

HAYGROUND CREEK RNA; Springerville Ranger District

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Gila and Salt River Base Meridian, Apache County, Arizona
Township: T. 5 N., R. 27 E.

Section 12 - S1/2 SE1/4,

Section 13 - N1/2 NE1/4 NE1/4,

Township: T. 5 N., R. 28 E.

Section 7 - Lot 4,

Section 18 - Lots 1, 2 & 3,
W1/2 SE1/4 NW1/4,
SW1/4 NE1/4 NW1/4,
NW1/4 SE1/4 SW1/4,
SE1/4 SE1/4 SW1/4,
NE1/4 SE1/4 SW1/4,
NE1/4 SW1/4,
NW1/4 NW1/4 SE1/4,
SW1/4 NW1/4 SE1/4,
SE1/4 NW1/4 SE1/4,
SW1/4 SE1/4,

ACREAGE: Approximately 316 acres (ForPlan) bounded by natural features, and described by a Meets and Bounds Description. Approximately 462 acres with linear boundaries as described in the Aliquot Part Description above.

DECISION NOTICE/DESIGNATION ORDER

Decision Notice Finding of No Significant Impact Designation Order

By virtue of the authority vested in me by the Secretary of Agriculture under regulations 7 CFR 2.42 and 36 CFR 251.23, I hereby establish the Hayground Creek Research Natural Area. The Hayground Creek Research Natural Area shall be comprised of lands described in the section of the Establishment Record entitled "Location."

The Regional Forester, Larry Henson, recommended the establishment of the Hayground Creek Research Natural Area in the Apache National Forest Land and Resource Plan. 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 Apache National Forest Land and Resource Management Plan and Final Environmental Impact Statement which are available to the public.

The Hayground Creek Research Natural Area will be managed in compliance with all relevant laws, regulations, and Forest Service Manual direction regarding Research Natural Areas. It will be administered in accordance with the management direction/prescription identified in the Establishment Record.

I have reviewed the Apache National Forest Land and Resource Management Plan (LRMP) direction for this RNA and find that the management direction cited in the previous paragraph is consistent with the LRMP and that a Plan amendment is not required.

The Forest Supervisor of the Apache National Forest shall notify the public of this decision and will mail a copy of the Decision Notice/Designation Order and amended direction to all persons on the Apache Land and Resource Management Plan mailing list.

Based on the Environmental Analysis, I find that the designation of the Hayground Creek Research Natural Area is not a major federal action significantly affecting the quality of the human environment.

This decision is subject to appeal pursuant to 36 CFR Part 217. A Notice of Appeal must be in writing and submitted to:

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

and simultaneously to the Deciding Officer:

Chief (1570)
USDA, Forest Service
P.O. Box 96090
Washington, D.C. 20090-6090

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

SIGNATURE PAGE

for

RESEARCH NATURAL AREA ESTABLISHMENT RECORD

Hayground Creek Research Natural Area

Apache National Forest

Apache County, Arizona

Prepared by Andy Laurenzi Date 11/3/87
Mark H. Cochran, The Nature Conservancy
Andy Laurenzi, The Nature Conservancy

Recommended by Charles W. Denton Date 4/22/88
Charles W. Denton, District Ranger,
Springerville Ranger District

Recommended by Nick W. McDonough Date 4-22-88
Nick W. McDonough, Forest Supervisor,
Apache-Sitgreaves National Forests

Recommended by John W. Russell Date 5-5-88
John W. Russell, Chairman,
Southwestern Research Natural
Area Committee

Recommended by David Gully Date 6/16/88
Sotero Muniz, Regional Forester
Southwestern Region

Recommended by Charles M. Loveless Date Sept. 29, 1988
Charles M. Loveless, Station Director
Rocky Mountain Forest and Range
Experiment Station

TITLE PAGE

**Establishment Record for Hayground Creek
Research Natural Area within Apache
National Forest, Apache County, Arizona.**

A. INTRODUCTION

The Hayground Creek Research Natural Area (HCRNA) comprises approximately 316 acres (128 hectares) in the Springerville Ranger District of the Apache National Forest in Apache County, Arizona, on reserved public domain National Forest land. The RNA includes a 1 mile (1.6 km) section of Hayground Creek and the adjoining slopes to the canyon rim.

(1) Land Management Planning

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

B. OBJECTIVES

The objectives for establishment of this RNA are:

1. To provide representation of blue spruce (*Picea pungens*)¹ forest in the Southwest Regional RNA system.
2. Preserve and maintain the genetic diversity of Southwestern blue spruce forest.
3. To provide opportunities for research related to silvicultural practices in spruce - fir forest ecosystems.

C. JUSTIFICATION STATEMENT FOR ESTABLISHMENT OF AREA

The HCRNA was identified primarily as an outstanding example of a streamside blue spruce forest. The need for representation of blue spruce forest was identified in the Southwestern Regional Guide (USDA Forest Service, 1983). The major significance of this RNA is the presence of populations of blue spruce in several topographic environments. This tree species has been identified as a gap in the national representation of ecotypes and ecosystems (USDA Forest Service, 1984).

D. PRINCIPAL DISTINGUISHING FEATURES

The principal feature of the HCRNA is the minimally disturbed, Southwestern blue spruce forest that occurs along Hayground Creek and the adjoining south-facing slope. In addition, one of the larger, known populations of Goodding's onion (*Allium gooddingii*), a Category 1 plant species (USDI Fish and Wildlife Service, 1985), occurs within the RNA.

¹In this Establishment Record, all trees are named following Little, E.L.Jr. 1979. Checklist of United States trees (native and naturalized). Agricultural Handbook No. 541. USDA. Washington, DC. All other plants are named following Lehr, J.H. 1978. A Catalog of the flora of Arizona. Northland Press. Flagstaff, AZ.

The perennial stream is a reintroduction site for Apache trout (Oncorhynchus apache), a federally listed, threatened species.

E. LOCATION

The HCRNA is located within the Springerville Ranger District of the Apache-Sitgreaves National Forests in Apache County, Arizona (Figs. 1 & 2). The HCRNA comprises approximately 316 acres (128 hectares). Elevations range from 8100 ft to 8700 feet (2470.5 meters to 2653.5 meters). The center of the area is at latitude 33° 49' north and longitude 109° 26' west.

Specifically, the area lies in portions of Sections 12 and 13 of Township 5 North, Range 27 East, and Sections 7 and 8 of Township 5 North, Range 28 East, Gila and Salt River Meridian, which are included on the USGS Big Lake SW 7.5' topographic quadrangle (Fig. 3).

Beginning at the south 1/4 corner of section 18, T5N, R28E., GSRM;
THENCE west along the south line of section 18 425 feet (129.6 meters);
THENCE northwesterly up a hydrographic divide approximately 1100 feet (335.5 meters) to the precipice of Hayground Creek Canyon;
THENCE northwesterly along said precipice approximately 8000 feet (2440 meters) to the point being on the longitudinal centerline of section 12, T5N, R27E;
THENCE north along said centerline approximately 900 feet (274.5 meters) to a point;
THENCE south 75 east 2700 feet (823.5 meters) to a point on the range line, said point being 650 feet (198.25 meters) north of the northwest corner of previously mentioned section 18;
THENCE south 61 east approximately 1400 feet (427 meters) to a point on the north line of said section 18, also being on the north precipice of Hayground Creek Canyon;
THENCE along said precipice approximately 4500 feet (122 meters) to the south end of the precipice;
THENCE southerly along a hydrographic divide approximately 2100 feet (640.5 meters) to a point on the south line of section 18;
THENCE west along the south line of section 18 approximately 1280 feet (390.4 meters) to the point of Beginning.

The HCRNA can be reached by proceeding south on FS Road 72 from its junction with FS Road 116. Turn east at the intersection located 1.3 miles (2.1 km) south. Immediately after turning make a sharp turn to the north and follow this road approximately 3.9 miles (4.8 km) north, staying to the left at all times. The road dead ends at a stock tank and the RNA is due south from there. The latter 3 miles (4.8 km) of dirt road are passable only with a four-wheel drive vehicle.

F. AREA BY COVER TYPES

Information on cover types in the HCRNA was obtained from the Southwest Regional RNA Progress Report (1984) and a field reconnaissance.

Küchler

The cover types are Spruce--Fir--Douglas-fir Forest, K-019 and Southwestern Spruce-Fir Forest, K-020 (Küchler, 1966).

Society of American Foresters

The cover types are Blue Spruce, SAF 216 and Engelmann spruce-subalpine fir, SAF 206 (Eyre, 1980).

Habitat Types or Plant Associations

The streamside blue spruce forest is the Picea pungens/Cornus stolonifera habitat type (USDA Forest Service, 1986a). In addition to the streamside forest, the steep north-facing slopes adjoining the stream support the Picea engelmanni/Erigeron eximius habitat type. The drier, warmer slopes on the south side of the canyon contain a variation (Muhlenbergia virescens phase) of the Picea pungens/Festuca arizonica habitat type (Fig. 4).

Table 1. Estimated areas of vegetation cover types in the Hayground Creek RNA.

Type1	SURFACE AREA			
	SAF Type2	Küchler Type3	Acres	Hectares
<u>Picea pungens/ Festuca arizonica</u>	SAF 216	K-019	119	48.2
<u>Picea pungens/ Cornus stolonifera</u>	SAF 216	K-019	10	4.0
<u>Picea engelmanni/ Erigeron eximus</u>	SAF 206	K-020	187	75.7
		TOTAL	<u>316</u>	<u>127.9</u>

1. USFS Habitat Type, USDA Forest Service (1986a).
2. Society of American Foresters Cover Type, Eyre (1980).
3. Potential Natural Vegetation Type, Küchler (1966).

G. PHYSICAL AND CLIMATIC CONDITIONS

Hayground Creek is a 2nd order, perennial stream entrenched 400 feet (122 m) within the basalt flows of the region. The stream is a tributary of the West Fork of the Black River and stream gradient is steep. Approximately 1 mile (1.6 km) of the stream is included within the RNA boundary. Adjoining side slopes are very steep (> 60%) with cobbly, talus slopes, especially on the less vegetated, south slopes.

Trewartha climate type is boreal (USDA Forest Service, 1986b). Average annual temperatures are 36oF (2.2oC). Average July and January temperatures are 54oF (12.2oC) and 19oF (7.2oC), respectively. Annual precipitation averages 29 inches (74 cm) which is distributed equally between the warm season, (May - October), and the cool season. Mean annual snowfall is 67 inches (178 cm) and frost free period is 70 days.

H. DESCRIPTION OF VALUES

(1) Flora

The primary habitat type of the HCRNA is the streamside blue spruce forest. This forest is the Picea pungens/Cornus stolonifera habitat type, (USDA Forest Service, 1986a), originally described by Moir and Ludwig (1979) as the Picea pungens/Poa pratensis habitat type. In addition to blue spruce, several other trees are common overstory components. These are Engelmann spruce (Picea engelmanni), quaking aspen (Populus tremuloides) and white fir (Abies concolor). Understory vegetation is rich and carpets much of the immediate streamside.

In addition to the streamside forest, the upper, north-facing slopes adjoining the stream include the Picea engelmanni/Erigeron eximus habitat type. This forest stand is densely vegetated, and blue spruce, quaking aspen and white fir are present as secondary components of the overstory vegetation. The warmer, drier south-facing slopes contain a variation (Muhlenbergia virescens phase), of the Picea pungens/Festuca arizonica habitat type. Grass and forb cover is abundant and the forest canopy is open. Ponderosa pine (Pinus ponderosa) and Douglas fir (Pseudotsuga menziesii) are co-dominant overstory trees with blue spruce.

Of particular note within the RNA, is the extensive population of Goodding's onion, a plant currently under consideration for listing as threatened (USDI Fish and Wildlife Service, 1990).

The flora of HCRNA has not been thoroughly collected, described or studied. The following list of plants was compiled by Will Moir, USFS plant ecologist, Rocky Mountain Forest and Range Experiment Station.

Abbreviated Plant List for Hayground Creek RNA

<u>Latin name</u>	<u>Common name</u>
TREES	
<u>Abies concolor</u>	white fir
<u>Abies lasiocarpa</u> var <u>lasiocarpa</u>	corkbark fir
<u>Picea engelmanni</u>	Engelmann spruce
<u>Picea pungens</u>	blue spruce
<u>Pinus ponderosa</u>	ponderosa pine
<u>Populus tremuloides</u>	quaking aspen
<u>Pseudotsuga menziesii</u>	Douglas fir
SHRUBS	
<u>Actaea rubra</u>	western baneberry
<u>Cornus stolonifera</u>	red ossier dogwood
<u>Humilis</u> sp.	
<u>Lonicera involucrata</u>	honeysuckle
<u>Potentilla fruticosa</u>	cinquefoil
<u>Ribes cereum</u>	gooseberry
<u>Ribes wolfii</u>	gooseberry

Ribes pinetorum
Rosa sp.
Rubus parviflorus
Rubus strigosus
Shepherdia canadensis

gooseberry
rose

FORBS

Allium gooddingii
Mertensia franciscanus
Rudbeckia lacinata
Helianthella quinquenervis
Athyrium filix-femina
Viola nephrophylla
Vertratum californica
Sidalcea neomexicanum
Geranium richardsonii
Thalictrum fendleri
Ligusticum porteri
Silene scouleri
Aralia sp.
Hypericum formosum
Aconitum sp.
Pedicularis grayi
Geum allepicum
Agrimonia striata
Pteridium aquilinum
Iris missouriensis
Trifolium sp.
Erigeron eximus
Erigeron speciosus
Aster cf. adsurgens
Smilicina stellata

Goodding's onion
bluebell

GRASSES AND GRASS-LIKE PLANTS

Agropyron sp.
Agrostis sp.
Bromus ciliatus
Calamagrostis sp.
Carex festivella
Carex occidentalis
Carex foenea
Elymus glaucus
Festuca arizonica
Glyceria sp.
Melica porteri
Muhlenbergia virescens

screwleaf muhly

Poa pratensis
Scirpus sp.
Trisetum montanum

(2) Fauna

The only threatened, endangered or sensitive animal species known from this site is the threatened Apache trout (Oncorhynchus apache). Apache trout were reintroduced to Hayground Creek in 1990, and are under study and cooperative management by the Arizona Game and Fish Department and the USFS. Forest management upstream and within the HCRNA is directed toward maintaining habitat for this species (Novy & Lopez, 1991).

The following terrestrial animal list was derived from the RUN WILD III computer-stored data base (Lehmkuhl and Patton, 1982) for the Subalpine Conifer Forest and Woodland biome, Spruce-Alpine Fir series (211.200) for Greenlee County, Arizona.

Abbreviated Animal List for Hayground Creek R.N.A.

Common name

Latin name

BIRDS

Dipper, American

Cinclus mexicanus

Flicker, northern

Colaptes auratus

Goshawk, northern

Accipiter gentilis

Jay, gray

Perisoreus canadensis

Kinglet, golden-crowned

Regulus satrapa

Owl, spotted

Strix occidentalis

Sparrow, white-crowned

Zonotrichia leucophrys

Woodpecker, hairy

Pixcoides villosus

MAMMALS

Bear, black

Ursus americanus

Cottontail, Nuttall's

Sylvilagus nuttallii

Mouse, western harvest

Reithrodontomys megalotis

Mouse, western jumping

Zapus princeps

Myotis, long-legged

Myotis volans

Porcupine

Erethizon dorsatum

Vole, long-tailed

Microtus longicaudus

Weasel, long-tailed

Mustela freneta

Woodrat, mexican

Neotoma mexicana

AMPHIBIANS AND REPTILES

Lizard, short-horned

Phrynosoma douglassi

Gopher, snake

Pituophis melanoleucus

(3) Geology

The entire area is underlain by Quaternary and Tertiary age basalt flows (Arizona Department of Transportation, 1980).

(4) Soils

The valley plain is mainly occupied by deep well, or moderately well, drained soils classified as Pachic Cryoboralls, fine-loamy, mixed (USDA Forest Service, 1986b). The adjacent hill slopes consist of soils classified as Typic Cryoboralls, loamy-skeletal, mixed.

(5) Lands

All lands within the HCRNA are controlled by the Apache National Forest. No private inholdings are involved.

(6) Cultural

There are no known cultural resources found within the area.

(7) Other

No other significant natural values which have not already been discussed occur in the HCRNA.

I. IMPACTS AND POSSIBLE CONFLICTS

(1) Mineral Resources

No known mineral resources exist in this area. There has been seismic testing 4 miles (6.4 km) to the northeast with no additional activity known in the area.

(2) Grazing

No use has been observed due to inaccessibility of the area to livestock. The withdrawal of this area will not result in any permitted animal reduction. Access points at the lower and upper end of the RNA will be fenced, requiring less than 0.5 miles (0.8 km) of additional fencing.

(3) Timber

This area has about 316 acres (128 hectares) that is mostly timbered. The area has been withdrawn from the timber base.

(4) Watershed Values

This area contributes to the West Fork of the Black River, which is a tributary to the Salt River.

(5) Recreation Values

Recreation use in this area is primarily hunting. There is not any access into the area other than by horse or foot. There is some use that comes up the West Fork of the Black River from the West Fork Campground, approximately 2 miles (3.2 km) down stream. There should be no conflicts between this use and potential research.

(6) Wildlife and Plant Values

The stream that passes through this area has been set aside for Apache trout (Oncorhynchus apache) and will be managed for that purpose. Wild onion (Allium gooddingii), a Category 1 species, is also found within the area. Exclusion of livestock from the riparian zone upstream of the HCRNA and from the HCRNA itself will be sufficient to maintain habitat for these species.

(7) Special Management Area Values

The HCRNA does not contain any congressionally designated special management areas, nor lie adjacent to any, so no conflicts with such areas exist.

(8) Transportation Plans

Access by vehicle is within 1/4 mile (0.4 km) on an old timber sale road. This is the only road that will have any effect on the area and no changes to this road or transportation plans for this area are anticipated or required.

J. MANAGEMENT PRESCRIPTION

The HCRNA is recommended in the Apache-Sitgreaves National Forests Plan Management Area 10 (see Appendix). Management emphasis is on the protection of the natural ecosystem for research purposes.

(1) Vegetation Management

No vegetative management practices are planned in this management area. The RNA is assigned a no grazing capacity and will be fenced as necessary to protect from livestock trespass.

K. ADMINISTRATION RECORDS AND PROTECTION

Administration and protection of the HCRNA will be the responsibility of the Apache-Sitgreaves National Forests. The District Ranger, Apache-Sitgreaves National Forests, Springerville Ranger District (P.O. Box 640, Springerville, Arizona 85938) has direct responsibility. Attention will be given to the construction and maintenance of fences sufficient to prevent livestock from entering the RNA.

Records for the HCRNA will be maintained in the following offices:
Regional Forester, Southwestern Region, Albuquerque, NM
Rocky Mountain Forest & Range Experiment Station, Fort Collins, CO
Apache-Sitgreaves National Forest, Springerville, AZ
District Ranger, Springerville Ranger District, Springerville, AZ

L. ARCHIVING

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. Requests

to conduct research in the area should be referred to him at 240 W. Prospect Rd., Ft. Collins, CO 80526-2098. He, or his designee, will evaluate research proposals and coordinate all studies and research in the area with the District Ranger and RNA research coordinator. Plant specimens collected in the course of research in the area will be maintained at the University of Arizona, College of Agriculture herbaria in Tucson, Arizona, or at the Forest Supervisor's office. Animal specimens will be maintained at the Arizona State University, Department of Zoology vertebrate museum in Tempe, Arizona.

M. REFERENCES

- Arizona Department of Transportation. 1980. A materials inventory of Apache county. Arizona Highway Division, Phoenix, Arizona.
- Eyre, F.H., ed. 1980. Forest cover types of the United States and Canada. Society of American Foresters, Washington, D.C. 148 pp.
- Küchler, A.W. 1966. Potential natural vegetation. USDI Geol. Survey. 1969. Washington, DC.
- Lehmkuhl, J.F. and D.R. Patton. 1984. Run Wild, Wildlife/Habitat relationships: user's manual for the Run Wild III data storage and retrieval system. USDA Forest Service, Southwestern Region, Wildlife Unit Technical Report, 68 pp.
- Moir, W.H. and J.A. Ludwig. 1979. A classification of spruce- fir and mixed conifer habitat types of Arizona and New Mexico. USDA Forest Service Research paper. RM-207, 47 pp.
- Novy, J. and M. Lopez. 1991. Hayground Creek fish management report 1988-1990. Arizona Game and Fish Dept. Statewide Fisheries Investigations, Survey of Aquatic Resources, Federal Aid Project F-7-M-33 Report, 35 pp.
- USDA Forest Service. 1983. Regional guide for the Southwestern Region. USDA Forest Service, Southwestern Region, Albuquerque, NM.
- USDA Forest Service. 1984. Progress report, Research Natural Areas: recommended representations for important ecosystems on National Forest System Land in the Southwestern Region. USDA Forest Service, Region 3, Albuquerque. 90 pp.
- USDA Forest Service. 1986a. Forest and Woodland Habitat Types (Plant Associations) of Southern New Mexico and Central Arizona (North of the Mogollon Rim). Edition 2. 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. Environmental Impact Statement, Apache-Sitgreaves National Forests Plan. USDA Forest Service, Southwestern Region, Albuquerque, NM. 872 pp.
- USDA Forest Service. 1987b. Apache-Sitgreaves National Forests Plan. USDA Forest Service, Southwestern Region, Albuquerque, NM. 261 pp.
- USDI Fish and Wildlife Service. 1990. Endangered and threatened wildlife and plants; review of plant taxa for listing as endangered or threatened species; notice of review. Federal Register Vol.55 No.35:6184-6229.

APPENDIX

These pages are reproduced from the
Apache-Sitgreaves National Forests Plan.



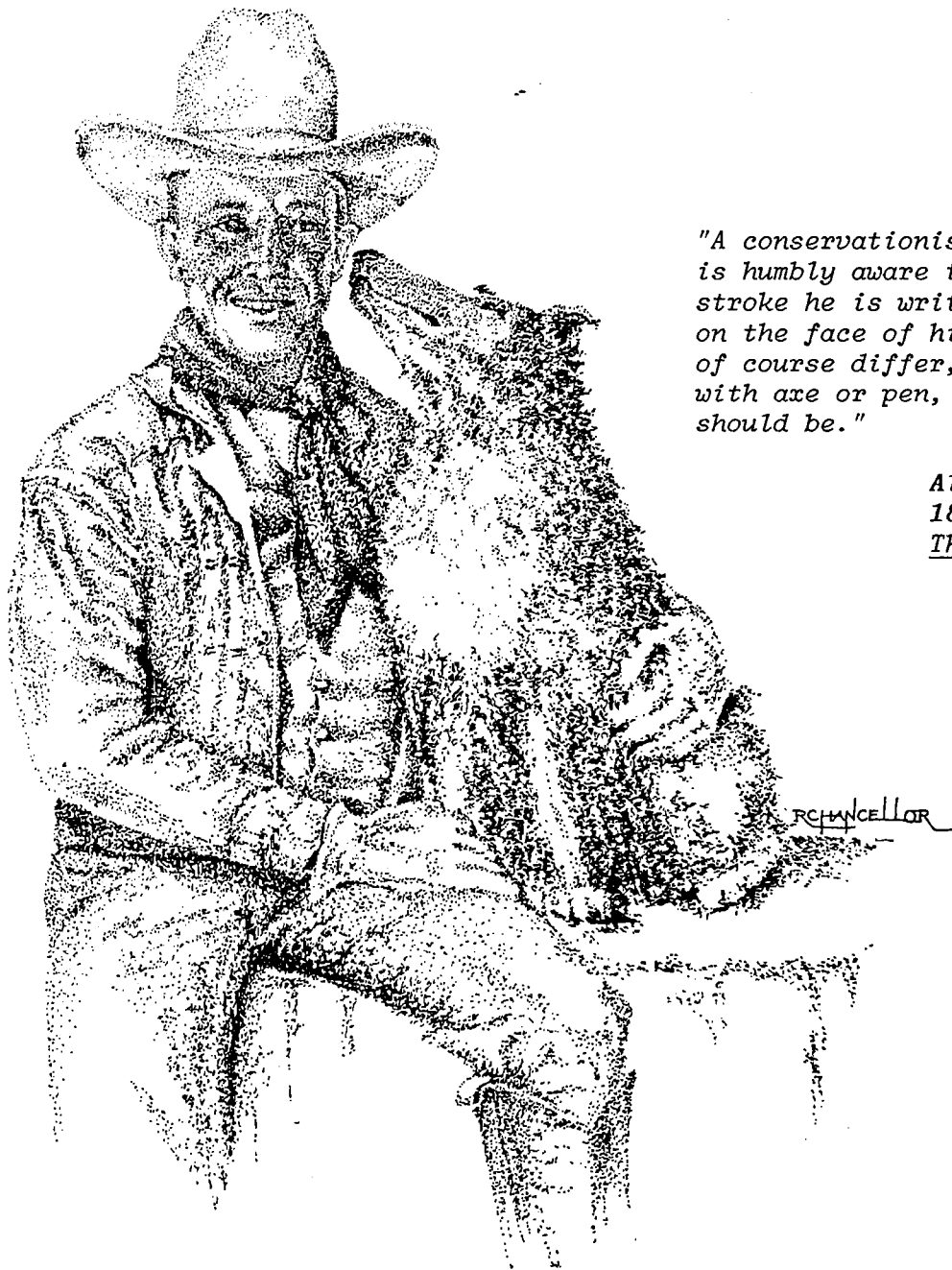
United States
Department of
Agriculture

Forest
Service

Southwestern
Region



Apache-Sitgreaves National Forests Plan



"A conservationist is one who is humbly aware that with each stroke he is writing his signature on the face of his land. Signatures of course differ, whether written with axe or pen, and that is as it should be."

*Aldo Leopold
1887-1948
The Sand County Almanac*

MANAGEMENT AREA 10

Analysis Areas: 92, 94, 230, 240, 270

Research Natural Areas

Acres: 2,550

This area includes the following research natural areas:

<u>Status</u>	<u>Name</u>	<u>Type</u>	<u>Areas-Acres</u>
Existing	Phelps Cabin	Montane Grassland	312
Recommended	Thomas Creek	Mixed Conifer	500
Recommended	Escudilla Mtn.	Spruce Montane grassland	909
Recommended	Wildcat	Pinyon Juniper	513
Recommended	Hayground	Blue Spruce/ Allium Goodingii	316

Management Emphasis:

Emphasis protection of the natural ecosystem for research purposes.

Timber Suitability Land Classification

Total National Forest Land	2,550
Not Capable, Available, or Suitable	2,550
Not Appropriate	0
Suitable	0

No vegetative management practices are planned in this management area.

<u>Program Components</u>	<u>Activities</u>	<u>Applicable Analysis Areas</u>	<u>Standards and Guidelines</u>
	A01	ALL	<u>Recreation</u> Prepare a dispersed use implementation plan with the objective of identifying the recreation attractions and means to discourage use.
	A08		Implement the plan. Do not encourage recreation use in these areas.

<u>Program Components</u>	<u>Activities</u>	<u>Applicable Analysis Areas</u>	<u>Standards and Guidelines</u>
D2	D01	ALL	<u>Range</u> Range resource planning and inventory. RNA's are assigned no grazing capacity. RNA's are fenced to protect them as necessary.

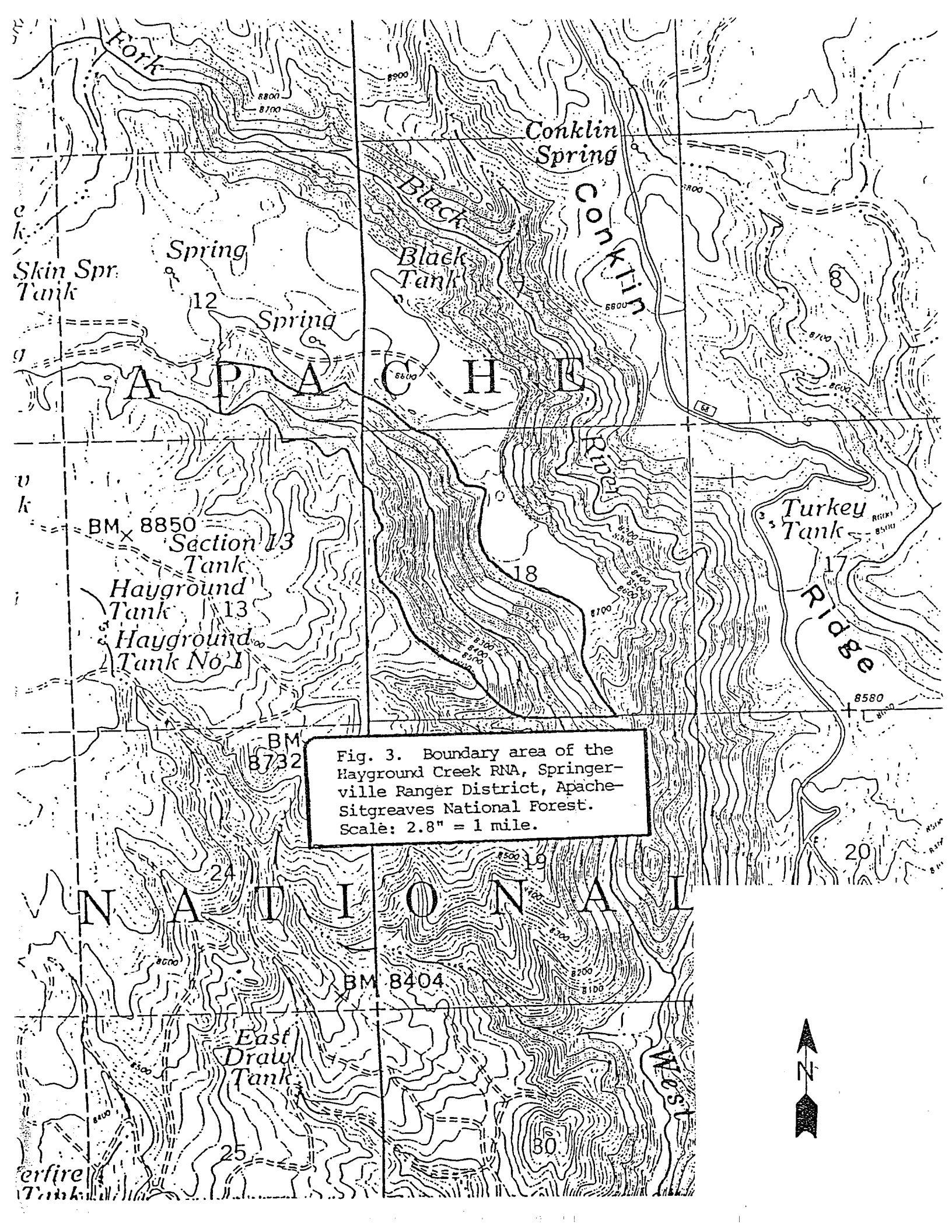
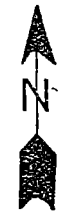
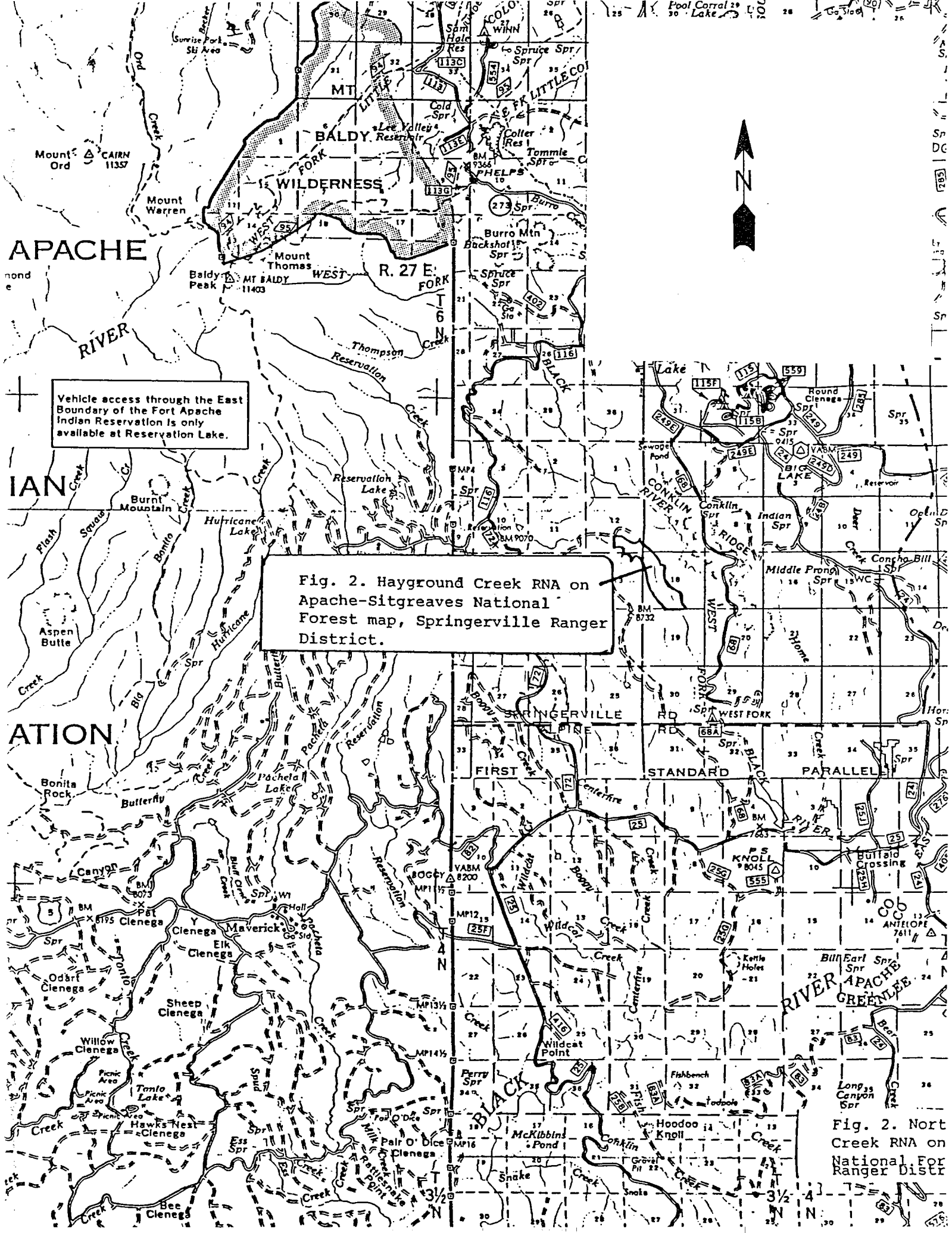


Fig. 3. Boundary area of the Hayground Creek RNA, Springer-ville Ranger District, Apache-Sitgreaves National Forest. Scale: 2.8" = 1 mile.





Vehicle access through the East Boundary of the Fort Apache Indian Reservation is only available at Reservation Lake.

Fig. 2. Hayground Creek RNA on Apache-Sitgreaves National Forest map, Springerville Ranger District.

Fig. 2. Nort Creek RNA on National For Ranger Distr

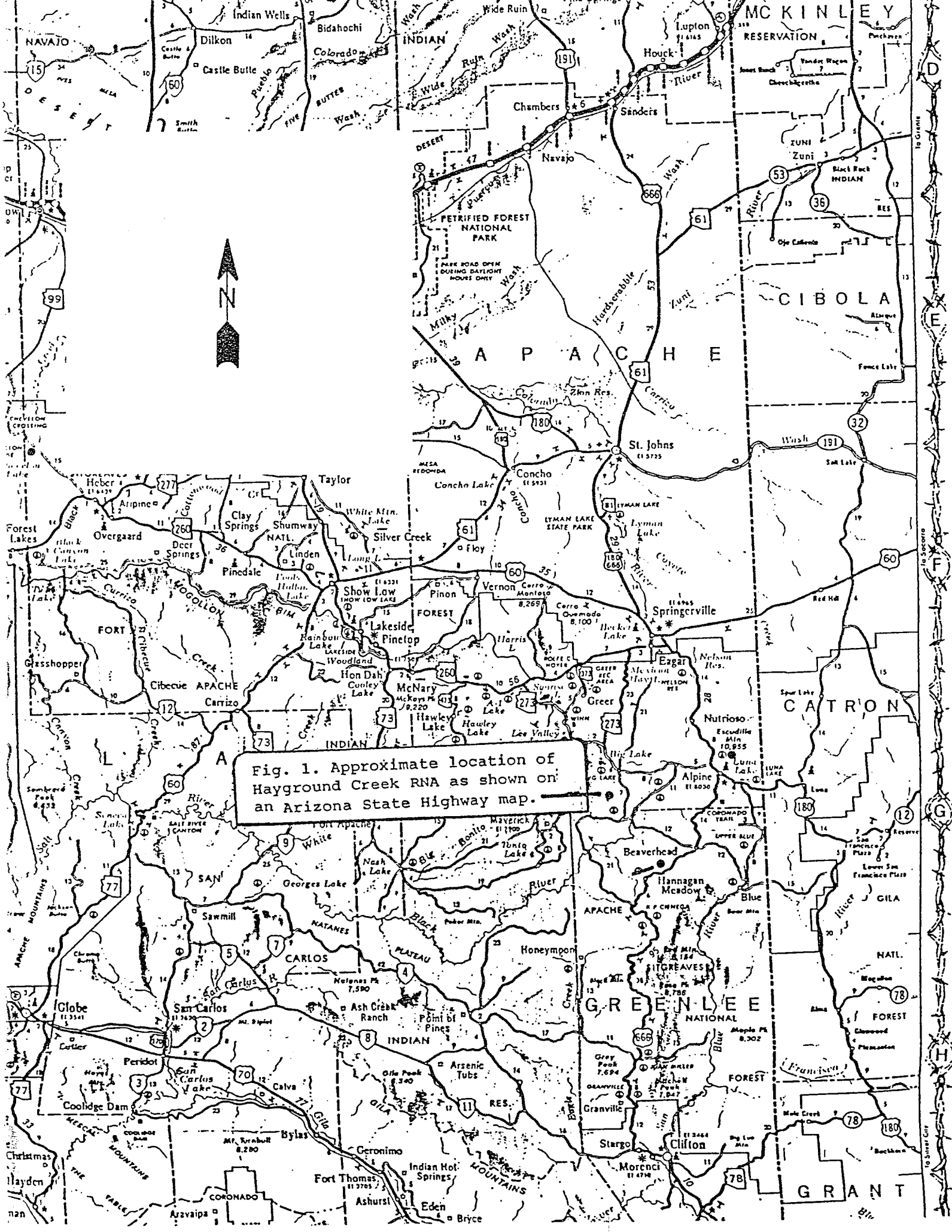


Fig. 1. Approximate location of Hayground Creek RNA as shown on an Arizona State Highway map.

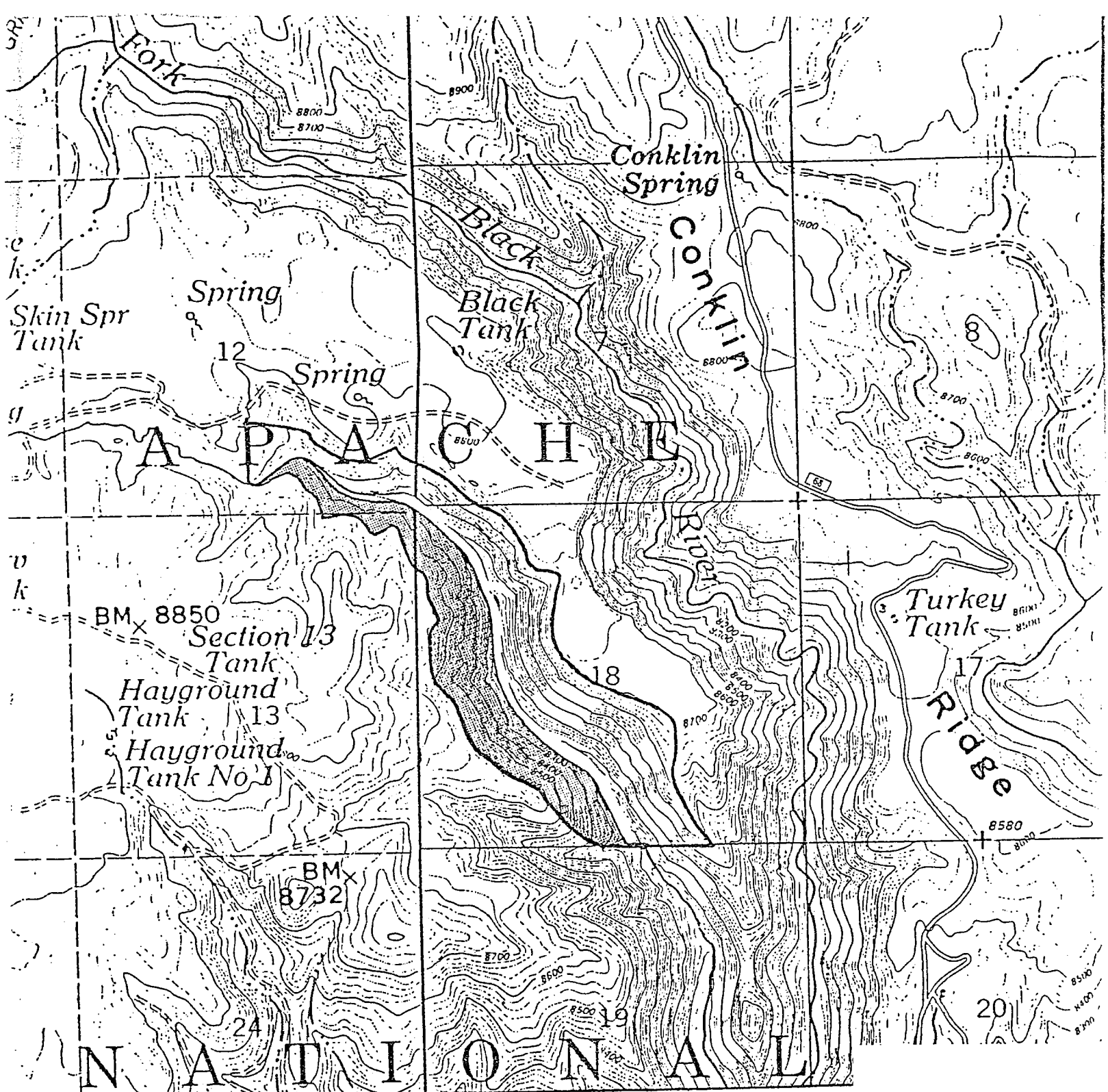


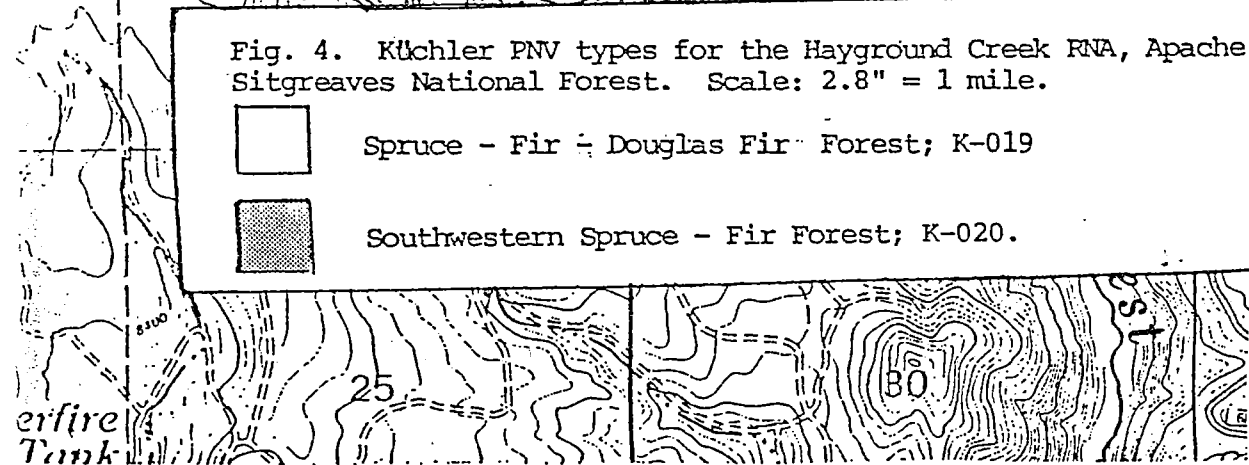
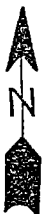
Fig. 4. Küchler PNV types for the Hayground Creek RNA, Apache Sitgreaves National Forest. Scale: 2.8" = 1 mile.



Spruce - Fir - Douglas Fir Forest; K-019



Southwestern Spruce - Fir Forest; K-020.



HAYGROUND CREEK
R.N.A.
APACHE-SITGREAVES NATIONAL FOREST

Beginning at the south 1/4 corner of Section 18, T.5 N., R.28 E., G.S.R.M.,
Thence West along the south line of said Section 18 a distance of 170 feet.
Thence N47°W, a distance of 3550 feet to the West 1/4 of said Section 18.
Thence North, along the west line of said Section 18, a distance of 1600 feet, from which point the northwest corner of Section 18 bears North, a distance of 900 feet.
Thence N60°W, a distance of 1600 feet.
Thence N66°W, a distance of 1130 feet.
Thence North, a distance of 980 feet.
Thence S76°E, a distance of 2520 feet, to a point on the west line of Section 7, T.5 N., R.28 E., G.S.R.M.. From which point the northwest corner of said Section 18 bears South a distance of 720 feet.
Thence S54°E, a distance of 1200 feet, to a point on the north line of said Section 18. From which point the northwest corner of Section 18 bears West a distance of 990 feet.
Thence S46°E, a distance of 1515 feet.
Thence S07°W, a distance of 710 feet.
Thence S27°E, a distance of 560 feet.
Thence S62°E, a distance of 1650 feet.
Thence South, a distance of 950 feet.
Thence S28°E, a distance of 1000 feet, to a point on the south line of said Section 18.
Thence West along the south line of said Section 18 a distance of 1330 feet to the point of beginning.

The described Hayground Creek R.N.A. contains 310 acres more or less.

The intent of this description is to identify the Hayground Creek R.N.A., as would be identified by a survey.

The above description was produced from information identified on the Big Lake Quad Map.

This description was prepared for Forest Service use in the preparation of R.N.A. documents

The above description for the Hayground Creek R.N.A., has been reviewed by me for use in an area designation. The legals are acceptable as presented, and no potential problems were noted during my review.

Douglas J. Williams
FOR Regional Land Surveyor

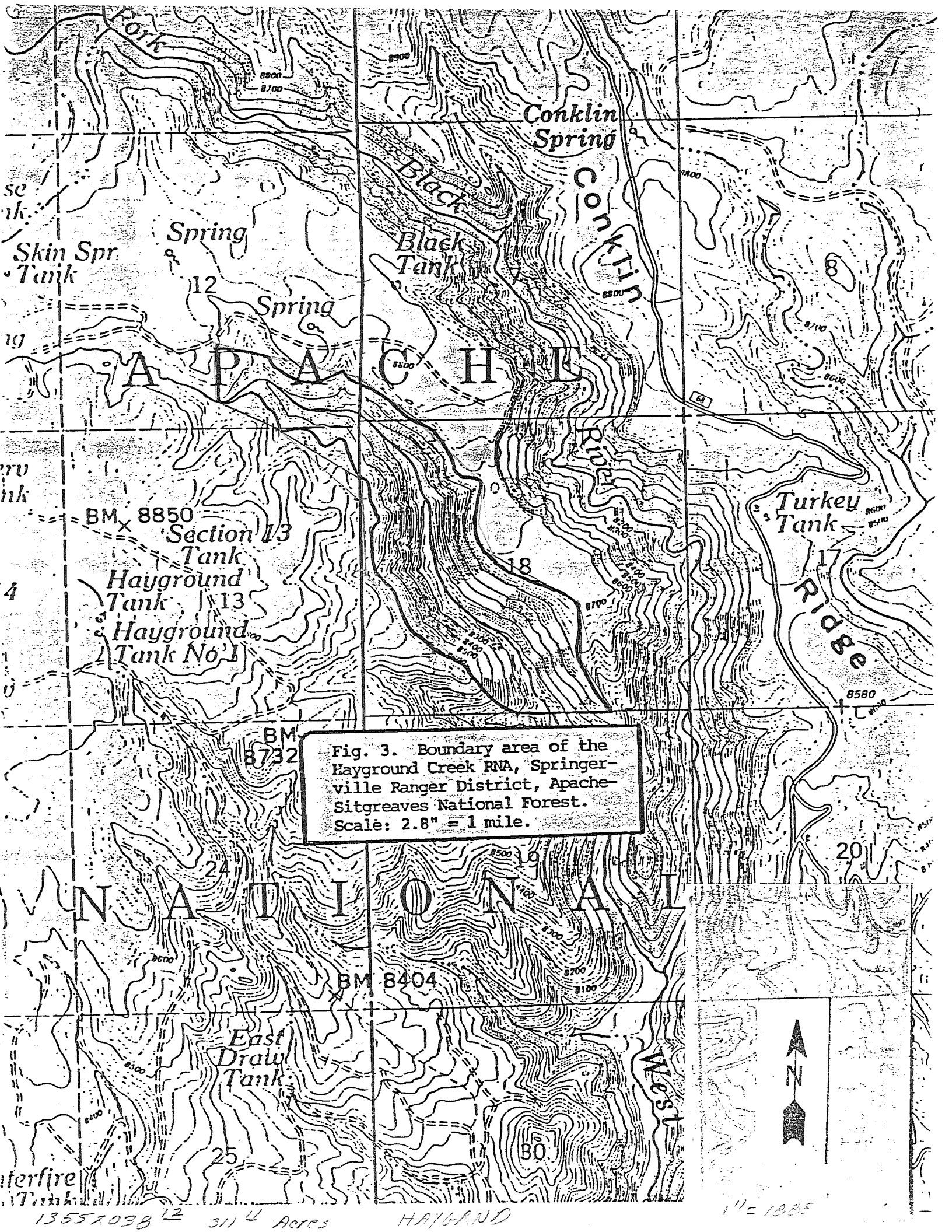


Fig. 3. Boundary area of the Hayground Creek RNA, Springer-ville Ranger District, Apache-Sitgreaves National Forest. Scale: 2.8" = 1 mile.

13557038 12 311 1/2 Acres HAYGROUND

11-1985

ENVIRONMENTAL ASSESSMENT HAYGROUND CREEK RESEARCH NATURAL AREA

Apache-Sitgreaves National Forests, Springerville Ranger District
Apache County, Arizona

Proposed Action

The proposed action is to establish the Hayground Creek Research Natural Area (RNA), and to manage it according to the direction provided in the Land and Resource Management Plan (Forest Plan) for the Apache-Sitgreaves National Forests. The Hayground Creek RNA was proposed for establishment and management direction was provided in the Forest Plan in Management Area 10, Research Natural Areas, pages 203 and 204. 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 Hayground Creek 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). Hayground Creek RNA contributes to this series of RNA's by providing an example of blue spruce streamside forest, as discussed in the Regional Guide, page 3-9. 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 habitat type as suitable for inclusion in the national network. Establishment of the Hayground Creek RNA provides the long-term protection and recognition of blue spruce streamside forest.

The Hayground Creek area was identified in the Forest Plan as a "proposed" RNA based on the relatively undisturbed conditions of the blue spruce streamside forest 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, and no important changes have occurred.

Conditions and environmental effects of designation are the same as described on pages 171 and 216 of the EIS for the Forest Plan and pages 3-7 through 3-12 of the Regional Guide. Site specific conditions and effects are as follows:

- The area is nearly inaccessible to livestock, so it has received little livestock use. The currently proposed allotment management plan for the area will exclude livestock from Hayground Creek, including the proposed RNA.
- No known significant mineral resources exist within the area.
- Recreation use is light and mostly limited to fishing and hunting. There are no roads or trails within the area.
- The area is mostly timbered, but is considered inaccessible for timber management. It is currently withdrawn from the timber land base.

Designation of alternate RNA's for protection was considered during Forest Plan development (Public Comments and Forest Service Response to DEIS, pages 66, 74, 402). A Region-wide study of potential RNA's

was conducted as input to the Regional Guide, and Hayground Creek was determined at that time to provide the most appropriate site for inclusion in the national network for protection of this habitat type.

Alternatives and Environmental Consequences

Alternative A, Proposed Action

Alternative A would designate a 970 acre area as the Hayground Creek RNA. Hayground Creek "proposed" RNA was estimated to be 909 acres in the Forest Plan; more precise measurement sets acreage at 970 as described on page of the attached Establishment Record. Management of the area emphasizes protection of the natural ecosystem for research purposes. There are no planned vegetative management practices. Recreation use will be limited to dispersed recreation at a low intensity and reduced service level. The area is assigned no grazing capacity.

There are no adverse or irreversible environmental effects of Alternative A. The Hayground Creek RNA is already being managed as a "proposed" RNA under the Forest Plan. No change in existing management would occur. The area is within the Escudilla Wilderness, and it receives minimal use. There are no significant cumulative effects of establishing the RNA.

Alternative B, No Action

Under this alternative, the Hayground Creek RNA would not be formally designated at this time. The area would continue to be managed as a "proposed" RNA according to direction in the Forest Plan, pages 203 and 204, and the recommendation would be revisited when the Forest Plan is revised. There are no significant cumulative effects of this alternative. Some research opportunities may be foregone due to the delay in establishing the RNA. No change in on-the-ground management should occur because of the Wilderness status of the area.

Agencies and Persons Consulted

In the process of updating information to determine whether or not conditions had changed since adoption of the Forest Plan, the State Natural Heritage Program, Nature Conservancy, Arizona Cattlegrowers Association, Arizona Game and Fish Department, and the range permittee were contacted. Only one comment was received, from the Arizona Game and Fish Department, which supported RNA designation.

Hayground

DECISION NOTICE AND DESIGNATION ORDER
and
FINDING OF NO SIGNIFICANT IMPACT

Hayground Creek Research Natural Area
Apache-Sitgreaves National Forests
Springerville Ranger District
Apache 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 Hayground Creek Research Natural Area (RNA). It shall be comprised of 310 acres (125 hectares) of lands in Apache County, Arizona, on the Springerville Ranger District of the Apache-Sitgreaves National Forests, 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 Apache-Sitgreaves National Forests 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 Hayground Creek area to ensure the environmental effects of establishing the area as an RNA have not changed since 1985. 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 Hayground Creek as an RNA. Alternative A is selected because it provides long-term protection and recognition of Arizona chaparral forest type. Hayground Creek 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 Hayground Creek as a "proposed" RNA. Alternative B was not selected because it would only provide short-term protection of the Hayground Creek 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 Hayground Creek area in the Forest Plan. The Apache-Sitgreaves Forest Plan is hereby amended to change the allocation of the Hayground Creek 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 Apache-Sitgreaves National Forests shall notify the public of this decision and mail a copy of the Decision Notice and Designation Order to all persons on the Apache-Sitgreaves National Forests 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

Hayground Creek RESEARCH NATURAL AREA Apache-Sitgreaves National Forests, Springerville Ranger District Apache County, Arizona

Proposed Action

The proposed action is to establish the Hayground Creek Research Natural Area (RNA), and to manage it according to the direction provided in the Land and Resource Management Plan (Forest Plan) for the Apache-Sitgreaves National Forests. The Hayground Creek RNA was proposed for establishment and management direction was provided in the Forest Plan in Management Area 10, Research Natural Areas, pages 203 and 204. 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 Hayground Creek 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). Hayground Creek RNA contributes to this series of RNA's by providing an example of blue spruce streamside forest, as discussed in the Regional Guide, page 3-9. 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 habitat type as suitable for inclusion in the national network. Establishment of the Hayground Creek RNA provides the long-term protection and recognition of blue spruce streamside forest.

The Hayground Creek area was identified in the Forest Plan as a "proposed" RNA based on the relatively undisturbed conditions of the blue spruce streamside forest 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, and no important changes have occurred.

Conditions and environmental effects of designation are the same as described on pages 171 and 216 of the EIS for the Forest Plan and pages 3-7 through 3-12 of the Regional Guide. Site specific conditions and effects are as follows:

-The area is nearly inaccessible to livestock, so it has received little livestock use. The currently proposed allotment management plan for the area will exclude livestock from Hayground Creek, including the proposed RNA.

-No known significant mineral resources exist within the area.

-Recreation use is light and mostly limited to fishing and hunting. There are no roads or trails within the area.

-The area is mostly timbered, but is considered inaccessible for timber management. It is currently withdrawn from the timber land base.

Designation of alternate RNA's for protection was considered during Forest Plan development (Public Comments and Forest Service Response to DEIS, pages 66, 74, 402). A Region-wide study of potential RNA's was conducted as input to the Regional Guide, and Hayground Creek was determined at that time to provide the most appropriate site for inclusion in the national network for protection of this habitat type.

Alternatives and Environmental Consequences

Alternative A, Proposed Action

Alternative A would designate a 970 acre area as the Hayground Creek RNA. Hayground Creek "proposed" RNA was estimated to be 909 acres in the Forest Plan; more precise measurement sets acreage at 970 as described on page of the attached Establishment Record. Management of the area emphasizes protection of the natural ecosystem for research purposes. There are no planned vegetative management practices. Recreation use will be limited to dispersrd recreation at a low intensity and reduced service level. The area is assigned no grazing capacity.

There are no adverse or irreversible environmental effects of Alternative A. The Hayground Creek RNA is already being managed as a "proposed" RNA under the Forest Plan. No change in existing management would occur. The area is within the Escudilla Wilderness, and it receives minimal use. There are no significant cumulative effects of establishing the RNA

Alternative B, No Action

Under this alternative, the Hayground Creek RNA would not be formally designated at this time. The area would continue to be managed as a "proposed" RNA according to direction in the Forest Plan, pages 203 and 204, and the recommendation would be revisited when the Forest Plan is revised. There are no significant cumulative effects of this alternative. Some research opportunities may be foregone due to the delay in establishing the RNA. No change in on-the-ground management should occur because of the Wilderness status of the area.

Agencies and Persons Consulted

In the process of updating information to determine whether or not conditions had changed since adoption of the Forest Plan, the State Natural Heritage Program, Nature Conservancy, Arizona Cattlegrowers Association, Arizona Game and Fish Department, and the range permittee were contacted. Only one comment was received, from the Arizona Game and Fish Department, which supported RNA designation.

MESSAGE SCAN FOR REGGIE A. FLETCHER

To r.fletcher:r03a
CC d.barber

From: DOUG BARBER:R03F01A

Postmark: Mar 16,94 11:58 AM

Delivered: Mar 16,94 11:54 AM

Subject: Forwarded: AliquotRNAs

Comments:

From: DOUG BARBER:R03F01A

Date: Mar 16,94 11:58 AM

You might want to retain a copy of this in the file in case we ever want to go for mineral withdrawal in the future. Tom Subirge put in a lot of time delineating these boundaries, and I'd hate to lose them.

-----X-----

LEGAL DESCRIPTIONS FOR RECOMMENDED RESEARCH NATURAL AREAS
APACHE-SITGREAVES NATIONAL FOREST

The Research Natural Areas referred to in the Forest Land Management Plan (pg. 203) which are in "recommended" status are: Escudilla Mtn. RNA, Hayground Creek RNA, North Fork of Thomas Creek RNA, and Wildcat Canyon RNA.

In case mineral withdrawal is desired on these respective areas, the following Aliquot Part Descriptions describe each respective RNA. The natural boundaries originally proposed are nearly all included within the Aliquot Part Descriptions. The greater acreage figures reflect additional area surrounding the natural boundaries and extending to the nearest fractional section lines.

JAMES MUTH
Forest Land Surveyor

November 29, 1993

Collectively these meadow ecosystems span a variety of types within our "mountain bunchgrass" range type. None of these ecosystems are presently within the RNA network to any significant degree. Because of their importance in high elevation grazing programs in the Southwestern Region, the Regional RNA Committee has identified such grassland ecosystems to be one of their critical and priority needs. We strongly recommend this area as an RNA-designate with the Forest Plan. Such designation will be compatible with the area's special management unit prescription.

Boundaries should include the forested areas that adjoin the meadows, since forest-meadow dynamics is both of research and management interest. We suggest that a fence at about the 10,000-foot contour on the south end of this unit (above the watered portions of Toolbox Draw) would effectively exclude livestock.

3. Hay Ground Creek (West Fork Black River tributary).

This area (for proposed boundaries see map) has two strong reasons for recommendation as an RNA. Blue spruce (Picea pungens) has been nationally identified as a gap in ecosystem representation within the RNA program; and Region 3 has indicated need for a representation in Arizona of a blue spruce RNA, since this is one of its major timber management types. The second reason concerns optimal habitat and populations of Allium gooddingii - on the Regional sensitive species list and strong candidate for Federal listing as a threatened and endangered species.

The suggested boundaries include about 330 acres. We feel that there should be at least one mile of stream stretch within the proposed RNA. An optional but desirable inclusion (indicated by the dotted boundary) is suggested for control of water quality about $\frac{1}{4}$ mile upstream of the main canyon area. Generally, the boundary follows the topographic canyon break. However, the Task Group thought it to be important that at least some upland blue spruce ecosystem be included. We suggest this be accommodated by making some boundary along the road in Section 12.

We point out that this area contains at least three distinctive blue spruce habitat types. The northerly canyon slopes (where Allium gooddingii abounds, along with its streamside habitat) are mostly Engelmann spruce forest with blue spruce as an infrequent seral tree.

4. Wildcat Canyon

A minimally disturbed pinyon-juniper (P-J) woodland that we examined south and east of Wildcat Canyon (section 2 and 11 of R 15 E, T 13 N) addresses one of Region 3's foremost deficiencies in its present RNA program. As previously mentioned in our letter to the A/S (ltr 25 May 1982, 4060) our P-J woodland in the Region is so heavily utilized that location of a satisfactory example for research is extremely difficult. The ecosystem examined is on sandstone and limestone rock. It is a Pinus edulis - Juniperus osteosperma/Cowania mexicana/Bouteloua gracilis habitat type.