what to expect and how to use the area for optimum benefits to all. Formal regulations, orders and/or permits will be considered only when less restrictive regulations or programs have consistently failed to achieve desired goals and objectives. Infrequent patrols and monitoring of conditions by appropriate State and Federal agency personnel will be conducted only as necessary to achieve management objectives. All scientific and ecological monitoring actions will be scheduled to meet social setting criteria. Trails will not be constructed and maintenance will be conducted only to protect the resource. No trail signs will be present, and no facilities of any kind will be provided or permitted, including lookouts and radio transmitter stations.

## II. OPPORTUNITY CLASS II

### A. Resource Setting

Characterized by an essentially natural environment. Ecological and natural processes and conditions are minimally affected by the action of users. Environmental impacts are low and restricted to minor losses of vegetation where camping occurs and along most travel routes. Most impacts recover on an annual basis and will be apparent to only a low number of visitors.

### B. Social Setting

Provides a high opportunity for exploring and experiencing isolation from the sights and sounds of man with the probability for encountering other users being low. The user has good opportunity for experiencing independence, closeness to nature, tranquility, and self-reliance through the application of primitive recreation skills. These opportunities occur in an environment that offers a high degree of challenge and risk. Inter-party contacts will be low on the trail and fairly low at the campsite, with parties often camped in isolation.

### C. Managerial Setting

Management will emphasize sustaining and enhancing the natural ecosystem. Direct onsite management will involve minimum visitor contact during the normal season. Necessary rules and regulations will be communicated to visitors outside the area, such as at trailhead and boundary portals. Contacts of visitors by Forest personnel will be mostly reactive and by invitation. In addition to what the visitor wants to know, the opportunity will be seized to present other pertinent site-specific messages. Formal and informal user education programs will be initiated to inform users about what to expect and how to use the area for optimum benefits to all. Formal rules and regulations may be necessary to achieve desired goals and objectives. Signs will be permitted within the area and will provide only the minimum information necessary to protect the wilderness resource. Trails will normally be constructed, maintained and managed to accommodate light and infrequent travel. Routes will be maintained only for resource protection and minimal user safety. Modification of the natural environment would be minimal. The route should provide the user with an opportunity for testing skills and experiencing a sensation of physical exertion and feeling of accomplishment. Facilities will be provided, only in a few extreme cases, and those that are will be permitted only for resource protection and will use only native materials.

## III. OPPORTUNITY CLASS III

### A. Resource Setting

Characterized by an essentially unmodified natural environment where ecological and natural processes are in a few areas moderately affected by the action of the users. Environmental impacts are moderate, with most areas along the travel routes and near campsites showing moderate losses of vegetation. Impacts in some areas often persist from year to year and are apparent to a moderate number of visitors.

### B. Social Setting

Moderate opportunities for exploring and experiencing isolation from the sights and sounds of man, with the probability of encountering other users low to moderate. The user has moderate opportunities for experiencing independence, closeness to nature, tranquility and self-reliance through the application of primitive recreation skills. These opportunities occur in a natural environment that normally offers a moderate degree of challenge and risk. Contact with other visitors both on the trail and while camped will be moderately frequent.

### C. Managerial Setting

Management will emphasize sustaining and enhancing the natural ecosystem. Onsite management will involve routine visitor contact. Necessary rules and regulations will be communicated to visitors outside the area, such as at trailheads and boundary portals. Forest personnel initiate contact during routine duties. Information concerning protection of site-specific wilderness resources will be presented. Formal and informal user education programs will be initiated to inform users about what to expect and how to use the area for optimum benefits to all. Formal rules and regulation may be necessary to achieve management objectives and permits may be considered only when light-handed, less restricted measures have failed to achieve desired goals and objectives. Signs will be permitted within the area and will include the minimum number necessary to protect the wilderness resource, and for administration. Trails will normally be constructed, maintained, and managed to accommodate moderate use for the majority of the use season. The route will only modify natural conditions to the extent necessary to protect the environment and provide for moderately safe use by a user with limited experience and average physical ability. A moderate number of facilities will be provided or permitted, and only those necessary for the protection of the wilderness resource and the user. Natural materials will dominate. Dimensional and non-native materials may be used but must remain not evident to the average user.

IV. OPPORTUNITY CLASS IV

A. Resource Setting

Characterized by a predominantly unmodified natural environment where ecological and natural processes are in many locations substantially affected by the action of users. Environmental impacts are generally high in areas along major travel routes, along popular river corridors and lakeshores, and near major entry points. Impacts often persist from year to year and there may be moderate loss of vegetation and soil at some sites. Impacts are readily apparent to most visitors.

B. Social Setting

Moderate to low opportunities for exploring and experiencing isolation from the sights and sounds of man with the probability of encountering other area users moderate to high. The user has the opportunity for a high degree of interaction with the natural environment, often with low or moderate challenge and risk. Contact with other users will be relatively high much of the time, both on the trail and at campsites. Some parties will camp out of sight and sound of other parties, but this will not be common during the main use season.

C. Managerial Setting

Management will be oriented to sustaining and enhancing the natural ecosystem. There will be frequent opportunity for visitor contact with management personnel. Necessary rules and regulations will be communicated to visitors outside the area, such as the trailheads and boundary portals. Special efforts will be taken to contact visitors. Information concerning wilderness management, user conflicts, fire prevention, and other pertinent subjects will be presented. Formal and informal user education programs will be initiated to inform users about what to expect and how to use the area for optimum benefit to all. Formal rules and regulations may be necessary to achieve management objectives and permits may be considered only when light-handed, less restricted measures have failed to achieve desired goals and objectives. Signs within the wilderness will be placed to aid in distributing and dispersing use, and for resource protection purposes. Trails will normally be constructed, maintained, and managed to accommodate heavy traffic for the majority of the use season. The routes will blend into the natural features of the area. Facilities and improvements may be provided and permitted for resource protection, user safety, and limited user convenience. Facilities when constructed will emphasize the use of natural materials. Dimensional and non-native materials are acceptable but should harmonize with the natural environment.

**Table 1**  
**Summary of Component Objectives For Each Opportunity Class**

	<b>Opportunity Class I</b>	<b>Opportunity Class II</b>	<b>Opportunity Class III</b>	<b>Opportunity Class IV</b>
<b>Resource Setting</b> (General Description)	Unmodified natural environment	Unmodified natural environment	Unmodified natural environment	Predominantly unmodified natural environment
1) Ecological Conditions	Not measurably affected by the action of users	Minimally affected by the action of users	Moderately affected by the action of users	Many locations substantially affected by the action of users
2) Prevalence and Duration of Impact	Temporary loss of vegetation where camping occurs and along some travel routes. Typically recovers on an annual basis	Minor loss of vegetation where camping occurs and along most travel routes. Most impacts recover on an annual basis	Moderate loss of vegetation where camping occurs and along most travel routes. Impacts in some areas persist year to year	Moderate loss of vegetation and soil on major travel routes, campsites, and popular lakeshores. Impacts persist from year to year
3) Visibility of Impacts	Not apparent to most visitors	Apparent to only a low number of visitors	Apparent to a moderate number of visitors	Impacts are readily apparent to most visitors
<b>Social Setting</b> (General Description)	Outstanding opportunity for isolation and solitude	High opportunity for isolation and solitude	Moderate opportunity for isolation and solitude	Moderate to low opportunities for isolation and solitude
1) General Level of Encounters	Very Infrequent	Low	Moderate	Moderate-High
2) Degree of Challenge and Risk	Very High	High	Moderate	Moderate-Low
3) Inter-party Contacts While Traveling	Very Few	Low	Moderately Frequent	Relatively High
4) Inter-party Contacts at the Campsites	Non-existent	Fairly Low	Moderately Frequent	Common

**Table 1 (Continued)**  
**Summary of Component Objectives For Each Opportunity Class**

	<b>Opportunity Class I</b>	<b>Opportunity Class II</b>	<b>Opportunity Class III</b>	<b>Opportunity Class IV</b>
<b>Managerial Setting</b> (General Description)	Strongly emphasize sustaining and enhancing the natural ecosystem	Emphasize sustaining and enhancing the natural ecosystem	Emphasize sustaining and enhancing the natural ecosystem	Emphasize sustaining and enhancing the natural ecosystem
1) Contact with Management Personnel during Normal Use Season	Infrequent	Minimum	Routine	Frequent
2) Rules and Regulations, and Visitor Behavior	Will be communicated to visitors primarily outside of the wilderness in areas such as at trailheads and boundary portals		Where necessary, on-site enforcement and communication of rules and regulations will be conducted	
3) Formal and Informal User Education Programs	Will be initiated to inform users about what to expect and how to use the area for optimum benefit to all			
4) Formal Rules and Regulations	May be necessary to achieve management objectives and permits may be considered only when light-handed, less restricted measures have consistently failed to achieve desired goals and objectives.			
5) Presence and Extent of Signing	No trail signs present	Trail signs permitted but will provide minimum information necessary to protect the resource	Trail signs permitted and will include minimum number necessary to protect the resources and for administration	Signs will be placed to aid in distributing and dispersing use, and for resource protection
6) General Level of Trail Construction and Maintenance	New trails will not be constructed and maintenance on existing trails will be conducted only to protect the resource	Trails managed to accommodate light and infrequent travel and maintained only for resource protection and minimal user safety	Trails managed to accommodate moderate use and maintained only for resource protection and moderate user safety	Trails managed to accommodate heavy traffic and maintained for resource protection, user safety, and limited user convenience
7) Presence of Facilities	None provided or permitted	Very few provided or permitted and only for resource protection	Moderate number provided or permitted and only for user and resource protection	May be provided or permitted for resource protection and user safety

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**Visual Quality Objective  
Class (VQO)  
Characterization**

<u>VQO Class</u>	<u>Characterization</u>
Retention (R)	A Visual Quality Objective that in general means man's activities are not evident to the casual forest visitor.
Partial Retention (PR)	A Visual Quality Objective that in general means man's activities may be evident but remain subordinate to the characteristic landscape.
Modification (M)	A Visual Quality Objective meaning man's activities may dominate the characteristic landscape but must, at the same time, utilize naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in the foreground or middle ground.
Maximum Modification (MM)	A Visual Quality Objective meaning man's activities may dominate the characteristic landscape but should appear as a natural occurrence when viewed as background.
Preservation (P)	A Visual Quality Objective that provides for ecological changes only.

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# APPENDIX K

## Implementation Schedules

**Table 2**

### Outputs, Activities, and Costs

Output/Activity	Average Annual Unit Of Measure	Periods				
		1	2	3	4	5
Recreation						
Developed	MRVD	1,539	1,544	1,558	1,599	1,643
Dispersed <sup>1/</sup>	MRVD	6,684	7,452	8,209	9,044	10,056
Wilderness	MRVD	376	427	480	528	576
Wildlife and Fish	MRVD	688	774	859	945	1,030
Permitted Use	MAUM	397	251	272	275	278
Grazing Capacity	MAUM	247	251	272	275	278
Timber Management <sup>2/</sup>	MMBF	7.9	13.8	16.5	16.8	16.7
Water Yield	MAcFt	356	375	394	394	394
<u>Total Budget <sup>3/</sup></u>	MM Dollars	8.7	10.8	10.8	10.8	10.8

<sup>1/</sup> Includes highway use.

<sup>2/</sup> Includes sawtimber and products.

<sup>3/</sup> 1980, 4th quarter dollars.

# APPENDIX K

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**Table 3 Existing Recreation Site Reconstruction/Rehabilitation**

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## First Period

### Lower Salt River

Coon Bluff\*  
Water Users\*  
Blue Point Bridge Complex\*  
Granite Reef Campground\*  
Traffic Control\*

### Other Areas

Oak Flat Campground\*  
Bartlett Toilets\*  
First Water Trailhead  
Pinal Mountain Campground  
Icehouse CCC Campground  
Jones Water Campground  
Seven Springs Campground\*

### Mogollon Rim Area

Ponderosa Campground  
Ponderosa Group Campground  
Christopher Creek Campground  
Valentine Ridge Campground+  
Pleasant Valley Vista  
Rose Creek Campground  
Tonto Creek Campground

### Saguaro/Canyon Lakes

Acacia Picnic\*  
Palo Verde Picnic\*  
Boulder Picnic\*  
Saguaro Del Norte Picnic\*  
Butcher Jones Picnic\*  
Bagley Flat Campground\*+  
Tortilla Flat Campground

## Second Period

### Lower Salt River

Tubers Landing\*\*

### Other Areas

Pinal/Pioneer Pass  
Riverside\*  
CCC Campground\*  
Cave Creek Group Site\*  
Upper Tonto Creek Campground

### Mogollon Rim Area

East Verde Crossing\*  
Second Crossing Picnic\*  
Cold Springs  
Third Crossing Picnic\*  
Tonto Creek Campground\*

### Saguaro/Canyon Lakes

The Point

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\* Indicates that a portion of the site may be within a floodplain as defined by Executive Order #11988.

+ Moved to First Period.

# Moved to Second Period.

# APPENDIX K

**Table 4 Schedule for Recreation Site Construction**

All sites listed in Periods 1-4 will undergo further analysis prior to project implementation.

**First Period**

Site	Persons at One Time	Acres	Ranger District
Sheep Bridge	-	-	Cave Creek
Sheep Bridge Campground	50*	5	Cave Creek
Sheep Bridge Trailhead	50*	5	Cave Creek
Needle Rock Campground	250*	28	Cave Creek
Skull Mesa Trailhead	20	3	Cave Creek
Bartlett Lake			
Jojoba Boating Site	1,000*	10	Cave Creek
Bartlett Flat Boating Site	750	8	Cave Creek
Bartlett Lake Marina	-*	60	Cave Creek
S.B. Cove Picnic Site	500*	5	Cave Creek
Rattlesnake Cove Picnic Site	500*	5	Cave Creek
Horseshoe Boating Site	2,000*	20	Cave Creek
Lime Creek Picnic Area	125	10	Cave Creek
Horseshoe Dam Vista	50	1	Cave Creek
Fisherman Point River Access	150	1	Cave Creek
Cottonwood Fishing Area	100	10	Cave Creek
Cliff River Access Points	100	1	Cave Creek
Sears Kay Cultural VIS	15	1	Cave Creek
Cave Creek Trailhead	50	5	Cave Creek
Arizona Trail Trailheads (3)	150	15	Globe, Mesa
Timber Camp Campground-Group Site	500	50	Globe
Lower Kellner Group Site	150	3	Globe
Foxtail Group Site	650*	25	Mesa
Poles Point Parking	2,500*	15	Mesa
North Bank Parking	500*	50	Mesa
Key Hole Picnic Site	100*	5	Mesa
Cross F Trailhead	50	5	Mesa
Cottonwood Trailhead	50	5	Mesa
Tortilla Trailhead	50	5	Mesa
East Control Road Campground**	500	5	Payson
Zane Gray Campground	200	75	Payson
Houston Mesa Campground	300	75	Payson
Horton Creek Picnic Site	150*	5	Payson
Fossil Springs Trailhead	50	5	Payson
Washington Park Trailhead	50	5	Payson
Two-Sixty Trailhead	30	2	Payson
See Canyon Trailhead	30	2	Payson
Box Canyon Trailhead	18	2	Payson
Geronimo Trailhead	18	2	Payson
Reynolds Creek Group Site**	100	5	Pleasant Valley
Canyon Creek Campground	300*	12	Pleasant Valley
Haigler Canyon Campground	100*	5	Pleasant Valley
Alderwood Campground	100*	5	Pleasant Valley
Windy Flat Boating Site	1,100*	40	Tonto Basin
Burnt Corral Campground	700*	52	Tonto Basin
Apache Lake VIS	10	1	Tonto Basin
Apache Lake Boat Camps	150*	9	Tonto Basin
Lone Pine Trailhead	150	15	Tonto Basin
Barnhart Trailhead	50	5	Tonto Basin

\* Indicates that a portion of the site may be within a floodplain as defined by Executive Order #11988.

\*\* Campground will be located so not to conflict with riparian and wildlife resources.

# APPENDIX K

**Table 4 Schedule for Recreation Site Construction (continued)**

**Second Period**

Site	Persons at One Time	Acres	Ranger District
Bartlett Lake Boat Camps	250*	10	Cave Creek
Horseshoe Picnic Area	250*	12	Cave Creek
Mesquite Campground	500*	45	Cave Creek
Cave Creek Trailhead	50	5	Cave Creek
Pinal Mountain Trailheads (4)	200	20	Globe
Gleason Flat River Access Point **	50*	5	Globe
Arnett Creek Picnic Site	100	5	Globe
Stewart Mountainb Group Site	100	5	Mesa
Saguaro Lake VIS	50	1	Mesa
Bushnell Tanks Group Site	100	5	Mesa
Hell's Gate Trailhead **	30	3	Payson
Payson VIS	50	1	Payson
Pearly Gate Trailhead	15	1	Payson
Sharp Creek Campground **	500	50	Payson
Doll Baby Trailhead	15	1	Payson
Bear Flat Trailhead **	30	3	Payson
Crackerjack Campground	500	50	Payson
Airplane Flat Campground	250	25	Pleasant Valley
Colcord Campground	250	25	Pleasant Valley
Valentine Canyon Campground	250	25	Pleasant Valley
Workman Campground **	100*	5	Pleasant Valley
Reynolds Creek Trailhead	50	5	Pleasant Valley
Sawmill Flats Campground	50	5	Pleasant Valley
Naeglin Recreation Site **	50	5	Pleasant Valley
Upper Burnt Corral Campground	500*	5	Tonto Basin
Mt. Peeley Trailhead	50	5	Tonto Basin

**Third Period**

Site	Persons at One Time	Acres	Ranger District
Juniper Horse Camp	100	10	Cave Creek
Pioneer Pass Campground	100	60	Globe
Lower Salt VIS/Control	-	4	Mesa
Sunflower Campground	250*	50	Mesa
Pine Campground	500	50	Payson
Verde Glen Campground	500	50	Payson
Flying H Trailhead	50	5	Pleasant Valley
Gordon Canyon Campground **	100	20	Pleasant Valley
Coon Creek Campground **	50	2	Tonto Basin
Cherry Creek Campground	50	2	Tonto Basin

\* Indicates that a portion of the site may be within a floodplain as defined by Executive Order #11988.

\*\* Campground will be located so not to conflict with riparian and wildlife resources.

# APPENDIX K

**Table 4 Schedule for Recreation Site Construction (continued)**

**Fourth Period**

Site	Persons at One Time	Acres	Ranger District
Oak Flat Group Site	50	30	Globe
Miles Ranch Trailhead	50	5	Globe
Goldfield Parking	300*	10	Mesa
Alder Creek Trailhead	30	2	Payson
Mineral Spring Trailhead	15	1	Payson
Crabtree Campground	130*	100	Tonto Basin
Pigeon Springs Trailhead	50	5	Tonto Basin

Central Arizona Project - Roosevelt Lake. These sites are taken from the Bureau of Reclamation Environmental Impact Statement on the Central Arizona Project. These sites will meet the developed site capacity for Roosevelt Lake. Any changes to sites analyzed in the EIS will be handled in environmental documents prepared by the Bureau of Reclamation.

Site	Persons at One Time	Acres
Indian Point Campground Boating Site (Site 1)	2,875*	70
Cholla Campground and Boating Site (Site 2)	3,000*	70
Vineyard Canyon Picnic Site (Site 3)	250*	20
Visitor's Center/Carson's Landing Picnic Site (Site 6)	750	40
New Resourt (Site 6a)	2,215*	80
Porter Springs Campground and Boating Site (Site 7)	4,875*	160
Grapevine Group Campground and Boating Site (Site 8)	2,375*	60
Schoolhouse Campground and Boating Site (Site 9)	2,625	9
Cottonwood Campground and Boating site (Site 10)	1,750*	9
Salt River And Diversion Dam Access Sites (Site 12)	2,500*	10
Boat Access Camping (Site 4)	125*	10

\* Indicates that a portion of the site may be within a floodplain as defined by Executive Order #11988.

\*\* Campground will be located so not to conflict with riparian and wildlife resources.

# APPENDIX K

**Table 5 Trail Construction/Reconstruction Schedule**

1. Multi-purpose desert trails, approximately 15 miles adjacent to metropolitan area. Project to be accomplished in first period.
2. Multi-purpose trails approximately 10 miles over the rest of Forest. Projects to be accomplished in First and Second periods.
3. Additional trails to be constructed in First and Second periods. (Those with asterisks are First Period.)

Ranger District	Trail Name	Miles
Cave Creek	Cottonwood Trail #247, Reconstruction*	9.50
	Skull Mesa Trail #248, Reconstruction*	4.50
	Quien Sabe Trail #250, Reconstruction*	2.60
	Skunk Creek Trail #246, Reconstruction*	4.80
Globe	Pineline Trail, Construction*	0.50
	Toll Road Loop Trail - Construction	2.00
	Middle Trail, Construction*	0.25
	Sixshooter Trail, Construction*	0.25
	Ferndell Trail, Construction*	0.50
Mesa	Soldier Camp Trail #83, Reconstruction*	1.00
	Soldier Camp Trail #83, Reconstruction (Phase II)	2.00
	Front Range Trail, Construction (Phase II)*	1.50
	Front Range Trail, Construction (Phase III)*	3.00
	Front Range Trail, Construction (Phase IV)	6.50
	Cross F Loop Trail, Construction	2.00
	Lower Salt Multi-Purpose Trail Construction	12.00
	Coon Bluff Vista Trail - Construction*	0.50
Payson	Geronimo Bypass (Highline Trail #31), Construction	1.50
	Ponderosa Campground Loop Trail, Construction*	2.00
	Railroad Tunnel Trail, Construction*	0.50
	Military Sink Hole Trail, Construction*	1.50
	Oak Spring #16, Reconstruction	4.00
	Fossil Spring Trail #18, Reconstruction*	2.00
	Big Ridge Trail #177, Reconstruction	1.50
Pleasant Valley	Moody Point Trail #140, Reconstruction	0.50
	Coon Creek Trail #254, Reconstruction*	4.40
	Hell's Hole Trail #284, Reconstruction*	1.50
	Canyon Creek Trail, Construction	0.50
	Canyon Point Trail, Construction	1.50
Tonto Basin	Brown's Trail #133, Reconstruction	2.00
	Four Peaks Trail #130, Reconstruction*	2.50
	Oak Flat Trail #123, Reconstruction	1.00
	Amethyst Trail #253, Construction	2.50
	Deer Creek Trail #45, Reconstruction	3.50

\* See paragraph 3 above.

# APPENDIX K

**Table 6 Administrative Facilities Construction Schedule - Period 1**

Fiscal Year	Ranger District	Project
1988	Pleasant Valley	Trailer Pads
1989	Tonto Basin	Potable Water System
	Pleasant Valley	Office
	Pleasant Valley	Crew Quarters
1991	Pleasant Valley	Warehouse

**Land Line Location and Rights-of-Way - Period 1**

During Period 1, 266 miles of the existing land line location backlog will be eliminated. The remaining 580 miles of backlog will be scheduled for completion by the year 2000. Rights-of-way needs for Period 1 are approximately 14 miles. Land lines and rights-of-way programs must be coordinated.

**APPENDIX K Table 7**

**Standard Vegetation Treatment Table**

COMPOSITION (Forest Type*)	Aspen and Western Live Oak	Engelmann Spruce-Subalpine Fir, White Fir, Blue Spruce, Limber Pine, Rocky Mountain Juniper, Cottonwood-Willow, Interior Ponderosa Pine, Pinyon-Juniper, Arizona Cypress, and Mesquite							All Forest Types	Grassland, Meadow and Alpine
STRUCTURE	<b>Desired One-Aged, Single-Storied Stand</b> (One-age class comprises >=90% of total stand BA for most of the rotation. Age difference between oldest and youngest tree in a class is less than 20% of the rotation)				<b>Desired Two-Aged, Two-Storied Stand</b> (Two age classes each > 10% BA most of rotation)	<b>Desired Uneven-Aged, Multi-Storied Stand</b> (More than two age classes)			<b>Any Desired One-, Two-, or Multi-Storied Stand</b>	<b>Open</b>
FUNCTION	Coppice Regeneration Method (vegetative regeneration function)	Clearcutting Regeneration Method (no trees function for seed/shelter)	Seed Tree Regeneration Method (some trees function for seed only)	Shelterwood Regeneration Method (some trees function for seed/shelter)	Irregular Shelterwood Method (function for continuous tree cover)	Single-Tree Selection Regeneration Method (function for continuous tree cover)	Group-Selection Regeneration Method (group size <= 2 to 4 acres)	Irregular Group Shelterwood Regeneration Method	Intermediate Treatment Methods (tree cover between stand formation and regeneration)	No or Few Trees (maintain open)
VEGETATIVE MANAGEMENT PRACTICE	<u>Activity</u> Coppice Coppice W/Reserves	<u>Activity</u> <= 5% tree cover post harvest: Patch cut Strip cut Stand cut 6-10% tree cover post harvest: Patch cut W/Reserves Strip cut W/Reserves Stand cut W/Reserves	<u>Activity</u> Preparatory Seed 1-10% tree cover post harvest: Final Removal Final Removal W/Reserves	<u>Activity</u> Preparatory Seed Group Seed Strip Seed Removal Group Removal Strip Removal Final Removal Final Removal W/Reserves	<u>Activity</u> Preparatory Seed Removal Final Removal Final Removal W/Reserves <hr/> Coppice Regeneration Method Coppice W/Standards (understory must regenerate vegetatively, suckers/sprouts)	<u>Activity</u> Single-Tree/ (Individual Tree) Selection	<u>Activity</u> Group-Selection Group-Selection W/Reserves	<u>Activity</u> Seed Removal Final Removal Final Removal W/Reserves	<u>Activity</u> Improvement Liberation Thinning Commercial & Noncommercial Mortality Salvage Sanitation Salvage Cull Salvage Prescribed Fire Cleaning Weeding	<u>Activity</u> Meadow Maintenance & Creation

Amendment No. 22, 6/5/1996

# APPENDIX K

**Table 8 Timber Offering Schedule - Period 1 <sup>1/</sup>**

Year	Sale	Volume <sup>2/</sup> MMBF	Estimated Acreage	Estimated Miles of Road Construction	District
1986	Elk	1.0	1,200	1	Payson
	Colcord	4.5	2,600	11	Pleasant Valley
	Small ST Sales	0.5	500	-	Payson
1987	Valentine	5.0	2,880	21	Pleasant Valley
	Meads	1.0	1,000	4	Payson
1988	Canyon	5.0	3,000	11	Pleasant Valley
	Small ST Sales	0.5	500	-	Payson
1989	Cherry	4.0	5,500	24	Pleasant Valley
	Small ST Sales	1.0	1,000	-	Payson
1990	Red Lake	3.5	5,100	10	Pleasant Valley
	Woffidd	1.0	1,000	-	Payson
1991	Crouch	6.4	2,400	10	Pleasant Valley
	Small ST Sales	1.0	1,000	-	Payson
1992	Rose	8.9	4,000	15	Pleasant Valley
	Small ST Sales	0.5	500	-	Payson
1993	Salt	6.9	3,800	12	Pleasant Valley
	Small ST Sales	1.0	1,000	-	Payson
1994	Ridge	8.4	3,000	15	Pleasant Valley
	Small ST Sales	0.5	500	-	Payson
1995	Unknown	5.0	3,000	10	Pleasant Valley
	Small ST Sales	1.0	1,000		Payson
<b>TOTAL:</b>		<b>66.6</b>			

<sup>1/</sup> No cable units are included in the timber offering schedule for Period 1.

<sup>2/</sup> Additional volume needed to meet planned annual harvest levels is 12.4 MMBF, under contract in the Colorado Plateau pulpwood sale.

# APPENDIX K

**Table 9 Special Area Recommendations**

During the first period, initiate appropriate action to formally establish special areas including necessary agreements and permits with other agencies or organizations.

<b>Area and Kind 1/</b>	<b>Vegetative Types</b>	<b>Acres</b>
<b>Haufer Wash RNA (D)</b>	Semi-desert Grassland	680
Upper Forks Parker Cr RNA (P)	Woodland/Ponderosa Pine	1,288
Picket Post Mtn. RNA (P)	Desert/Chaparral	1,120
Desert Botanical Garden BA	Desert	1,200
Blue Point Cottonwoods BA	Desert Riparian	480
Sycamore Creek NA	Desert Riparian	60
Fossil Springs NA	Riparian	20
Superstition Museum	Desert	60
<b>Buckhorn Mountain RNA (D)</b>	Interior Chaparral	2,810
Bush Highway RNA (E)	Creosote, Palo Verde	488

1/ RNA (D) – Designated Research Natural Area; RNA (P) - Proposed Research Natural Area; BA - Botanical Area; NA - State Natural Area.

**Table 10 Desired Vegetative Condition - Fifth Period**

Table 10 Summarizes the desired management condition in terms of vegetative condition:

<b>Vegetative Type</b>	<b>Acres</b>	<b>Percent</b>
Grassland	316,894	11
Chaparral	1,155,722	40
Conifer	283,204	10
Riparian	35,022	1
Pinyon-Juniper	265,480	9
Mesquite	169,857	6
Desert	605,363	21
Non-vegetated	41,750	2
<b>TOTAL</b>	<b>2,873,292</b>	<b>100</b>

Vegetative treatments scheduled through the planning period in the pinyon-juniper, chaparral, and conifer vegetative types are transitory in nature with the objective to improve age class distribution and/or increase forage production. Additional benefits will be realized in wildlife habitat diversity and water yield.

# APPENDIX K

**Table 11 Predicted Population Trends of Management Indicator Species**

Table 11 displays the desired future condition of fish and wildlife in terms of predicted population trends for management indicator species.

The predicted changes are subjective figures assigned with the help of various cooperators who have expertise regarding these species and their habitats, and is intended to indicate a direction of response (increase or decrease) and magnitude (small = 10 percent and large = 800 percent). These figures are not given as absolutes based on hard data.

It is further noted that the responses represent predicted changes from the present into the future and does not take into account habitat changes and animal species responses that have occurred from past to present. For instance, the predicted 800 percent increase by the riparian obligate species is intended to indicate that riparian condition is degraded from its historic condition and the obligate animal species have decreased. Implementation of the Forest Plan is predicted to result in improved riparian condition and increased animal numbers. It does not mean that future condition will be equal to or better than it was historically. Also, three species are predicted to decline; however, these decreases will not affect viable populations.

<u>Species</u>	<u>Predicted Trend by 2030</u>
Elk	+ 67%
Turkey	+103%
Pygmy Nuthatch	+ 40%
Violet-Green Swallow	+ 20%
Western Bluebird	+ 10%
Hairy Woodpecker (in Pine/Mixed Conifer type)	+ 10%
Goshawk	+ 20%
Abert's Squirrel	+ 25%
Ash-Throated Flycatcher	+ 20%
Gray Vireo	- 50%
Townsend's Solitaire	- 50%
Plain Titmouse	- 50%
Common Flicker	+ 20%
Rufous-Sided Towhee	+ 15%
Black-Chinned Sparrow	+ 25%
Savannah Sparrow	+ 200%
Horned Lark	+ 200%
Black-Throated Sparrow	+ 200%
Brown Towhee	+ 200%
Bald Eagle	+ 100%
Bell's Vireo	+ 800%
Summer Tanager	+ 800%
Hooded Oriole	+ 800%
Hairy Woodpecker (in Riparian type)	+ 200%
Arizona Grey Squirrel	+ 400%
Warbling Vireo	+ 400%
Western Wood Pewee	+ 400%
Black Hawk	+ 400%

# APPENDIX K

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**Table 12 Cultural Resources Management 1/ - Period 5**

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<b><u>Opportunity</u></b>	
Inventory - Survey of Lands	
Total Acres	580,000
Percentage of Forest Total	20 %
Priority 1 Lands (Proposed)	100 %
Priority 2 Lands (Classified)	25 %
Priority 3 Lands (Classified)	15 %
Priority 4 Lands (Classified)	10 %
Inventory - Recording of Resources	
Total Number	11,900
Percentage of Projected Forest Total	20 %
Evaluation and Nomination	
Resources Evaluated for National Register Eligibility (Percentage of Total)	75 %
Resources Nominated to National Register of Historic Places	100
Management and Protection	
Percentage of National Register Eligible Resources Managed and Protected so as to Prevent Loss	100 %
Interpretation and Enhancement	
Resources With Some Form of Interpretation or Enhancement	50

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1/ Refer to Appendix H for detailed explanation of management activities listed in this table.

# APPENDIX L

**Table 15**

**The Minimum Criteria for the Structural Attributes Used to Determine Old Growth**

Forest Cover Type, Name	Pinyon-Juniper		Interior Ponderosa Pine		Aspen	Mixed-Species Group		Engelmann Spruce Subalpine Fir	
Forest Cover Type SAF Code	239		237		217	210, 211, 216, 219		206, 209	
Site Capability Potential Break Between Low and High Site			55 minor			50 Douglas-fir Edminster & Jump		50 Engelmann Spruce Alexander	
Site	Low	High	Low	High	All	Low	High	Low	High
1. Live Trees in Main Canopy									
Trees/Acre	12	30	20	20	20	12	16	20	30
DBH/DRC	9"	12"0	14"	18"	14"	18"	20"	10"	14"
Age (Years)	150	200	180	180	100	150	150	140*/170**	140*/170**
2. Variation in Tree Diameters (Yes or No)	ND	ND	ND	ND	No	ND	ND	ND	ND
3. Dead Trees									
Standing									
Trees/Acre	0.5*	1	1	1	ND	2.5	2.5	3	4
Size, DBH/DRC	9"	10"	14"	14"	10"	14"	16"	12"	16"
Height (Feet)	8'	10'	15'	25'	ND	20'	25'	20'	30'
Down									
Pieces/Acre	2	2**	2	2	ND	4	4	5	5
Size (Diameter)	9"	10"	12"	12"	ND	12"	12"	12"	12"
Length (Feet)	8'	10'	15'	15'	ND	16'	16'	16'	16'
4. Tree Decadence									
Trees/Acre	ND	ND	ND	ND	ND	ND	ND	ND	ND
5. Number of Tree Canopies	SS/MS	SS/MS	SS/MS	SS/MS	SS	SS/MS	SS/MS	SS/MS	SS/MS
6. Total BA, Square Feet/Acre	6	24	70	90	ND	80	100	120	140
7. Total Canopy Cover, Percent	20	35	40	50	50	50	60	60	70

Pinyon-Juniper: \* Dead limbs help make up dead material deficit.

\*\* Unless removed for firewood or fire burning activities.

Spruce-Fir: \* In mixed corkbark fir and Engelmann spruce stands where Engelmann spruce is less than 50% in the stand.

\*\* In mixed corkbark fir and Engelmann spruce stands where Engelmann spruce is 50% or more composition in the stand.

ND is not determined; SS is single-storied; and MC is Multi-storied.