ESTABLISHMENT RECORD

for

ROCKY GULCH RESEARCH NATURAL AREA

within

Coconino National Forest
Coconino County, Arizona

INTRODUCTION

Rocky Gulch Research Natural Area (RNA) is located in central Arizona on the Long Valley Ranger District of the Coconino National Forest, Coconino County, on reserved public domain National Forest System land. Rocky Gulch RNA encompasses 950 acres (384 hectares) of Watershed No. 13 in the former Beaver Creek Experimental Watershed. The area has a long history of silvicultural and watershed research.

Land Management Planning. The Southwest Regional Guide (USDA Forest Service, 1983) and Coconino National Forest Plan (USDA Forest Service, 1987a) include Rocky Gulch RNA. The environmental analysis conducted as part of the Forest planning process supports the recommendation to establish this Research Natural Area (USDA Forest Service, 1987b).

OBJECTIVES

Rocky Gulch RNA was recommended in the Southwest Region RNA Progress Report (USDA Forest Service, 1984) as an undisturbed land area representative of ponderosa pine *Pinus ponderosa* forest.

JUSTIFICATION STATEMENT FOR ESTABLISHMENT OF AREA

Rocky Gulch RNA was identified primarily as an example of a virgin ponderosa pine forest. This site represents one of the few remaining undisturbed ponderosa pine forest stands on the Coconino Plateau. The need to include this plant community was identified in the Southwestern Regional Guide (USDA Forest Service, 1983). An advantage of this area for research is the weir in Rocky Gulch and the history of past watershed and silvicultural research.

The objectives of establishing Rocky Gulch RNA are:

1. To provide examples of ponderosa pine habitat types for research and to maintain old growth processes.

2. To serve as a reference area for the study of fire succession, and long term ecological change.

3 To serve as a control area for silvicultural and watershed research.

PRINCIPAL DISTINGUISHING FEATURES

The predominant feature of Rocky Gulch RNA is a virgin stand of ponderosa pine. The presence of an operational weir on Rocky Gulch enhances the attractiveness of the site for research.

LOCATION

Access to the southern end of Rocky Gulch RNA can be made by traveling south from Flagstaff on Interstate Highway 17 (Figs. 1 and 2). Exit at the Stoneman Lake turnoff and proceed east 6.3 miles (10.1 kilometers) on Forest Road 213 to Forest Road 229. Turn south and proceed 2.8 miles (4.5 kilometers) to Forest Road 229F. This road dead ends in 2 miles (3.2 kilometers) at the weir in Rocky Gulch.

Rocky Gulch RNA can also be reached from Forest Highway 3. About 5 miles (8.0 kilometers) north of Happy Jack turn west on Forest Road 213 and travel 0.4 mile (0.6 kilometers) to Forest Road 230. Traveling 2.6 miles (4.2

kilometers) south will lead to within 0.25 miles (0.4 kilometers) of the eastern boundary, which can be reached by cross-country travel through open terrain.

Rocky Gulch RNA is located on the Long Valley Ranger District, Coconino National Forest, Coconino County, Arizona. The area is at 34° 45′ North latitude and 111° 29′ West longitude. It is within portions of Sections 14, 15, 22, 23, 26, and 27 of Township 16 North, Range 8 East, Gila and Salt Rivers Meridian, Arizona.

The boundaries of Rocky Gulch RNA are more particularly described as follows:

BEGINNING from a point on the south end of Jones Mountain which is located approximately 1,500 feet (457 meters) north and 100 feet (30 meters) west of the section corner of Sections 14, 15, 22, and 23, Township 16 North, Range 9 East;

THENCE, southwesterly along the top of a predominant ridge for approximately 5,500 feet (1,676 meters), to a point in the bottom of the saddle between Rocky Gulch and Jones Springs;

THENCE, continue southwesterly approximately 600 feet (183 meters), to the high point of a hill with a shown elevation of 7,261 feet (2,213 meters);

THENCE, southwesterly on a straight line for approximately 3,500 feet (1,067 meters), to a point of intersection with west boundary of Section 27 and the 7,000 foot (2,134 meter) contour line;

THENCE, southeasterly on a straight line that crosses Rocky Gulch and runs along a ridge for approximately 5,500 feet (1,676 meters) to the summit of a ridge with an approximate elevation of 7,100 feet (2,164 meters) and is located near the east boundary of Section 27;

THENCE, northeasterly for approximately 3,500 feet (1,067 meters), to a bench mark with a shown elevation of 7,296 feet (2,224 meters);

THENCE, northwesterly for approximately 1,000 feet (305 meters), to a high point with an approximate elevation of 7,260 feet (2,213 meters);

THENCE, north for approximately 3,400 feet (1,036 meters), along a south slope to the 7,400 foot (2,256 meter) contour;

THENCE, northwesterly for approximately 2,500 feet (762 meters), to a point on the Section line between Sections 14 and 23 which is approximately 900 feet (274 meters) east of the corner of Sections 14, 15, 22, and 23;

THENCE,northwesterly for approximately 1,700 feet (518 meters), along a ridge to the point of BEGINNING.

Lands herein described and topographic features referred to are based on 7.5′ United States Geological Survey Quadrangle Sheets HUTCH MOUNTAIN and HAPPY JACK, ARIZONA, dated 1965. Rocky Gulch RNA contains 950 acres (384 hectares), more or less. Elevations within the RNA are from 6,720 to 7,936 feet (2,048 to 2,419 meters) (Fig. 3).

AREA BY COVER TYPES

Information on cover types was obtained from the Southwestern RNA Progress Report (USDA Forest Service, 1984) and field reconnaissance. Surface area of habitat types is provided in Table 1.

Küchler. The cover type within Rocky Gulch RNA is Arizona Pine Forest, K-18 (Küchler, 1966).

Society of American Foresters. The cover type within Rocky Gulch RNA is Interior Ponderosa Pine, SAF-237 (Eyre, 1980).

Habitat Types or Plant Associations. *P. ponderosa*/Gambel Oak *Quercus gambelii*, and *P. ponderosa*/Arizona fescue *Festuca arizonica*, *Q. gambelii* phase

(USDA Forest Service, 1986a) are the habitat types that occur in Rocky Gulch RNA.

Table 1. Estimated areas of vegetation cover types in Rocky Gulch Research Natural Area.

USFS Type[1]	SAF Type[2]	Küchler Type[3]	Surface Area Acres (Hectares)
Ponderosa pine/ Gambel oak	SAF-237	K-18	950 (384)
Ponderosa pine/ Arizona fescue	None	None	
Total			950 (384)

[1]USDA Forest Service, 1986a
[2]Eyre, 1980
[3]Küchler, 1966

PHYSICAL AND CLIMATIC CONDITION

Rocky Gulch RNA includes the headwaters of Rocky Gulch, an ephemeral drainage that heads on the southern slopes of Jones Mountain, a prominent butte-like exposure at the north end of the RNA. Slopes are moderate with a predominantly southern or western exposure. In the eastern portions of Rocky Gulch RNA slopes are considerably more gentle. Elevations range from 6,720 feet (2,048 meters) at the weir to 7,936 feet (2,419 meters) at the northernmost point near the top of Jones Mountain.

Mean annual temperature at the site is 41° F (5° C) (USDA Forest Service, 1986b). July temperatures average 62° F (17° C) while average monthly temperatures in January are 24° F (4°C). Frost free period is 100 days. Average annual precipitation is 22 inches (56 centimeters) with 45 percent falling during May to October. Snowfall averages 47 inches (119 centimeters) annually.

DESCRIPTION OF VALUES

Flora. The entire site is relatively uniform in vegetation cover that is characteristic of the ponderosa pine forests found on the Coconino Plateau (Pase and Brown, 1982). Ponderosa pine is the predominant tree species throughout the site (Importance Value = 252.8) with Gambel oak (Importance Value = 36.0) and alligator juniper (Importance Value = 11.2) of secondary importance (Szaro and Balda, 1979b). On the steeper side slopes that adjoin Rocky Gulch, the *P. ponderosa/Q. gambelli* habitat type occurs but is replaced to the east, where slope angle becomes more moderate, by the *Q. gambelli* phase of the *P. ponderosa/F. arizonica* habitat type.

A plant list for the area has not been assembled; no threatened or endangered plants are known to occur there.

Fauna. The animal list provided in Table 2 was derived from the RUN WILD III computer-stored data base for Montane Conifer Forest biome, Pine series, Ponderosa Pine association (Lehmkuhl and Patton, 1984). The breeding bird list was reproduced from Szaro and Balda (1979b). No threatened or endangered animals are known from the area.

Table 2. Abbreviated animal list for Rocky Gulch RNA.

Common Name	Scientific Name
BIRDS	
Bluebird, western	*Sialia mexicana*
Chickadee, mountain	*Parus gambeli*
Dove, mourning	*Zenaida macroura*
Flicker, common	*Coaptes auratus cafer*
Flycatcher, western	*Empidonax difficilis*
Grosbeak, black-headed	*Pheucticus melanocephalus*
Hummingbird, broad-tailed	*Selasphorus platycercus*
Jay, Steller's	*Cyanocitta stelleri*
Junco, gray-headed	*Junco caniceps*
Nighthawk, common	*Chrordeiles minor*
Nuthatch, pygmy	*Sitta pygmaea*
Nuthatch, white-breasted	*Sitta carolinensis*
Sparrow, chipping	*Spizella passerina*
Tanager, western	*Piranga ludoviciana*
Thrush, hermit	*Cathrus guttatus*
Vireo, solitary	*Vireo solitarius*
Warbler, Grace's	*Dendroica graciae*
Warbler, red-faced	*Cardellina rubrifrons*
Warbler, yellow-rumped	*Dendroica coronata auduboni*
Woodpecker, hairy	*Picoides villosus*
MAMMALS	
Badger	*Taxidea taxus*
Bat, Allen's big-eared	*Idionycteris phyllotis*
Bat, big brown	*Eptesicus fuscus*
Bat, big free-tailed	*Tadaria macrotis*
Bat, Brazilian free-tailed	*Tadaria brasiliensis*
Bat, hoary	*Lasiurus cinereus*
Bat, pallid	*Antrozous pallidus*
Bat, red	*Lasiurus borealis*
Bat, silver-haired	*Lasionycteris noctivagans*
Bat, spotted	*Euderma maculatum*
Bat, Townsend's big-eared	*Plecotus townsendii*
Bear, black	*Ursus americanus*
Chipmunk, cliff	*Tamias doraslis*
Chipmunk, gray-collared	*Tamias cinereicollis*
Cottontail, eastern	*Sylvilagus floridanus*
Coyote	*Canis latrans*
Deer, mule	*Odocoileus hemionus*
Deer, white-tailed	*Odocoileus virginianus*
Elk	*Cervus elaphus*
Gopher, Botta's pocket	*Thomomys bottae*
Lion, mountain	*Felis concolor*
Mouse, brush	*Peromyscus boylii*
Mouse, deer	*Peromyscus maniculatus*
Mouse, pinyon	*Peromyscus truei*
Mouse, western harvest	*Reithrodontomys megalotis*
Myotis, California	*Myotis californica*
Myotis, fringed	*Myotis thysanodes*
Myotis, little brown	*Myotis lucifugus*
Myotis, long-eared	*Myotis evotis*
Myotis, long-legged	*Myotis volvans*
Myotis, small-footed	*Myotis leibii*
Myotis, Yuma	*Myotis yumanensis*
Porcupine	*Erethizon dorsatum*
Raccoon	*Procyon lotor*
Ringtail	*Bassariscus astutus*

Shrew, Merriam's	*Sorex merriami*
Shrew, vagrant	*Sorex monticolus*
Skunk, striped	*Mephitis mephitis*
Squirrel, Abert's	*Sciurus aberti*
Squirrel, Arizona gray	*Sciurus arizonensis*
Squirrel, golden-mantled ground	*Spermophilus lateralis*
Squirrel, red	*Tamiascirus hudsonicus*
Squirrel, rock	*Spermophilus variegatus*
Vole, Mexican	*Microtus mexicanus*
Weasel, long-tailed	*Mustela frenata*
Woodrat, Mexican	*Neotoma mexicanus*
Woodrat, Stephen's	*Neotoma stephensi*

AMPHIBIANS AND REPTILES

Lizard, side-blotched	*Uta stansburiana*

Geology. The entire area is underlain by basalt flows (Arizona Department of Transportation, 1975).

Soils. Soils are mainly classified as Mollic Eutroboralfs: fine and montmorillonitic (USDA Forest Service, 1986b). These are deep, moderately well drained soils with large amounts of expanding lattice type clay minerals.

Lands. Rocky Gulch RNA is wholly reserved National Forest System lands.

Cultural. There are no records on Coconino National Forest that indicate there has ever been a cultural resource survey conducted within the boundaries of Rocky Gulch RNA. We do not know if any historic or prehistoric sites exist. If any sites do exist it is quite likely they would be at Campbell Springs, Jones Springs, or within the Rocky Gulch drainage.

IMPACTS AND POSSIBLE CONFLICTS

Mineral Resources. There are no known mineral resources in this area. The parent soil material is a basalt of volcanic origin. The two major soils series that occur within Rocky Gulch RNA have been classified as Siesta-Sponseller, a deep and moderately deep loamy upland soil, and Stoneman, a moderately shallow, stony, clay upland soil.

Grazing. Rocky Gulch is included in the Turkey Mountain Allotment. Cattle pass through and graze Rocky Gulch RNA in the spring and fall on alternate years. Grazing use is low due to the short period of time the cows are in the area. The withdrawal of 950 to 1,000 acres (385 to 405 hectares) should not result in any permitted animal reductions. There probably will be need for fence construction around most of the area if cattle are to be totally excluded.

Timber. The area is virgin ponderosa pine. No logging has occurred in the area and it has been withdrawn from the commercial timber base of the Coconino National Forest. Some firewood has been harvested around the perimeter of the boundary, however the quantity is negligible.

Watershed Values. The entire RNA was formerly known as Watershed No. 13, and was the control area for watershed studies done in the ponderosa pine vegetation type on the Beaver Creek watershed. Rocky Gulch is an intermittent drainage that ultimately flows into the Verde River, a critical watershed that provides a large portion of the water needs for the greater Phoenix area.

Recreation Values. Due to a lack of roads and relative steepness the Rocky Gulch area has very little recreation potential. The hunting of elk, deer, turkey, bear, and other game species is the extent of recreation activities.

Wildlife and Plant Values. Establishment of Rocky Gulch RNA is unlikely to have any effect on wildlife habitat for most species of game and non-game animals. There are no known threatened or endangered plant or animal species inhabiting the Rocky Gulch area.

Special Management Area Values. The Rocky Gulch area has no characteristics that would qualify it for any special designations. The only thing remotely related is that the drainage does eventually reach the Verde River, which has a portion designated as a Wild and Scenic River.

Transportation Plans. Rocky Gulch RNA has limited access by primitive roads. One road, just south of Jones Mountain, passes through the northern most tip of the area. Another road near Jones Spring also enters the area for a short distance. A third road penetrates the area just north of Little Rocky Tank. Two roads also terminate at the boundary. One is at Campbell Springs and the other is at Section 26 Tank. These roads would be closed and Rocky Gulch RNA closed to off-road vehicles to protect the area.

Utility Corridor Plans. No existing or potential utility corridors are within the area immediately adjacent to this RNA.

MANAGEMENT PRESCRIPTION

Rocky Gulch RNA is recommended within Management Area 17 of the Coconino National Forest Plan (USDA Forest Service, 1987a). Management emphasis is to protect watershed condition and maintain natural ecological conditions so that Rocky Gulch RNA is available for research and education projects that do not disturb the area's natural condition. Use restrictions will be imposed as necessary to keep Rocky Gulch RNA in it's natural or unmodified condition. Rocky Gulch RNA is closed to off-road vehicles (Appendix 1).

Vegetation Management. There is no harvest of timber products, including firewood. Rocky Gulch RNA is assigned no grazing capacity and will be fenced as necessary to restrict cattle access. Prescribed fire, using planned ignitions, will be used as a management tool provided its use is compatible with the resources being managed. Suppression tactics will be used that minimize damage to the character of Rocky Gulch RNA. Fires in the area are allowed to burn undisturbed unless they threaten persons or property outside of the area, or they threaten the uniqueness of the area.

ADMINISTRATIVE RECORDS AND PROTECTION

Administration and protection of Rocky Gulch RNA will be the responsibility of the Coconino National Forest. The District Ranger, Long Valley Ranger District, Happy Jack, AZ, has direct responsibility.

The Director of the Rocky Mountain Forest and Range Experiment Station will be responsible for any studies or research conducted in the area, and requests to conduct research in the area should be referred to the Director. The Director will evaluate research proposals and coordinate all studies and research in the area with the District Ranger and RNA research coordinator. Records for the Rocky Gulch RNA will be maintained in the following offices of the USDA Forest Service:

Southwestern Region, Albuquerque, NM

Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO
Coconino National Forest, Flagstaff, AZ
Long Valley Ranger District, Happy Jack, AZ

ARCHIVING

Plant and animal specimens collected in the course of research conducted in the area will be properly preserved and maintained within university or federal agency herbaria and museums, as approved by the Rocky Mountain Station Director.

REFERENCES

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USDA Forest Service. 1986a. Forest and Woodland Habitat Types (Plant Associations) of southern New Mexico and central Arizona (north of the Mogollon Rim). 2nd edition. USDA Forest Service, Southwestern Region, Albuquerque, NM.

USDA Forest Service. 1986b. Terrestrial ecosystem handbook, Appendix B. USDA Forest Service, Southwestern Region, Albuquerque, NM.

USDA Forest Service. 1987a. Coconino National Forest Plan. USDA Forest Service, Southwestern Region, Albuquerque, NM.

USDA Forest Service. 1987b. Environmental Impact Statment for Coconino National Forest Plan. USDA Forest Service, Southwestern Region, Albuquerque, NM.

I certify the enclosed boundary description of Rocky Gulch Research Natural Area was prepared under my direct supervision.

Seal

Forest Land Surveyor

Date

APPENDIX 1

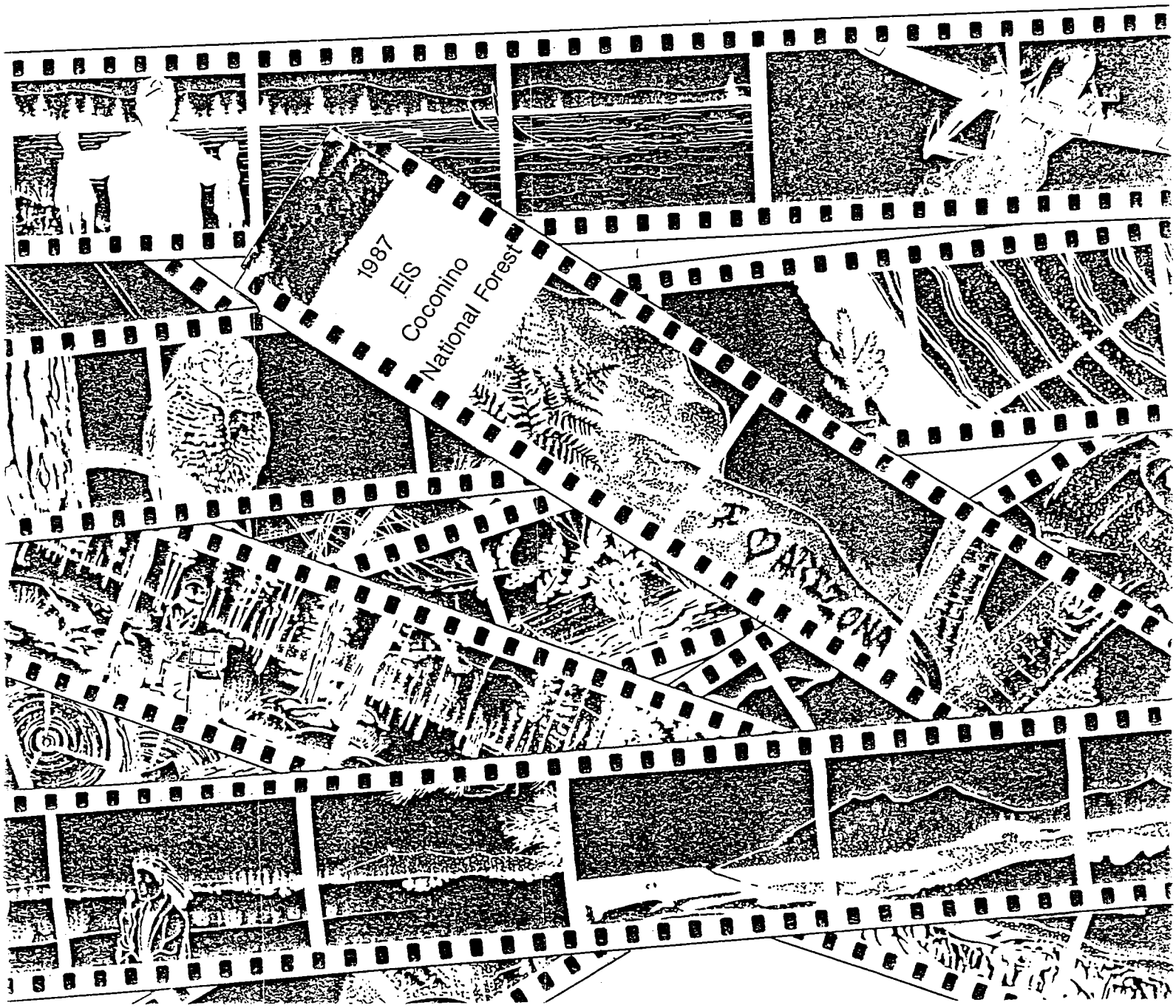
The following pages were reproduced from the
Coconino National Forest Plan

United States
Department of
Agriculture

Forest
Service

Southwestern
Region

Coconino National Forest Plan



MANAGEMENT AREA 17

Special Areas
Analysis Areas 48-51 Acres: 4,773

The Special Areas include one geological area, four botanical areas, one research natural area (RNA), Casner Canyon, and one proposed RNA, Rocky Gulch. There are two other RNA's, the San Francisco Peaks and West Fork of Oak Creek, included in the wildernesses that surround them, and G. A. Pearson RNA is included in the Fort Valley Experimental Forest. West Clear Creek proposed RNA is within the West Clear Creek Wilderness. By approval of this Forest Plan, the Red Mountain Geological Area, the Mogollon Rim Botanical Area, the Verde Valley Botanical Area, the Fern Mountain Botanical Area, and the Fossil Springs Botanical Area are officially designated (FSM 2372.2). The proposed Rocky Gulch and West Clear Creek RNA's require establishment reports and designation by the Chief.

- Casner Canyon RNA is located near Sedona and within Oak Creek Canyon. The area contains a pure stand of Arizona cypress along with some chaparral. This area was established in 1973 and contains 565 acres.

- Rocky Gulch proposed RNA is located in the Beaver Creek Watershed. The area contains 950 acres of old-growth ponderosa pine and was one of the control watersheds for research in the Beaver Creek Watershed.

- The 154-acre G. A. Pearson RNA was established in 1950 and is located just north of Flagstaff in a portion of Rocky Mountain Research Station Experimental Forest. The area represents a pure stand of old-growth ponderosa pine. Management decisions for the experimental forests are not made in this Forest Plan.

- The 1,223-acre Red Mountain Geological Area was first proposed in 1977 by the Forest but only had a withdrawal from mineral entry without formal designation. It contains a unique cinder cone within the San Francisco Peaks volcanic field.

- Mogollon Rim Botanical Area, a 360-acre white fir/bigtooth maple community, represents a unique vegetation type found in Arizona only at a few locations along the Mogollon Rim.

- Verde Valley Botanical Area, a 1,140-acre desert scrub community, represents a unique desert community which has been greatly reduced by human activities. Cowania subintegra, a T&E species, is located here.

- Fern Mountain Botanical Area, a 170-acre high elevation riparian scrub community dominated by Bebb's willow, represents a unique riparian community.

- Fossil Springs Botanical Area is a riparian deciduous forest associated with a large perennial spring and covers approximately 28 acres. It is immediately adjacent to the Fossil Springs Wilderness.

Management Emphasis

Emphasize and protect watershed condition and maintain natural ecological conditions on the Research Natural Areas (RNA's) so that they are available for research and education that does not disturb the areas' natural condition. Use restrictions are imposed as necessary to keep areas in their natural or unmodified condition. There is no harvest of timber products, including firewood. RNA's are closed to off-road driving.

The botanical areas and the geological area are managed to maintain, as nearly as possible, existing conditions and natural processes for public enjoyment, demonstration, and study. Interpretative and educational demonstration opportunities are emphasized and enhanced through selective facility development. Natural events are not rehabilitated. Off-road driving is prohibited.

Highlights include:

- Prepare establishment reports for the Rocky Gulch and West Clear Creek proposed Research Natural Areas.
- Prepare implementation schedules for the botanical areas and the geological area.
- Include management that provides for later interpretation.
- Manage for VQO's of Preservation in the research natural areas and Retention or Partial Retention in the geological and botanical areas.

Timber Land Use Classes:

Nonforest	1,432 acres
Forested land withdrawn	
Ponderosa Pine/Mixed Conifer	1,629 acres
Pinyon-juniper	1,712 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	4,773 acres

Program Components	Activities	Standards and Guidelines
		Recreation Planning and Inventory
A2 Recreation	A01, A02	Prepare an implementation schedule for the Red Mountain Geological Area and post the boundaries for it in the first decade.
		Prepare implementation schedules and post boundaries for Mogollon Rim, Verde Valley, Fern Mountain, and Fossil Springs botanical areas during the first decade.
		Eliminate mention of RNA's in news stories and general informational materials.
		Prepare establishment reports for the Rocky Gulch and West Clear Creek proposed RNA's during the first decade. In the interim, manage them to preserve their suitability for designation.
		As the Arizona Natural Areas Council recommends RNA's and botanical areas for inclusion in the State Natural Areas Program, the Forest will review the recommendations and may support the recommendations and develop VIS programs as needed.
		Dispersed Recreation--Standard Service Level
	A08	As needed, assess carrying capacity in special areas and limit visitors to meet carrying capacity.
		Prohibit off-road driving.
		Range Resources Planning and Inventory
D2 Range	D01, D02	RNA's are assigned no grazing capacity.
		There are 93 acres in the Red Mountain Geological Area open to grazing that are managed at the C level.
		RNA's and botanical areas are managed to protect and maintain their uniqueness and ecological condition.
		AMP's will have provisions to protect the uniqueness and/or ecological condition of the special areas. Approved AMP's are revised and if necessary amended by 1992.
		Timber Resource Management Planning and Inventory
E8 Timber	E06	Timber harvest and firewood cutting is prohibited.

Program Components	Activities	Standards and Guidelines
		Minerals
G1, G2 Minerals	G01	Seek withdrawal of RNA's and the other special areas from locatable mineral entry in the first decade.
		Lands
J3 LMP/Special-Uses/Lands	J01	Do not allow special-use authorizations that would or could adversely affect or change the character of the areas.
		Road Maintenance and Management
L2 Transportation	L19, F04	Manage roads adjacent to botanical areas and the Red Mountain Geological Area to prevent vehicular intrusion. Block and obliterate existing roads entering the area in the first decade.
		Fire Management Planning and Inventory
P2 Protection	P01	Use prescribed fire with planned ignitions as a management tool provided its use is compatible with the management of the specific area. Suppression tactics minimize damage to the the character of RNA's and all other special areas. Manage each special area as the adjacent lands until implementation schedules are developed. Implementation schedules will recognize each area's unique management objectives and the sensitivity of each area to different fire suppression techniques.

I certify the enclosed boundary description of Rocky Gulch Research Natural Area was prepared under my direct supervision.

Seal

_____ _____

Forest Land Surveyor Date

Decision Notice
Finding of No Significant Impact

Designation Order
for
Rocky Gulch Research Natural Area
Coconino National Forest
Long Valley Ranger District
Coconino County, Arizona

By virtue of the authority vested in me by the Secretary of Agriculture under regulations at 7 CFR 2.42, 36 CFR 251.23, and 36 CFR Part 219, I hereby establish the Rocky Gulch Research Natural Area (RNA). It shall be comprised of 950acres (384 hectares) of lands in Coconino County, Arizona, on the Long Valley Ranger District of the Coconino National Forest, as described in the section of the Establishment Record entitled "Location".

The Regional Forester recommended the establishment of this RNA in the Record of Decision for the Coconino National Forest Land and Resource Management Plan (Forest Plan) in 1987. That recommendation was the result of an analysis of the factors listed in 36 CFR 219.25 and Forest Service Manual 4063.41. Results of the Regional Forester's analysis are documented in the Forest Plan and Final Environmental Impact Statement, which are available to the public.

The Regional Forester has reexamined the Rocky Gulch area to ensure the environmental effects of establishing the area as an RNA have not changed since 1987. This analysis is documented in the attached environmental assessment. Based on the analysis in the environmental assessment, it is my decision to adopt Alternative A, to establish Rocky Gulch as an RNA. Alternative A is selected because it provides long-term protection and recognition of ponderosa pine forest type. Rocky Gulch RNA will be managed in compliance with all relevant laws, regulation, and Forest Service Manual direction regarding RNA's and in accordance with the management direction identified in the Forest Plan.

The alternative considered was Alternative B, the "No Action" alternative, which would continue management of Rocky Gulch as a "proposed" RNA. Alternative B was not selected because it would only provide short-term protection of the Rocky Gulch area. Alternative B is consistent with the Forest Plan. Although the proposed action (Alternative A) is consistent with the management direction, it is not consistent with the land allocation for the Rocky Gulch area in the Forest Plan. The Coconino Forest Plan is hereby amended to change the allocation of the Rocky Gulch area from "Proposed" to Established RNA. This is a non-significant amendment of the Forest Plan (36 CFR 219.10(f).

Legal notice of this decision will appear in the Federal Register. The Forest Supervisor of the Coconino National Forest shall notify the public of this decision and mail a copy of the Decision Notice and Designation Order to all persons on the Coconino National Forest mailing list.

It has been determined through the environmental assessment that the proposed action is not a major Federal action that would significantly affect the quality of the human environment; therefore, an environmental impact statement is not needed. This determination is based on the following factors (40 CFR 1508.27):

A. Context.

Although this is an addition to the national system of RNA's both short-term and long-term physical and biological effects are limited to the local area.

B. Intensity.

1. There are no known effects on public health and safety.

2. There are no known effects on historic or cultural resources, actual or eligible National Register of Historic places sites, Park lands, prime farmlands, wetland, wild and scenic rivers. Effects on ecologically critical areas are minimal.

3. Effects on the human environment are not uncertain, do not involve unique or unknown risks, and are not likely to be highly controversial.

4. The action is not likely to establish a precedent for future actions with significant effects.

5. There are no known cumulative effects.

6. The proposed action would not adversely affect an endangered or threatened species or its critical habitat.

7. The proposed action is consistent with Federal, State, and local laws and requirements for the protection of the environment.

This decision is subject to appeal pursuant to 36 CFR 217. Two (2) copies of the Notice of Appeal must be in writing and submitted to:

The Secretary of Agriculture
14th and Independence Ave., S. W.
Washington, D. C. 20250

The Notice of Appeal prepared pursuant to 36 CFR 217.9(b) must be submitted within 45 days from the date of legal notice of this decision. Review by the Secretary is wholly discretionary. If the Secretary has not decided within 15 days of receiving the Notice of Appeal to review the Chief's decision, appellants will be notified that the Chief's decision is the final administrative decision of the U. S. Department of Agriculture (36 CFR 217.17(d)).

_____ _____

Chief Date

Environmental Assessment

Rocky Gulch Research Natural Area
Coconino National Forest
Long Valley Ranger District
Coconino County, Arizona

Proposed Action

The proposed action is to establish the Rocky Gulch "proposed" Research Natural Area (RNA) identified in the Land and Resource Management Plan (Forest plan) for the Coconino National Forest as the Rocky Gulch RNA, and to manage it according to the direction provided in the Forest Plan (Management Area 17). The proposed action, formal designation of the RNA by the Chief of the Forest Service, will amend the Forest Plan.

Purpose and Need for Action

The purpose of establishing the Rocky Gulch RNA is to contribute to a series of RNA's designated to "illustrate adequately or typify for research or education purposes, the important forest and range types in each forest region, as well as other plant communities that have special or unique characteristics of scientific interest and importance" (36 CFR 251.23). Rocky Gulch RNA contributes to this series of RNA's by providing an example of ponderosa pine forest type as discussed in the Forest Plan. An evaluation by the Regional RNA Committee, pursuant to direction in Forest Service Manual (FSM) 4063.04b, of the need for RNA's identified this type as suitable and desirable for inclusion in the national network. Establishment of the Rocky Gulch RNA provides long-term protection and recognition of ponderosa pine forest type.

The Rocky Gulch area was identified in the Forest Plan as a "proposed" RNA based on the relatively undisturbed conditions of ponderosa pine forest type in the area at that time. Comments received from interested and affected members of the public supported establishment of an RNA in the area. Site conditions and public concerns have been reviewed; no important changes have occurred.

Conditions and environmental effects of designation are the same as described in the EIS for the Forest Plan. Site specific conditions and effects are as follows:

-Grazing use is low and withdrawal shoud not result in any permitted animal reductions.

-No known significant mineral resources are within the area.

-The area has been withdrawn from the commercial timber base of the Coconino National Forest.

-Recreation use is light and consists of small- and big-game hunting.

-No threatened or endangered plant or animals are known to occur in the area.

-Existing roads will be closed.

Designation of alternate RNA's for protection of these types was considered during Forest Plan development. Rocky Gulch was determined at that time to provide the most appropriate site for inclusion in the national network for protection of the ponderosa pine forest type.

Alternatives and Environmental Consequences

Alternative A, Proposed Action

Alternative A would designate a 950-acre (384 hectares) area as the Rocky Gulch RNA. This alternative will provide long-term protection for the area. Management of the area will limit recreation use to non-motorized dispersed recreation at a low intensity and reduced service level, rangeland will be managed at Level A (exclusion), and no harvest of forest products, including fuelwood, will be allowed. Unplanned ignitions within the area will receive appropriate suppression action, wildfires burning outside that threaten the area will be suppressed. Use restrictions will be imposed as necessary to keep areas in their natural or unmodified condition (Forest Plan). Rocky Gulch Research Natural Area will be withdrawn from mineral entry should future and as-yet-unknown information be found to require withdrawal for the protection and management of the basic objectives and purposes of the RNA.

The environmental consequences of Alternative A are described in the EIS for the Coconino Forest Plan. No adverse or irreversible environmental consequences are envisioned. Irretrievable effects result from resource outputs either reduced or lost as a result of special area designation. There are no significant cumulative effects of establishing the RNA.

Alternative B, No Action

This alternative continues management according to direction in the Forest Plan for the "proposed" RNA. Rocky Gulch RNA is recommended in Management Area 17 of the Coconino National Forest Plan. Management emphasis is to provide opportunities for nondisruptive research and education. Use restrictions will be imposed as necessary to keep the area in an unmodified or natural condition.

Management of the area will be the same as for Alternative A. However, only short-term protection of the area, dependent on the life of the Forest Plan, would be provided.

The environmental consequences of Alternative B, the "No Action" alternative, are as described in the EIS for the Coconino Forest Plan. No adverse or irreversible environmental effects are anticipated. Irretrievable effects result from resource outputs either reduced or lost as a result of special area designation.

Agencies and Persons Consulted

In the process of updating information to determine whether or not conditions had changed since adoption of the Forest Plan, several groups and individuals who may have additional information regarding Rocky Gulch RNA were contacted. Representatives from the national office of The Nature Conservancy, the Arizona Chapter of The Nature Conservancy, Arizona Heritage Program, Arizona Game and Fish Department, and Arizona Cattle Growers Association were contacted. No additional concerns were raised by these groups. Documentation of the contacts made and summaries of the comments are attached to this Environmental Assessment.

ESTABLISHMENT RECORD

for

ROCKY GULCH RESEARCH NATURAL AREA

within

Coconino National Forest
Coconino County, Arizona

INTRODUCTION

Rocky Gulch Research Natural Area (RNA) is located in central Arizona on the Long Valley Ranger District of the Coconino National Forest, Coconino County, on reserved public domain National Forest System land. Rocky Gulch RNA encompasses 950 acres (384 hectares) of Watershed No. 13 in the former Beaver Creek Experimental Watershed. The area has a long history of silvicultural and watershed research.

Land Management Planning. The Southwest Regional Guide (USDA Forest Service, 1983) and Coconino National Forest Plan (USDA Forest Service, 1987a) include Rocky Gulch RNA. The environmental analysis conducted as part of the Forest planning process supports the recommendation to establish this Research Natural Area (USDA Forest Service, 1987b).

OBJECTIVES

Rocky Gulch RNA was recommended in the Southwest Region RNA Progress Report (USDA Forest Service, 1984) as an undisturbed land area representative of ponderosa pine *Pinus ponderosa* forest.

JUSTIFICATION STATEMENT FOR ESTABLISHMENT OF AREA

Rocky Gulch RNA was identified primarily as an example of a virgin ponderosa pine forest. This site represents one of the few remaining undisturbed ponderosa pine forest stands on the Coconino Plateau. The need to include this plant community was identified in the Southwestern Regional Guide (USDA Forest Service, 1983). An advantage of this area for research is the weir in Rocky Gulch and the history of past watershed and silvicultural research.

The objectives of establishing Rocky Gulch RNA are:

1. To provide examples of ponderosa pine habitat types for research and to maintain old growth processes.

2. To serve as a reference area for the study of fire succession, and long term ecological change.

3 To serve as a control area for silvicultural and watershed research.

PRINCIPAL DISTINGUISHING FEATURES

The predominant feature of Rocky Gulch RNA is a virgin stand of ponderosa pine. The presence of an operational weir on Rocky Gulch enhances the attractiveness of the site for research.

LOCATION

Access to the southern end of Rocky Gulch RNA can be made by traveling south from Flagstaff on Interstate Highway 17 (Figs. 1 and 2). Exit at the Stoneman Lake turnoff and proceed east 6.3 miles (10.1 kilometers) on Forest Road 213 to Forest Road 229. Turn south and proceed 2.8 miles (4.5 kilometers) to Forest Road 229F. This road dead ends in 2 miles (3.2 kilometers) at the weir in Rocky Gulch.

Rocky Gulch RNA can also be reached from Forest Highway 3. About 5 miles (8.0 kilometers) north of Happy Jack turn west on Forest Road 213 and travel 0.4 mile (0.6 kilometers) to Forest Road 230. Traveling 2.6 miles (4.2 kilometers) south will lead to within 0.25 miles (0.4 kilometers) of the eastern boundary, which can be reached by cross-country travel through open terrain.

Rocky Gulch RNA is located on the Long Valley Ranger District, Coconino National Forest, Coconino County, Arizona. The area is at 34° 45′ North latitude and 111° 29′ West longitude. It is within portions of Sections 14, 15, 22, 23, 26, and 27 of Township 16 North, Range 8 East, Gila and Salt Rivers Meridian, Arizona.

The boundaries of Rocky Gulch RNA are more particularly described as follows:

BEGINNING from a point on the south end of Jones Mountain which is located approximately 1,500 feet (457 meters) north and 100 feet (30 meters) west of the section corner of Sections 14, 15, 22, and 23, Township 16 North, Range 9 East;

THENCE, southwesterly along the top of a predominant ridge for approximately 5,500 feet (1,676 meters), to a point in the bottom of the saddle between Rocky Gulch and Jones Springs;

THENCE, continue southwesterly approximately 600 feet (183 meters), to the high point of a hill with a shown elevation of 7,261 feet (2,213 meters);

THENCE, southwesterly on a straight line for approximately 3,500 feet (1,067 meters), to a point of intersection with west boundary of Section 27 and the 7,000 foot (2,134 meter) contour line;

THENCE, southeasterly on a straight line that crosses Rocky Gulch and runs along a ridge for approximately 5,500 feet (1,676 meters) to the summit of a ridge with an approximate elevation of 7,100 feet (2,164 meters) and is located near the east boundary of Section 27;

THENCE, northeasterly for approximately 3,500 feet (1,067 meters), to a bench mark with a shown elevation of 7,296 feet (2,224 meters);

THENCE, northwesterly for approximately 1,000 feet (305 meters), to a high point with an approximate elevation of 7,260 feet (2,213 meters);

THENCE, north for approximately 3,400 feet (1,036 meters), along a south slope to the 7,400 foot (2,256 meter) contour;

THENCE, northwesterly for approximately 2,500 feet (762 meters), to a point on the Section line between Sections 14 and 23 which is approximately 900 feet (274 meters) east of the corner of Sections 14, 15, 22, and 23;

THENCE,northwesterly for approximately 1,700 feet (518 meters), along a ridge to the point of BEGINNING.

Lands herein described and topographic features referred to are based on 7.5′ United States Geological Survey Quadrangle Sheets HUTCH MOUNTAIN and HAPPY JACK, ARIZONA, dated 1965. Rocky Gulch RNA contains 950 acres (384 hectares), more or less. Elevations within the RNA are from 6,720 to 7,936 feet (2,048 to 2,419 meters) (Fig. 3).

AREA BY COVER TYPES

Information on cover types was obtained from the Southwestern RNA Progress Report (USDA Forest Service, 1984) and field reconnaissance. Surface area of habitat types is provided in Table 1.

Küchler. The cover type within Rocky Gulch RNA is Arizona Pine Forest, K-18 (Küchler, 1966).

Society of American Foresters. The cover type within Rocky Gulch RNA is Interior Ponderosa Pine, SAF-237 (Eyre, 1980).

Habitat Types or Plant Associations. *P. ponderosa*/Gambel Oak *Quercus gambelii*, and *P. ponderosa*/Arizona fescue *Festuca arizonica*, *Q. gambelii* phase (USDA Forest Service, 1986a) are the habitat types that occur in Rocky Gulch RNA.

Table 1. Estimated areas of vegetation cover types in Rocky Gulch Research Natural Area.

USFS Type[1]	SAF Type[2]	Küchler Type[3]	Surface Area Acres (Hectares)
Ponderosa pine/ Gambel oak	SAF-237	K-18	950 (384)
Ponderosa pine/ Arizona fescue	None	None	
Total			950 (384)

[1]USDA Forest Service, 1986a
[2]Eyre, 1980
[3]Küchler, 1966

PHYSICAL AND CLIMATIC CONDITION

Rocky Gulch RNA includes the headwaters of Rocky Gulch, an ephemeral drainage that heads on the southern slopes of Jones Mountain, a prominent butte-like exposure at the north end of the RNA. Slopes are moderate with a predominantly southern or western exposure. In the eastern portions of Rocky Gulch RNA slopes are considerably more gentle. Elevations range from 6,720 feet (2,048 meters) at the weir to 7,936 feet (2,419 meters) at the northernmost point near the top of Jones Mountain.

Mean annual temperature at the site is 41° F (5° C) (USDA Forest Service, 1986b). July temperatures average 62° F (17° C) while average monthly temperatures in January are 24° F (4°C). Frost free period is 100 days. Average annual precipitation is 22 inches (56 centimeters) with 45 percent falling during May to October. Snowfall averages 47 inches (119 centimeters) annually.

DESCRIPTION OF VALUES

Flora. The entire site is relatively uniform in vegetation cover that is characteristic of the ponderosa pine forests found on the Coconino Plateau (Pase and Brown, 1982). Ponderosa pine is the predominant tree species throughout the site (Importance Value = 252.8) with Gambel oak (Importance Value = 36.0) and alligator juniper (Importance Value = 11.2) of secondary importance (Szaro and Balda, 1979b). On the steeper side slopes that adjoin Rocky Gulch, the *P. ponderosa/Q. gambelli* habitat type occurs but is replaced to the east, where slope angle becomes more moderate, by the *Q. gambelli* phase of the *P. ponderosa/F. arizonica* habitat type.

A plant list for the area has not been assembled; no threatened or endangered plants are known to occur there.

Fauna. The animal list provided in Table 2 was derived from the RUN WILD III computer-stored data base for Montane Conifer Forest biome, Pine series, Ponderosa Pine association (Lehmkuhl and Patton, 1984). The breeding bird list was reproduced from Szaro and Balda (1979b). No threatened or endangered animals are known from the area.

Table 2. Abbreviated animal list for Rocky Gulch RNA. Nomenclature and authority follow that of Banks et al. (1987).

Common Name	Scientific Name
BIRDS	
Bluebird, western	*Sialia mexicana*
Chickadee, mountain	*Parus gambeli*
Dove, mourning	*Zenaida macroura*
Flicker, common	*Coaptes auratus cafer*
Flycatcher, western	*Empidonax difficilis*
Grosbeak, black-headed	*Pheucticus melanocephalus*
Hummingbird, broad-tailed	*Selasphorus platycercus*
Jay, Steller's	*Cyanocitta stelleri*
Junco, gray-headed	*Junco caniceps*
Nighthawk, common	*Chrordeiles minor*
Nuthatch, pygmy	*Sitta pygmaea*
Nuthatch, white-breasted	*Sitta carolinensis*
Sparrow, chipping	*Spizella passerina*
Tanager, western	*Piranga ludoviciana*
Thrush, hermit	*Cathrus guttatus*
Vireo, solitary	*Vireo solitarius*
Warbler, Grace's	*Dendroica graciae*
Warbler, red-faced	*Cardellina rubrifrons*
Warbler, yellow-rumped	*Dendroica coronata auduboni*
Woodpecker, hairy	*Picoides villosus*
MAMMALS	
Badger	*Taxidea taxus*
Bat, Allen's big-eared	*Idionycteris phyllotis*
Bat, big brown	*Eptesicus fuscus*
Bat, big free-tailed	*Tadaria macrotis*
Bat, Brazilian free-tailed	*Tadaria brasiliensis*
Bat, hoary	*Lasiurus cinereus*
Bat, pallid	*Antrozous pallidus*
Bat, red	*Lasiurus borealis*
Bat, silver-haired	*Lasionycteris noctivagans*
Bat, spotted	*Euderma maculatum*
Bat, Townsend's big-eared	*Plecotus townsendii*
Bear, black	*Ursus americanus*
Chipmunk, cliff	*Tamias doraslis*
Chipmunk, gray-collared	*Tamias cinereicollis*
Cottontail, eastern	*Sylvilagus floridanus*
Coyote	*Canis latrans*
Deer, mule	*Odocoileus hemionus*
Deer, white-tailed	*Odocoileus virginianus*
Elk	*Cervus elaphus*
Gopher, Botta's pocket	*Thomomys bottae*
Lion, mountain	*Felis concolor*
Mouse, brush	*Peromyscus boylii*
Mouse, deer	*Peromyscus maniculatus*

Mouse, pinyon	*Peromyscus truei*
Mouse, western harvest	*Reithrodontomys megalotis*
Myotis, California	*Myotis californica*
Myotis, fringed	*Myotis thysanodes*
Myotis, little brown	*Myotis lucifugus*
Myotis, long-eared	*Myotis evotis*
Myotis, long-legged	*Myotis volvans*
Myotis, small-footed	*Myotis leibii*
Myotis, Yuma	*Myotis yumanensis*
Porcupine	*Erethizon dorsatum*
Raccoon	*Procyon lotor*
Ringtail	*Bassariscus astutus*
Shrew, Merriam's	*Sorex merriami*
Shrew, vagrant	*Sorex monticolus*
Skunk, striped	*Mephitis mephitis*
Squirrel, Abert's	*Sciurus aberti*
Squirrel, Arizona gray	*Sciurus arizonensis*
Squirrel, golden-mantled ground	*Spermophilus lateralis*
Squirrel, red	*Tamiascirus hudsonicus*
Squirrel, rock	*Spermophilus variegatus*
Vole, Mexican	*Microtus mexicanus*
Weasel, long-tailed	*Mustela frenata*
Woodrat, Mexican	*Neotoma mexicanus*
Woodrat, Stephen's	*Neotoma stephensi*

AMPHIBIANS AND REPTILES

Lizard, side-blotched	*Uta stansburiana*

Geology. The entire area is underlain by basalt flows (Arizona Department of Transportation, 1975).

Soils. Soils are mainly classified as Mollic Eutroboralfs: fine and montmorillonitic (USDA Forest Service, 1986b). These are deep, moderately well drained soils with large amounts of expanding lattice type clay minerals.

Lands. Rocky Gulch RNA is wholly reserved National Forest System lands.

Cultural. There are no records on Coconino National Forest that indicate there has ever been a cultural resource survey conducted within the boundaries of Rocky Gulch RNA. We do not know if any historic or prehistoric sites exist. If any sites do exist it is quite likely they would be at Campbell Springs, Jones Springs, or within the Rocky Gulch drainage.

IMPACTS AND POSSIBLE CONFLICTS

Mineral Resources. There are no known mineral resources in this area. The parent soil material is a basalt of volcanic origin. The two major soils series that occur within Rocky Gulch RNA have been classified as Siesta-Sponseller, a deep and moderately deep loamy upland soil, and Stoneman, a moderately shallow, stony, clay upland soil.

Grazing. Rocky Gulch is included in the Turkey Mountain Allotment. Cattle pass through and graze Rocky Gulch RNA in the spring and fall on alternate years. Grazing use is low due to the short period of time the cows are in the area. The withdrawal of 950 to 1,000 acres (385 to 405 hectares) should not result in any permitted animal reductions. There probably will be

need for fence construction around most of the area if cattle are to be totally excluded.

Timber. The area is virgin ponderosa pine. No logging has occurred in the area and it has been withdrawn from the commercial timber base of the Coconino National Forest. Some firewood has been harvested around the perimeter of the boundary, however the quantity is negligible.

Watershed Values. The entire RNA was formerly known as Watershed No. 13, and was the control area for watershed studies done in the ponderosa pine vegetation type on the Beaver Creek watershed. Rocky Gulch is an intermittent drainage that ultimately flows into the Verde River, a critical watershed that provides a large portion of the water needs for the greater Phoenix area.

Recreation Values. Due to a lack of roads and relative steepness the Rocky Gulch area has very little recreation potential. The hunting of elk, deer, turkey, bear, and other game species is the extent of recreation activities.

Wildlife and Plant Values. Establishment of Rocky Gulch RNA is unlikely to have any effect on wildlife habitat for most species of game and non-game animals. There are no known threatened or endangered plant or animal species inhabiting the Rocky Gulch area.

Special Management Area Values. The Rocky Gulch area has no characteristics that would qualify it for any special designations. The only thing remotely related is that the drainage does eventually reach the Verde River, which has a portion designated as a Wild and Scenic River.

Transportation Plans. Rocky Gulch RNA has limited access by primitive roads. One road, just south of Jones Mountain, passes through the northern most tip of the area. Another road near Jones Spring also enters the area for a short distance. A third road penetrates the area just north of Little Rocky Tank. Two roads also terminate at the boundary. One is at Campbell Springs and the other is at Section 26 Tank. These roads would be closed and Rocky Gulch RNA closed to off-road vehicles to protect the area.

Utility Corridor Plans. No existing or potential utility corridors are within the area immediately adjacent to this RNA.

MANAGEMENT PRESCRIPTION

Rocky Gulch RNA is recommended within Management Area 17 of the Coconino National Forest Plan (USDA Forest Service, 1987a). Management emphasis is to protect watershed condition and maintain natural ecological conditions so that Rocky Gulch RNA is available for research and education projects that do not disturb the area's natural condition. Use restrictions will be imposed as necessary to keep Rocky Gulch RNA in it's natural or unmodified condition. Rocky Gulch RNA is closed to off-road vehicles (Appendix 1).

Vegetation Management. There is no harvest of timber products, including firewood. Rocky Gulch RNA is assigned no grazing capacity and will be fenced as necessary to restrict cattle access. Prescribed fire, using planned ignitions, will be used as a management tool provided its use is compatible with the resources being managed. Suppression tactics will be used that minimize damage to the character of Rocky Gulch RNA. Fires in the area are allowed to burn undisturbed unless they threaten persons or property outside of the area, or they threaten the uniqueness of the area.

ADMINISTRATIVE RECORDS AND PROTECTION

Administration and protection of Rocky Gulch RNA will be the responsibility of the Coconino National Forest. The District Ranger, Long Valley Ranger District, Happy Jack, AZ, has direct responsibility.

The Director of the Rocky Mountain Forest and Range Experiment Station will be responsible for any studies or research conducted in the area, and requests to conduct research in the area should be referred to the Director. The Director will evaluate research proposals and coordinate all studies and research in the area with the District Ranger and RNA research coordinator. Plant and animal specimens collected in the course of research conducted in the area will be properly preserved and maintained within university or federal agency herbaria and museums, as approved by the Rocky Mountain Station Director. Records for the Rocky Gulch RNA will be maintained in the following offices of the USDA Forest Service:

Southwestern Region, Albuquerque, NM
Rocky Mountain Forest and Range Experiment Station, Fort Collins, CO
Coconino National Forest, Flagstaff, AZ
Long Valley Ranger District, Happy Jack, AZ

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I certify the enclosed boundary description of Rocky Gulch Research Natural Area was prepared under my direct supervision.

Seal

Forest Land Surveyor

Date

APPENDIX 1

The following pages were reproduced from the Coconino National Forest Plan

DESIGNATION ORDER

By virtue of the authority vested in me by the Secretary of Agriculture under regulations 7 CFR 2.60(a) and 36 CFR 251.23. I hereby designate as the Rocky Gulch Research Natural Area the lands described in the following establishment record prepared by Andrew W. Laurenzi and Mark Cochran, dated November 3, 1987. These lands shall hereafter be administered as a research natural area subject to the above regulations and instructions issued herunder.

_____ _____

Chief Date

SIGNATURE PAGE

for

RESEARCH NATURAL AREA ESTABLISHMENT RECORD

Rocky Gulch Research Natural Area

Coconino National Forest

Coconino County, Arizona

Prepared by_____Date_____
Mark H. Cochran, The Arizona Nature Conservancy
Andrew W. Laurenzi, The Arizona Nature Conservancy

Recommended by_____Date_____
Samuel J. Wolfskill, District Ranger,
Long Valley Ranger District

Recommended by_____Date_____
Neil Paulsen, Forest Supervisor,
Coconino National Forests

Recommended by_____Date_____
John W. Russell, Chairman,
Southwestern Research Natural
Area Committee

Recommended by_____Date_____
Sotero Muniz, Regional Forester
Southwestern Region

Recommended by_____Date_____
Charles M. Loveless, Station Director
Rocky Mountain Forest and Range
Experiment Station

INTRODUCTION

The Rocky Gulch Research Natural Area (RGRNA) is located in central Arizona within the Long Valley Ranger District of the Coconino National Forest, Coconino County, on reserved public domain National Forest land. The RGRNA encompasses 950 acres (380 hectares) of control Watershed No. 13 in the former Beaver Creek Experimental Watershed. The area has a long history of silvicultural and watershed research.

LAND MANAGEMENT PLANNING

The current Coconino National Forest planning documents, the Environmental Impact Statement and Forests Plan (USDA Forest Service, 1987a/1987b), include the Rocky Gulch RNA. The environmental analysis conducted as part of the planning process supports the recommendation to establish this Research Natural Area.

JUSTIFICATION STATEMENT FOR ESTABLISHMENT OF AREA

The Rocky Gulch RNA was identified primarily as an example of a virgin ponderosa pine (Pinus ponderosa) forest. This site represents one of the few remaining undisturbed ponderosa pine forest stands on the Coconino Plateau. The need to include this plant community was identified in the Southwestern Regional Guide (USDA Forest Service, 1983). An advantage of this area for research is the weir in Rocky Gulch and the history of past watershed and silvicultural research.

The objectives of establishing this RNA are:

1. To provide examples of ponderosa pine habitat types for research and to maintain old growth processes.
2. To serve as a reference area for the study of fire succession, and long term ecological change.
3 To serve as a control area for silvicultural and watershed research.

PRINCIPAL DISTINGUISHING FEATURES

The predominant feature of the RGRNA is a virgin stand of ponderosa pine (Pinus ponderosa) forest. The presence of an operational weir on Rocky Gulch enhances the attractiveness of the site for research.

LOCATION

The RNA is located within the Long Valley Ranger District of the Coconino National Forest in Coconino County, Arizona (Figs. 1 & 2). The area is at latitude 34° 45′ north and 111° 29′ west.

Specifically the area lies in portions of sections 14, 15, 22, 23, 26, and 27 of T16N R9E, which are included on the USGS Hutch Mt. and Happy Jack 7.5' topographic quadrangles (Fig. 3).

Access to the southern end of the RNA is from I-17. Exit at the Stoneman Lake turnoff and proceed east on FS road 213, 6.3 miles (10.1 km), to FS Road 229. Turn south and proceed 2.8 miles (4.5 km) to FS Road 229F. This road dead ends in 2 miles (3.2 km) at the weir in Rocky Gulch.

The RGRNA can also be reached from Forest Highway 3. Approximtely 5 miles (8.0 km) north of Happy Jack turn west on FS Road 213 and travel 0.4 mile (0.6 km) to FS Road 230. 2.6 miles (4.2 km) south on this road will lead to within 0.25 miles (0.4 km) of the eastern boundary of the RNA which can be reached by cross-country travel through open terrain.

AREA BY COVER TYPES

Information on cover types was obtained from the Southwestern RNA Progress Report (USDA Forest Service, 1984) and field reconnaisance.

Küchler

The cover type within the RNA is Arizona Pine Forest, K-018 (Küchler, 1964).

Society of American Foresters

The cover type within the RNA is Interior Ponderosa Pine, SAF 237 (Eyre, 1980).

Habitat Types or Plant Associations

Pinus ponderosa/Quercus gambelii habitat type and the *Pinus ponderosa/Festuca arizonica* habitat types, *Quercus gambelii* phase are the two habitat types, (USDA Forest Service, 1986a), which occur in the RGRNA.

PHYSICAL AND CLIMATIC CONDITION

The RGRNA includes the headwaters to Rocky Gulch, a rocky, ephemeral drainage which heads on the southern slopes of Jones Mountain, a prominent butte-like exposure at the north end of the RNA. Slopes are moderate with a predominantly southern or western exposure. In the eastern portions of the RNA slopes are considerably more gentle. Elevations range from 6,720 feet (m) at the weir to 7900 feet at the northernmost point in the RNA near the top of Jones Mountain.

Mean annual temperature at the site is 41°F (5°C) (USDA Forest Service, 1986b). July temperatures average 62°F (16.7°C) while average monthly temperatures in January are 24°F (4.4°C). Frost free period is 100 days. Average annual precipitation is 22 inches (55.9cm) with 45% falling during May - October. Snowfall averages 47 inches (8.3cm) annually.

DESCRIPTION OF VALUES

Flora

The entire is site is relatively uniform in vegetation cover which is characteristic of the pondersosa pine forests found on the Coconino Plateau (Pase and Brown, 1982). Pondersosa pine is the overwhelming dominant throughout the site (Importance Value = 252.8) with Gambel oak (Importance Value = 36.0) and alligator juniper (Importance Value = 11.2) of secondary importance (Szaro and Balda, 1979b). On the steeper side slopes, that adjoin Rocky Gulch, the Pinus ponderosa/Quercus gambelli habitat type occurs, but is replaced to the east, where slope angle becomes more moderate, by the Quercus gambelli phase of the Pinus ponderosa/Festuca arizonica habitat type.

A plant list for the area has not been assembled and no threatened or endangered plants are known from the area.

Fauna

The following animal list was derived from the RUN WILD III computer-stored data base (Lehmkuhl and Patton, 1982) for Montane Conifer Forest biome, Pine series, Ponderosa Pine association (221.203) with the exception of the breeding bird list which was reproduced from Szaro and Balda (1979b). No threatened or endangered animals are known from the area.

Common Name	Latin Name
Birds	
Bluebird, Western	Sialia mexicana
Chickadee, Mountain	Parus gambeli
Dove, Mourning	Zenaida macroura
Flicker, Common	Coaptes auratus cafer
Flycatcher, Western	Empidonax difficilis
Grosbeak, Black-headed	Pheucticus melanocephalus
Hummingbird, Broad-tailed	Selasphorus platycercus
Jay, Steller's	Cyanocitta stelleri
Junco, Gray-headed	Junco caniceps
Nighthawk, Common	Chrordeiles minor
Nuthatch, Pygmy	Sitta pygmaea
Nuthatch, White-breasted	Sitta carolinensis
Sparrow, Chipping	Spizella passerina
Tanager, Western	Piranga ludoviciana
Thrush, Hermit	Cathrus guttatus
Vireo, Solitary	Vireo solitarius
Warbler, Grace's	Dendroica graciae
Warbler, Red-faced	Cardellina rubrifrons
Warbler, Yellow-rumped	Dendroica coronata auduboni
Woodpecker, Hairy	Picoides villosus

Mammals

Badger	Taxidea taxus
Bat, Allen's Big-eared	Idionycteris phyllotis
Bat, Big brown	Eptesicus fuscus
Bat, Big free-tailed	Tadaria macrotis
Bat, Brazilian free-tailed	Tadaria brasiliensis
Bat, Hoary	Lasiurus cinereus
Bat. Pallid	Antrozous pallidus
Bat, Red	Lasiurus borealis
Bat, Silver-haired	Lasionycteris noctivagans
Bat, Spotted	Euderma maculatum
Bat, Townsend's big-eared	Plecotus townsendii
Bear, Black	Ursus americanus
Chipmunk, cliff	Tamias doraslis
Chipmunk, gray-collared	Tamias cinereicollis
Cottontail, eastern	Sylvilagus floridanus
Coyote	Canis latrans
Deer, mule	Odocoilus hemionus
Deer, white-tailed	Odocoileus virginianus
Elk	Cervus elaphus
Gopher, Botta's pocket	Thomomys bottae
Lion, mountain	Felis concolor
Mouse, brush	Peromyscus boylii
Mouse, deer	Peromyscus maniculatus
Mouse, pinyon	Peromyscus truei
Mouse, western harvest	Reithrodontomys megalotis
Myotis, California	Myotis californica
Myotis, fringed	Myotis thysanodes
Myotis, little brown	Myotis lucifugus
Myotis, long-eared	Myotis evotis
Myotis, long-legged	Myotis volvans
Myotis, saml1-footed	Myotis leibii
Myotis, Yuma	Myotis yumanensis
Porcupine	Erethizon dorsatum
Raccoon	Procyon lotor
Ringtail	Bassariscus astutus
Shrew, Merriam's	Sorex merriami
Shrew, vagrant	Sorex monticolus
Skunk, striped	Mephitis mephitis
Squirrel, Abert's	Sciurus aberti
Squirrel, Arizona gray	Sciurus arizonensis
Squirrel, golden-mantled ground	Spermophilus lateralis
Squirrel, red	Tamiascirus hudsonicus
Squirrel, rock	Spermophilus variegatus
Vole, mexican	Microtus mexicanus
Weasel, long-tailed	Mustela frenata
Woodrat, Mexican	Neotoma mexicanus
Woodrat, Stephen's	Neotoma stephensi

Amphibians and Reptiles

Lizard, Side-blotched Uta stansburiana

Geology

The entire area is underlain by basalt flows (Arizona Department of Transportation, 1975).

Soils

Soils are mainly classified as Mollic Eutroboralfs: fine and montmorillonitic (USDA Forest Service, 1986b). These are deep, moderately well drained soils with large amounts of expanding lattice type clay minerals.

Cultural

There are no records on the District that indicate there has ever been a cultural resource survey conducted within the boundaries of the RGRNA. We do not know if any historic or prehistoric sites exist. If any sites do exist it is quite likely they would be at Campbell Springs, Jones Springs or within the Rocky Gulch drainage.

IMPACTS AND POSSIBLE CONFLICTS

Mineral Resources

There are no known mineral resources in this area. The parent soil material is a basalt of volcanic origin. The two major soils series that occur within the RNA have been classified as Siesta-Sponseller - deep and moderately deep loamy upland soil, and Stoneman - a moderately and shallow, stony, clay upland soil.

Grazing

Rocky Gulch is included in the Turkey Mountain Allotment. Cattle pass through and graze the RNA in the spring and fall on alternate years. Grazing use is low due to the short period of time the cows are in the area. The withdrawal of 950 to 1,000 acres (385 to 405 hectare) should not result in any permitted animal reductions. There probably will be need for fence construction around most of the area if cattle are to be totally excluded.

Timber

The area is virgin ponderosa pine. No logging has occurred in the area and it has been withdrawn from the commercial timber base of the Coconino National Forest. Some firewood has been harvested around the perimeter of the boundary, however the quantity is negligible.

Watershed Values

The entire RNA was formerly known as Watershed No. 13. This was the control area for various watershed studies done in the

ponderosa pine vegetation type on the Beaver Creek Watershed. Rocky Gulch is an intermittent drainage that eventually flows into the Verde River, a critical watershed that provides a large portion of the water needs for the Greater Phoenix Area.

Recreation Values

Due to a lack of roads and relative steepness the Rocky Gulch Area has very little recreation potential. The hunting of elk, deer, turkey, bear and some game species is the extent of recreation activities.

Wildlife and Plant Values

Establishment of a RNA will enhance the wildlife habitat for many species of game and non-game animals. There are no known T&E plant or animal species inhabiting the Rocky Gulch area.

Wilderness, Wild and Scenic River, National Recreation Area Values

The Rocky Gulch Area has no characteristics which would qualify it for any of the above designations. The only thing remotely related is that the drainage does eventually reach the Verde River which has a portion designated as a Wild and Scenic River.

Transportation

The RNA has limited access and all of it is by primitive roads. One road, just south of Jones Mountain, passes through the northern most tip of the area. Another road near Jones Spring also enters the area for a short distance. A third road penetrates the area just north of Little Rocky Tank. Two roads also terminate at the boundary. One is at Campbell Springs and the other is at Section 26 Tank. These roads would be closed and the RNA will be closed to ORV to protect the area.

Utility Corridor Plans

No existing of potential utility corridors are within the area immediately adjacent to this RNA.

MANAGEMENT PLANNING

Land Management Planning

The RGRNA is recommended in the Coconino National Forest Plan Management Area 17 (see Appendix). Management emphasis is to protect watershed condition and maintain natural ecological conditions so that the RNA is available for research and education that does not disturb the area's natural condition. Use restrictions will be imposed as necessary to keep the RNA in it's natural or unmodified condition. The RNA is closed to ORV's.

Vegetation Management

There is no harvest of timber products, including firewood. The RNA is assigned no grazing capacity and will be fenced as necessary to protect. Prescribed fire, using planned ignitions,

will be used as a management tool provided its use is compatible with the resources being managed. Suppression tactics will be used that minimize damage to the character of the RNA. Fires in the area are allowed to burn undisturbed unless they threaten persons or property outside of the area, or they threaten the uniqueness of the area.

ADMINISTRATIVE RECORDS AND PROTECTION

Administration and protection of the Rocky Gulch RNA will be the responsibility of the Coconino National Forest. The District Ranger, Long Valley Ranger District, Happy Jack, AZ has direct responsibility.

The Director of the Rocky Mountain Forest and Range Experiment Station, or his designee, will be responsible for any studies or research conducted in the area, and request to conduct research in the area should be referred to him. He, or his designee, will evaluate research proposals and coordinate all studies and research in the area with the District Ranger and the RNA research coordinator. Plant and animal specimens collected in the course of research conducted in the area will be properly preserved and maintained within university or federal agency herbaria and museums, approved by the Rocky Mountain Station Director.

Records for the Rocky Gulch RNA will be maintained in the following offices:

Regional Forester, Southwestern Region, Albuquerque, NM
Rocky Mountain Station, Fort Collins, CO
Coconino National Forest, Flagstaff, AZ
District Ranger, Long Valley Ranger District, Happy Jack, AZ

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LEGAL DESCRIPTION FOR THE ROCKY GULCH RESEARCH NATURAL AREA

Coconino National Forest, Arizona

Township 16 North, Range 9 East, a portion of Sections 14, 15, 22, 23, 26 and 27, G&SRM.

A parcel of land within the Administrative Boundary of the Coconino National Forest, Coconino County, Arizona, more particularly described as follows:

Beginning from a point on the south end of Jones Mountain which is located approximately 1500 feet north and 100 feet west of the Section corner of Sections 14, 15, 22 and 23;

Thence, southwesterly along the top of a predominant ridge for approximately 5500 feet, to a point in the bottom of the saddle between Rocky Gulch and Jones Springs;

Thence, continue southwesterly approximately 600 feet, to the high point of a hill with a shown elevation of 7261 feet;

Thence, southwesterly on a straight line for approximately 3500 feet, to a point of intersection with the west boundary of Section 27 and the 7000 foot contour line;

Thence, southeasterly on a straight line that crosses Rocky Gulch and runs along a ridge for approximately 5500 feet to the summit of a ridge with an approximate elevation of 7100 feet and is located near the east boundary of Section 27;

Thence, northeasterly for approximately 3500 feet, to a bench mark with a shown elevation of 7296 feet;

Thence, northwesterly for approximately 1000 feet, to a high point with an approximate elevation of 7260 feet;

Thence, north for approximately 3400 feet, along a south slope to the 7400 foot contour;

Thence, northwesterly for approximately 2500 feet, to a point on the Section line between Sections 14 and 23 which is approximately 900 feet east of the corner of Sections 14, 15, 22 and 23;

Thence, northwesterly for approximately 1700 feet, along a ridge to the point of Beginning.

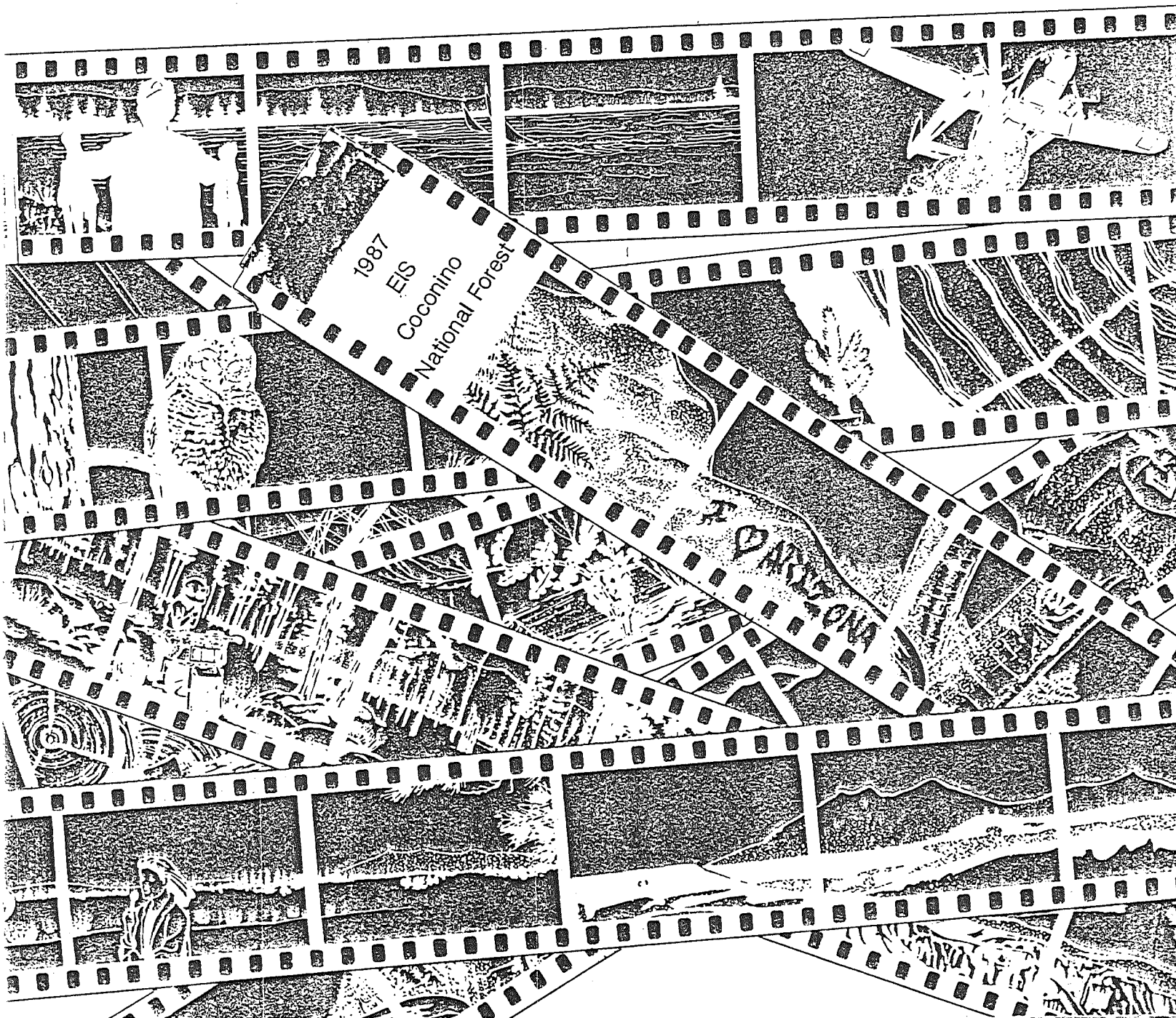
The total area of the Rocky Gulch Research Natural Area is 950 acres, more or less.

United States
Department of
Agriculture

Forest
Service

Southwestern
Region

Coconino National Forest Plan



MANAGEMENT AREA 17

Special Areas
Analysis Areas 48-51 Acres: 4,773

The Special Areas include one geological area, four botanical areas, one research natural area (RNA), Casner Canyon, and one proposed RNA, Rocky Gulch. There are two other RNA's, the San Francisco Peaks and West Fork of Oak Creek, included in the wildernesses that surround them, and G. A. Pearson RNA is included in the Fort Valley Experimental Forest. West Clear Creek proposed RNA is within the West Clear Creek Wilderness. By approval of this Forest Plan, the Red Mountain Geological Area, the Mogollon Rim Botanical Area, the Verde Valley Botanical Area, the Fern Mountain Botanical Area, and the Fossil Springs Botanical Area are officially designated (FSH 2372.2). The proposed Rocky Gulch and West Clear Creek RNA's require establishment reports and designation by the Chief.

- Casner Canyon RNA is located near Sedona and within Oak Creek Canyon. The area contains a pure stand of Arizona cypress along with some chaparral. This area was established in 1973 and contains 565 acres.

- Rocky Gulch proposed RNA is located in the Beaver Creek Watershed. The area contains 950 acres of old-growth ponderosa pine and was one of the control watersheds for research in the Beaver Creek Watershed.

- The 154-acre G. A. Pearson RNA was established in 1950 and is located just north of Flagstaff in a portion of Rocky Mountain Research Station Experimental Forest. The area represents a pure stand of old-growth ponderosa pine. Management decisions for the experimental forests are not made in this Forest Plan.

- The 1,223-acre Red Mountain Geological Area was first proposed in 1977 by the Forest but only had a withdrawal from mineral entry without formal designation. It contains a unique cinder cone within the San Francisco Peaks volcanic field.

- Mogollon Rim Botanical Area, a 360-acre white fir/bigtooth maple community, represents a unique vegetation type found in Arizona only at a few locations along the Mogollon Rim.

- Verde Valley Botanical Area, a 1,140-acre desert scrub community, represents a unique desert community which has been greatly reduced by human activities. Cowania subintegra, a T&E species, is located here.

- Fern Mountain Botanical Area, a 170-acre high elevation riparian scrub community dominated by Bebb's willow, represents a unique riparian community .

- Fossil Springs Botanical Area is a riparian deciduous forest associated with a large perennial spring and covers approximately 26 acres. It is immediately adjacent to the Fossil Springs Wilderness.

Management Emphasis

Emphasize and protect watershed condition and maintain natural ecological conditions on the Research Natural Areas (RNA's) so that they are available for research and education that does not disturb the areas' natural condition. Use restrictions are imposed as necessary to keep areas in their natural or unmodified condition. There is no harvest of timber products, including firewood. RNA's are closed to off-road driving.

The botanical areas and the geological area are managed to maintain, as nearly as possible, existing conditions and natural processes for public enjoyment, demonstration, and study. Interpretative and educational demonstration opportunities are emphasized and enhanced through selective facility development. Natural events are not rehabilitated. Off-road driving is prohibited.

Highlights include:

- Prepare establishment reports for the Rocky Gulch and West Clear Creek proposed Research Natural Areas.
- Prepare implementation schedules for the botanical areas and the geological area.
- Include management that provides for later interpretation.
- Manage for VQO's of Preservation in the research natural areas and Retention or Partial Retention in the geological and botanical areas.

Timber Land Use Classes:

Nonforest	1,432 acres
Forested land withdrawn	
Ponderosa Pine/Mixed Conifer	1,629 acres
Pinyon-Juniper	1,712 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	4,773 acres

Program Components	Activities	Standards and Guidelines
		Recreation Planning and Inventory
A2 Recreation	A01, A02	Prepare an implementation schedule for the Red Mountain Geological Area and post the boundaries for it in the first decade.
		Prepare implementation schedules and post boundaries for Mogollon Rim, Verde Valley, Fern Mountain, and Fossil Springs botanical areas during the first decade.
		Eliminate mention of RNA's in news stories and general informational materials.
		Prepare establishment reports for the Rocky Gulch and West Clear Creek proposed RNA's during the first decade. In the interim, manage them to preserve their suitability for designation.
		As the Arizona Natural Areas Council recommends RNA's and botanical areas for inclusion in the State Natural Areas Program, the Forest will review the recommendations and may support the recommendations and develop VIS programs as needed.
		Dispersed Recreation—Standard Service Level
	A08	As needed, assess carrying capacity in special areas and limit visitors to meet carrying capacity.
		Prohibit off-road driving.
		Range Resources Planning and Inventory
D2 Range	D01, D02	RNA's are assigned no grazing capacity.
		There are 93 acres in the Red Mountain Geological Area open to grazing that are managed at the C level.
		RNA's and botanical areas are managed to protect and maintain their uniqueness and ecological condition.
		AMP's will have provisions to protect the uniqueness and/or ecological condition of the special areas. Approved AMP's are revised and if necessary amended by 1992.
		Timber Resource Management Planning and Inventory
E8 Timber	E06	Timber harvest and firewood cutting is prohibited.

Program Components	Activities	Standards and Guidelines
		Minerals
G1, G2 Minerals	G01	Seek withdrawal of RNA's and the other special areas from locatable mineral entry in the first decade.
		Lands
J3 LMP/Special-Uses/Lands	J01	Do not allow special-use authorizations that would or could adversely affect or change the character of the areas.
		Road Maintenance and Management
L2 Transportation	L19, F04	Manage roads adjacent to botanical areas and the Red Mountain Geological Area to prevent vehicular intrusion. Block and obliterate existing roads entering the area in the first decade.
		Fire Management Planning and Inventory
P2 Protection	P01	Use prescribed fire with planned ignitions as a management tool provided its use is compatible with the management of the specific area.
		Suppression tactics minimize damage to the the character of RNA's and all other special areas.
		Manage each special area as the adjacent lands until implementation schedules are developed.
		Implementation schedules will recognize each area's unique management objectives and the sensitivity of each area to different fire suppression techniques.

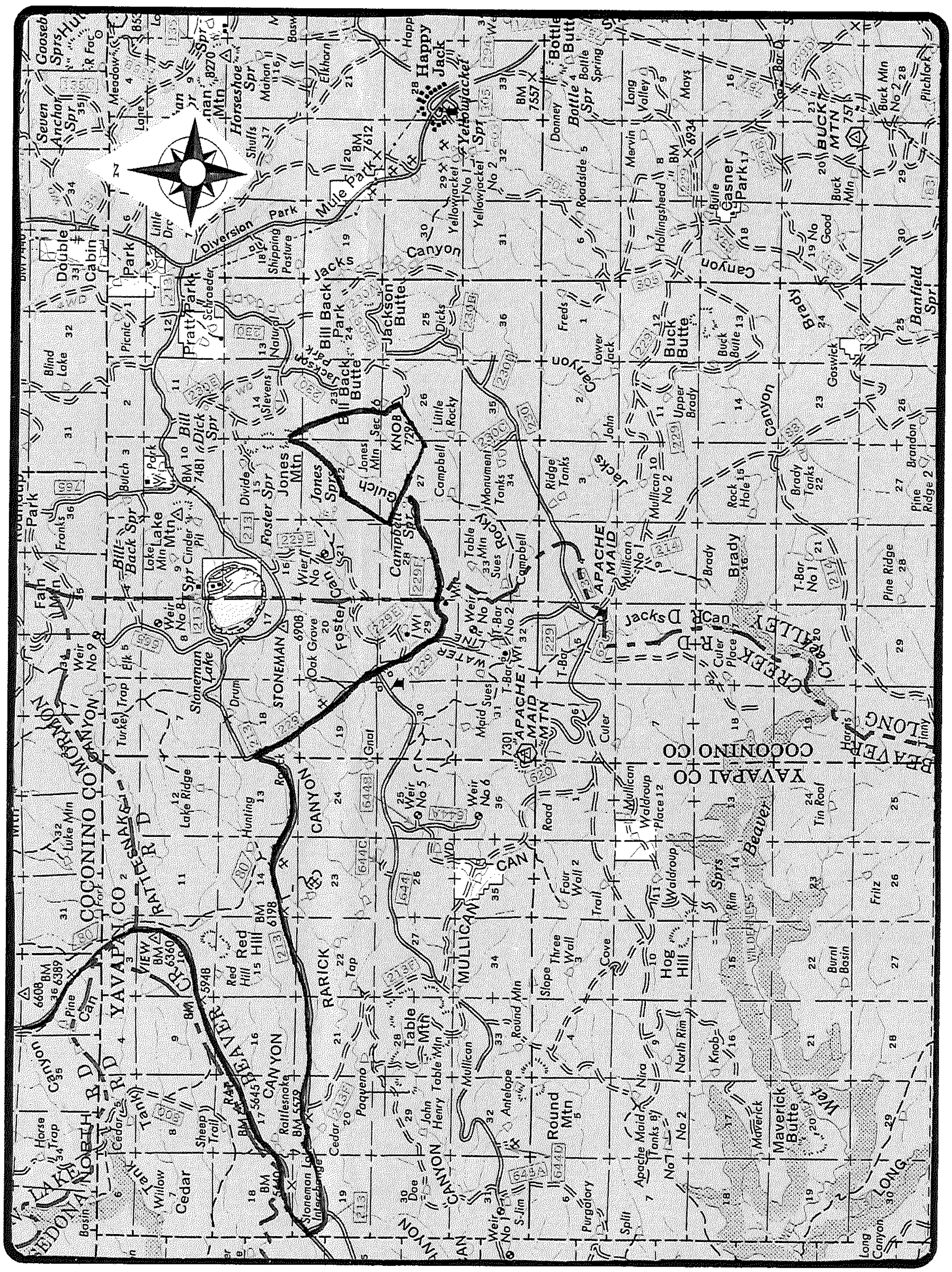


Figure 2. Vicinity map of Rocky Gulch Research Natural Area, Arizona, showing recommended access. Scale: 1 inch=2 miles (1 centimeter=1.27 kilometers).

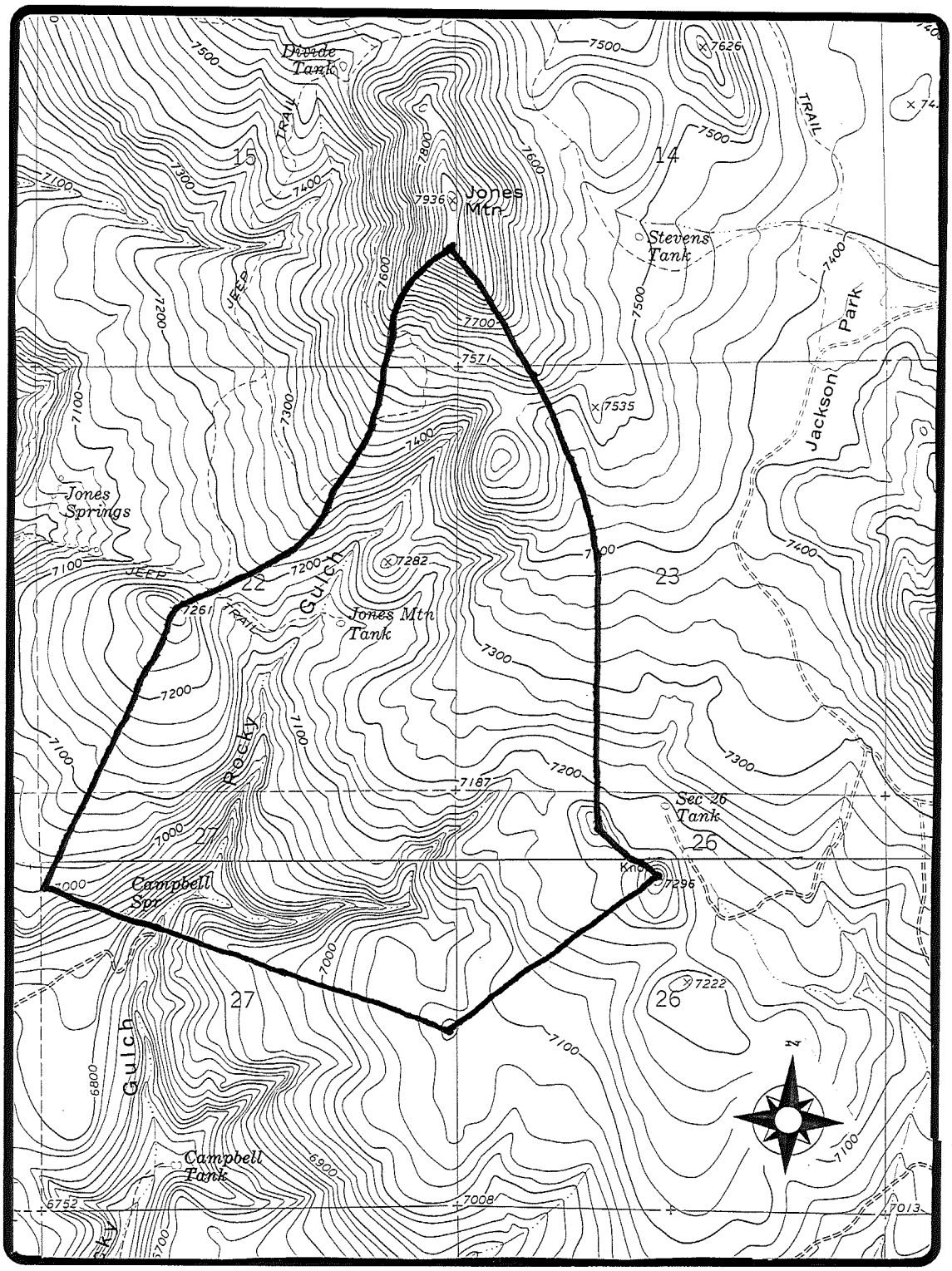


Figure 3. Boundary map of Rocky Gulch Research Natural Area, Arizona, with elevations shown in feet. Scale: 2.64 inches=1 mile (42 millimeters=1 kilometer).

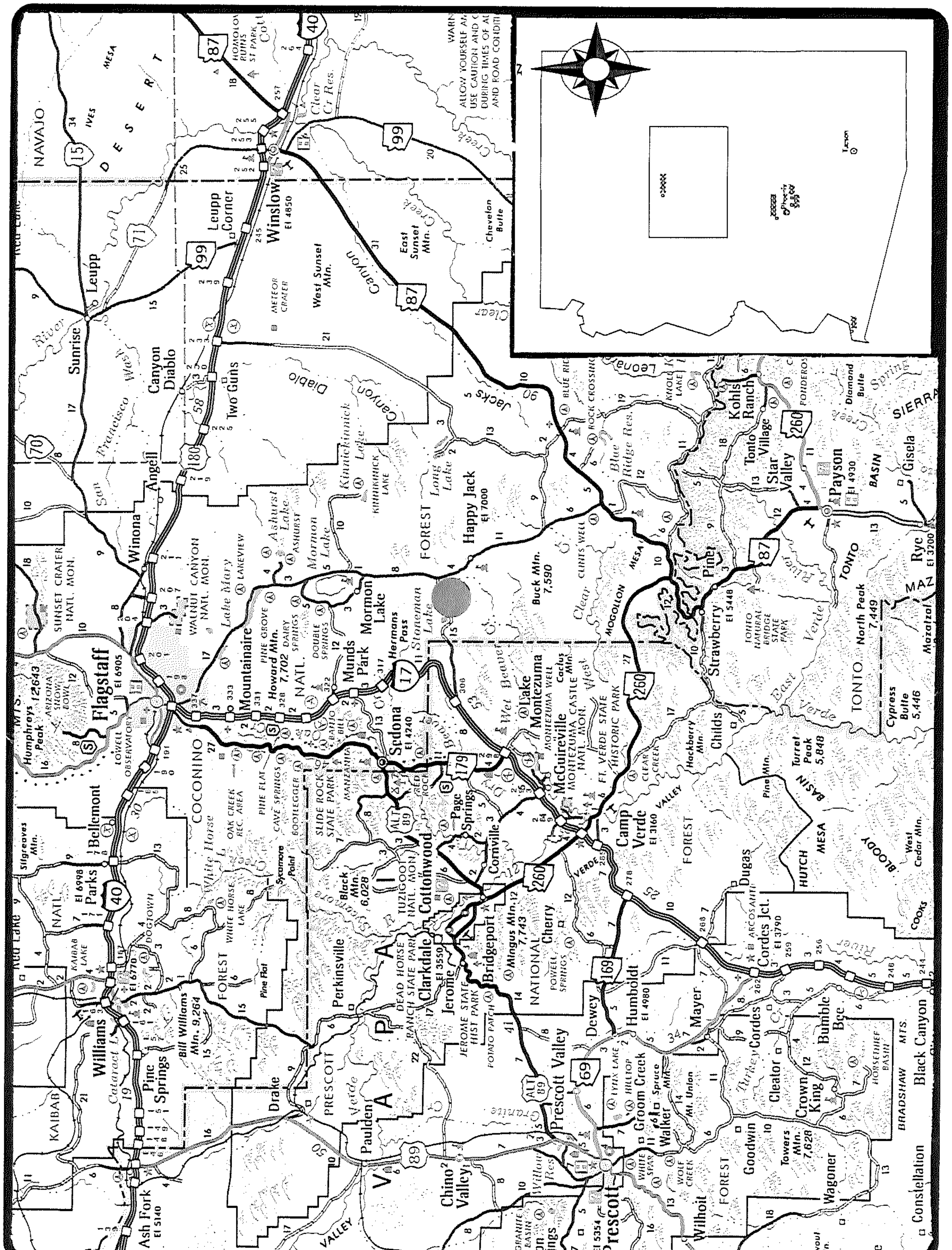
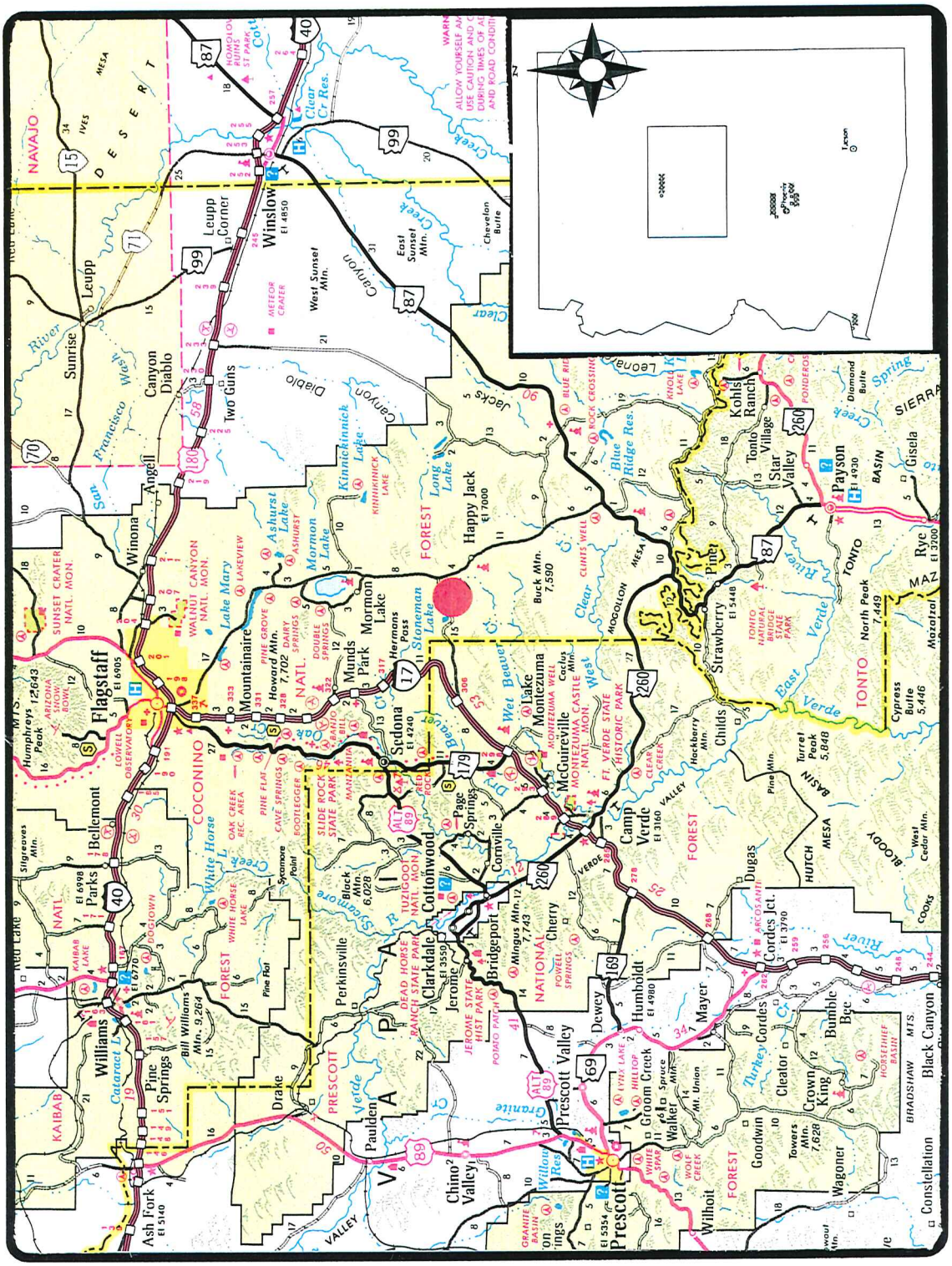


Figure 1. General location of Rocky Gulch Research Natural Area, Arizona, showing nearby cities. Scale: 1 inch=16 miles (1 centimeter=10 kilometers).



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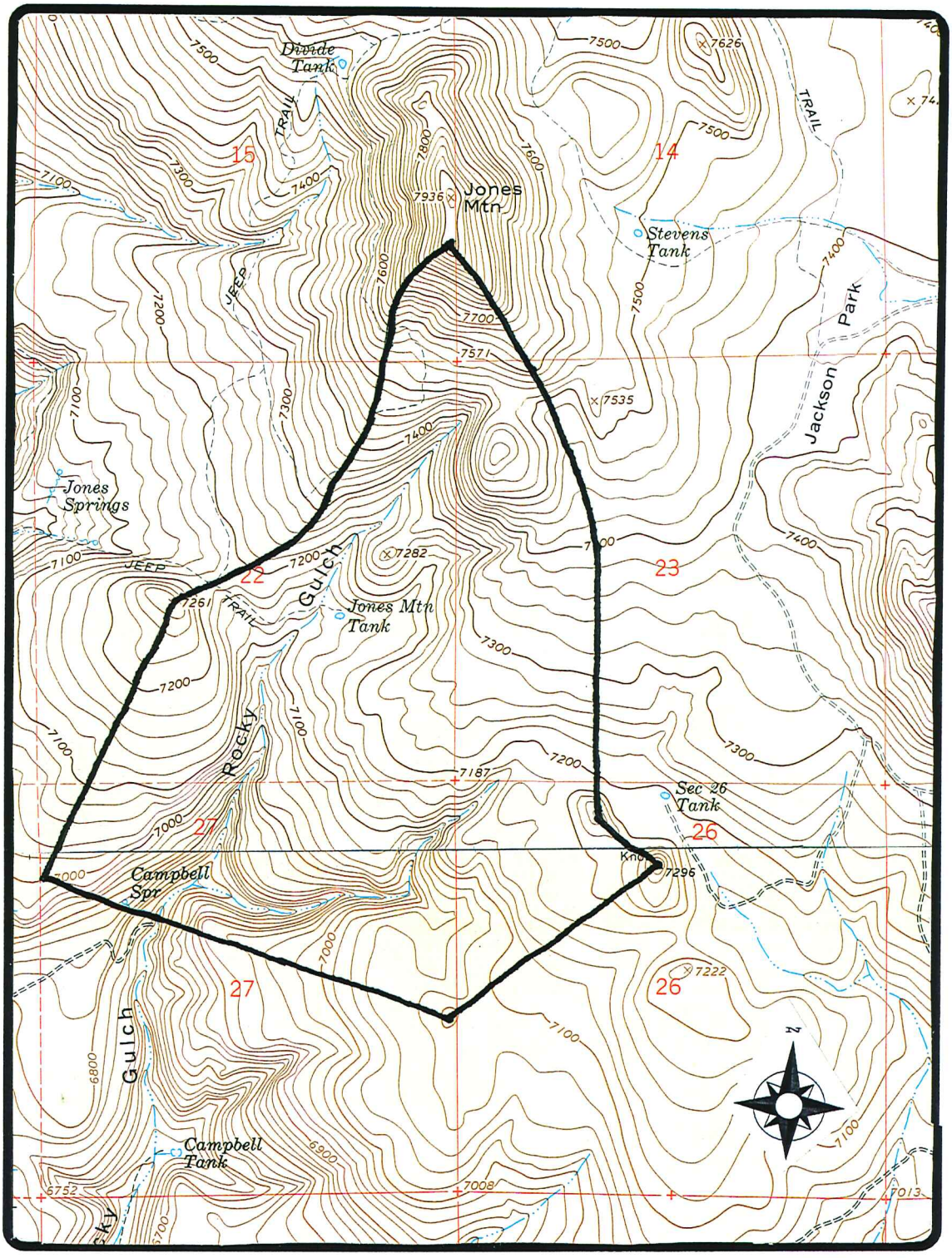

Figure 3. Boundary map of Rocky Gulch Research Natural Area, Arizona, with elevations shown in feet. Scale: 2.64 inches=1 mile (42 millimeters=1 kilometer).

Unfortunately, three allotments converge in the suggested sites. We foresee management conflicts and much refencing in order to set up an RNA here. One weir is almost useless since a highway and old borrow pit interfere with the natural hydrological cycle. Also, the range seemed, at best, in a fair condition. The bottoms, especially were taken over by iris and bluegrass, replacing the more productive and ecologically diverse mixed sedge communities.

The Arizona fescue meadow at Profanity Ridge on Escudilla Mountain remains our choice for this example of montane grassland.

9. Forest Lakes Old Growth Ponderosa Pine

This site was suggested by the Heber Ranger District as a possible RNA. Nearly pristine yellowpine old-growth covers about 600 or so acres in vicinity of Forest Lake Estates (private residence area on patented mining claims). We found this to be truly an exceptional and noteworthy area. The forest meets description of the ponderosa pine/screwleaf muhly-Arizona fescue habitat type. Site index is high II and low I in the bottoms. The forest appears two-aged: an overstory of old yellowpine greater than 250 years and regeneration, often as thickets, of saplings less than 100 years.

While research opportunities here are enormous, we regretfully decline to suggest this site as an RNA within the Region's present need. Our basic reason is that as of now the representation of ponderosa pine ecosystems appears filled. Similar ponderosa pine/bunchgrass ecosystems are within the Gus Pearson, Monument Canyon, and proposed Rocky Gulch RNA's.

We hope this area can continue to serve a useful old-growth function within the Forest Plan. Possible prescriptions as an old-growth requirement for wildlife and as historic or cultural value can be developed. The Task Group suggests that you might consult with Stet Edmunds, Timber Staff, Carson NF. Stet identified a tract of similar old-growth yellowpine on the Mt. Taylor District of the Cibola NF while he was ranger there. Its recreational and wildlife possibilities exceeded its timber returns.

10. Double Cabin

Double Cabin is a site somewhat over 100 acres where nearly pristine ponderosa pine and mixed conifer ecosystems exist as old growth. The ecosystems appear to be ponderosa pine/Arizona fescue on the drier site, white fir/Arizona fescue on the wetter.

Like Forest Lakes ponderosa pine, this area is unusual and of natural area quality. The Region does not contain any example of the white fir/Arizona fescue within its RNA network (minor acreages of this ecosystem can be found on north-facing slopes in Monument Canyon RNA in New Mexico).

However, the proposed site is too small for qualification as RNA, and edge effects upon the old-growth stands would affect much anticipated research there. Again, the old stands might well serve a useful wildlife requirement within that area.