garland est record

ESTABLISHMENT RECORD

for

GARLAND PRAIRIE RESEARCH NATURAL AREA

within

Kaibab National Forest
Coconino County, Arizona

INTRODUCTION

Garland Prairie Research Natural Area (RNA) comprises about 338 acres (136 hectares) in the Chalender Ranger District of Kaibab National Forest, Coconino County, Arizona, on reserved public domain National Forest System land. Several Forest Service management reviews during 1983 focused on aspects of management by the Forest Service of grasslands of Arizona fescue. These included RNA reviews on the Gila, Apache-Sitgreaves, Coconino, and Kaibab national forests conducted by the Regional RNA Task Group, and a range program review on the Kaibab National Forest. All drew attention to the importance of Arizona Fescue Grassland in the southwest and the relative extent of range deterioration within this ecosystem. After considering the relative merits of two proposed Arizona Fescue Grassland RNA's on the Kaibab National Forest, as put forward by Will Moir, Southwestern Regional Ecologist, the Kaibab Forest Supervisor and his staff selected Garland Prairie as the candidate RNA within their management plan.

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

OBJECTIVES

Garland Prairie RNA will be established for its research and management value as a typical representative of an important grassland type that can serve as a control area for manipulative research and as a benchmark to monitor range management techniques and practices.

JUSTIFICATION STATEMENT FOR ESTABLISHMENT OF AREA

In the Southwestern Region of the USDA Forest Service, major areas of Arizona Fescue Grassland exist as "parks" or steppic openings within the ponderosa pine forest of the Colorado Plateau region. At present there are no RNA's established in the Southwest Regional RNA system that contain Arizona Fescue Grassland. The need for representation of montane grasslands was identified in the Southwestern Regional Guide (USDA Forest Service, 1983a) although this particular site was not identified by name. Garland Prairie RNA is a prime example of Arizona Fescue Grassland in good range condition. Given the importance of this rangeland, it is appropriate that Garland Prairie RNA be established for its research and management value as a typical representation of an important grassland type that can serve as a control area for manipulative research and as benchmark to monitor range management techniques and practices.

PRINCIPAL DISTINGUISHING FEATURES

Garland Prairie RNA is a prime example of an Arizona Fescue Grassland community in good range condition. Perennial bunch-grasses constitute the dominant vegetation throughout Garland Prairie RNA. This level, montane grassland includes an open ponderosa pine forest in the southern portion of the boundary area.

LOCATION

Garland Prairie RNA is reached from Flagstaff, Arizona, by traveling west along Interstate 40 to the Parks exit and turning south over the highway overpass to the railroad tracks (Figs. 1 and 2). A service road along the south side of the railroad tracks parallels the northern boundary of Garland Prairie RNA. The northeast corner of the boundary line is 0.5 miles (8.4 kilometers) west along the railway service road.

Garland Prairie RNA is located on the Chalender Ranger District of the Kaibab National Forest, Coconino County, Arizona. The center of the area is at 35° 14′ North latitude and 111° 57′ West longitude. It is within portions of sections 34 and 35 of Township 22 North, Range 4 East, Gila and Salt Rivers Meridian, Arizona.

A fence bordering the Atchison, Topeka & Santa Fe Railway corridor forms the northern boundary. The rest of the boundary of Garland Prairie RNA approximates the edge of the grassland with the open

ponderosa pine forest. The boundaries of Garland Prairie RNA are more particularly described as follows:

Commencing at the W 1/16 corner between Sections 26 and 35 being a 1969 BLM brass cap; THENCE in 78°43'14"W along the North line of section 35 a distance of 192.56 meters (631.76 feet) to the POINT OF BEGINNING;

Thence S 02°52'36"W along a fence line and it's Northerly extension 1,246.47 meters (4,098.46 feet) to a fence corner;
Thence S 81°20'00"W along a fence line 1,019.89 meters (3,346.09 feet) to a fence corner;
Thence N 04°24'50"W along a fence line 1,218.87 meters (3,998.91 feet) to the AT&SF railway right-of-way fence;
Thence N 82°37'53"E along said right-of-way fence 71.54 meters (234.71 feet);
Thence continuing along said right-of-way fence N 72°13'57"E 112.69 meters (369.72 feet);
Thence continuing along said right-of-way fence N 79°52'48"E 348.42 meters (1,143.11 feet);
Thence continuing along said right-of-way fence N 78°22'04"E 219.98 meters (721.72 feet);
Thence continuing along said right-of-way fence N 79°20'14"E 313.70 meters (1,029.20 feet) to the North line of Section 35;
Thence S 78°43'14"E along the North line of Section 35 a distance of 99.51 meters (326.48 feet) to the E-W-W 1/256 corner monumented with a USDA Forest Service A1. cap;
Thence continuing along said North line S 78°43'14"E 22.44 meters (73.62 feet) to the POINT OF BEGINNING.

Lands herein described and topographic features referred to are based on 7.5' United States Geological Survey Quadrangle Sheet GARLAND PRAIRIE and PARKS, ARIZONA, dated 1963 and 1966, respectively (Fig. 3) and further described by F. Dwan Utley (Fig. 4 & 5). Garland Prairie RNA contains a nearly level area at 7,020 feet (2,140 meters) containing 338 acres (136 hectares), more or less.

AREA BY COVER TYPES

Vegetation cover types within Garland Prairie RNA are Ponderosa Pine Forest and Arizona Fescue Grassland (Table 1, Figure 6). The forested portion of Garland Prairie RNA is described as Arizona Pine Forest, K-18, and the grassland is Fescue-Mountain Muhly Prairie, K-46 (Küchler, 1966). The Society of American Foresters described the forested type as Interior Ponderosa Pine Forest, SAF 237; the non-forested type was not covered (Eyre 1980).

Based on range survey information provided by Kaibab National Forest (Williams, unpubl. data), the grassland cover type is best

described as a Rocky Mountain montane grassland, Pine-Bunchgrass series association, as proposed by Brown et al. (1980). In the western portion of Garland Prairie RNA is an open Ponderosa pine/Arizona fescue habitat type (USDA Forest Service, 1986a). The presence of several young ponderosa pines scattered throughout the grassland area suggests that potential natural vegetation for the entire site is the Ponderosa pine/Arizona fescue habitat type.

PHYSICAL AND CLIMATIC CONDITIONS

Table 1. Estimated areas of vegetation cover types in Garland Prairie Research Natural Area.

USFS Type[1]	SAF Type[2]	Küchler Type[3]	Surface Area Acres (Hectares)
Ponderosa Pine/ Arizona Fescue	SAF-237	K-18	66 (26)
Arizona Fescue Grassland	None	K-46	272 (110)
Total			338 (136)

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

Garland Prairie is situated on the Coconino Plateau, an elevated plain interspersed with isolated cinder hills and volcanic mountains. Drainage systems are generally ill-defined with ephemeral flow. Elevation is 7,020 feet (2,140 meters) and topography is flat.

Climate in the area is temperate-continental with a cool summer and no dry season (USDA Forest Service, 1986b). Average annual precipitation is approximately 22 inches (56 centimeters) with half falling as snow. The driest months are May and June. One hundred days of the year are frost-free and annual temperatures average 41°F. Because of the flat topography, climatic influences are uniform throughout the site.

DESCRIPTION OF VALUES

Flora. A range analysis conducted by Kaibab National Forest (Williams, unpubl. data) indicates that vegetation cover within the grassland averages 42 percent and that perennial grasses constitute 95 percent of that. Based on importance values calculated using density, cover, and frequency estimates, Arizona fescue and mountain muhly are the predominant species. Additional grasses present in Garland Prairie RNA include blue grama, mutton grass, squirreltail, and black dropseed. Forbaceous species comprise five percent of the vegetation cover and include thistle, aster, Arenaria fendleri, broom snakeweed, and red root buckwheat. Flora of Garland Prairie RNA has not been thoroughly collected, described, nor studied. No threatened, endangered, or sensitive plants are known from this site. Observations by Janet Williams under contract by the Rocky Mountain Forest and Range Experiment Station and A. Phillips, J. Bowers, M. Butterwick and S. McLaughlin during an Arizona Natural Areas Advisory Council reconnaissance trip, 7 May 1984, resulted in the list of plants provided in Table 2.

Fauna. Elk, mule deer, and pronghorn, are the primary game species inhabiting the area. No threatened, endangered or sensitive animals are known from this site. The animal list presented in Table 3 was derived for the Montane Grassland biome, Arizona fescue association, for Coconino County, Arizona (Lemkuhl and Patton, 1984).

Geology. The entire area is underlain by basalt flows.

Soils. Soils are derived from basalt with an average profile depth of around 20 inches (51 centimeters). The argillic horizon is in montmorillonite clay. The profiles are described as Typic and Lithic Argiborolls, Terrestrial Ecosystem Survey mapping unit 518 (USDA Forest Service, 1986b).

Cultural. The proposed area of Garland Prairie RNA has not been surveyed for the discovery and recordation of cultural resource values, however, minor restricted surveys have been conducted in the vicinity, primarily for road maintenance projects. No cultural resource sites were discovered during these surveys.

IMPACTS AND POSSIBLE CONFLICTS

Mineral Resources. No known mineral resources are in this area.

Grazing. Garland Prairie RNA is part of an established livestock grazing allotment and is full capacity range. Grazing capacity of the area is low because the current non-intensive management

results in light use of the area by livestock. The livestock operation recently changed from a sheep to cattle operation. The withdrawal of 338 acres (136 hectares) will result in the loss of 30 AUM's grazing capacity. Permitted livestock use is well within the estimated grazing capacity, so the withdrawal will not result in any permitted livestock reductions. Exclusion of this portion of the allotment would require a fence. The use of existing fences for boundaries reduces the amount of new fencing.

Timber. Widely scattered ponderosa pine and a few juniper trees occur within the area. The area is considered non-forested land and not a part of the timber base.

Table 2. An abbreviated plant list for Garland Prairie RNA. Nomenclature and authority follow that of Lehr (1979).

Scientific Name	Common Name
TREES	
Pinus ponderosa	Ponderosa pine
Juniperus monosperma	One-seed juniper
SHRUBS AND WOODY LIANAS	
Chrysothamnus viscidiflorus	Rabbitbrush
Corypantha vivipara var. arizonica	Beehive cactus
Gutierrezia sarothrae	Broom snakeweed
Opuntia macrorhiza	Prickly pear
FORBS	
Agoseris sp.	Mountain dandelion
Antennaria rosulata	Rose pussy toes
Arabis perennans	Rock cress
Artemisia ludoviciana	Wormwood
Aster arenosis	Aster
Astragalus humistratus	Milk vetch
Astragalus whitneyi	
Anthericum torreyi	Crag lily
Cirsium wheeleri	Thistle
Cymopteris sp.	
Erigeron divergens	Spreading fleabane
Eriogonum alatum	Winged buckwheat
Eriognum racemosum	Red root buckwheat
Euphorbia lurida	Spurge
Hymenoxys richardsoni var. floribunda	Pinque
Leucelene ericoides	Rose heath
Linum sp.	Flax
Lithospermum cobrense	Puccoon
Lotus wrightii	Wright's lotus
Menodora scabra	
Potentilla cf. concinna	Cinquefoil
Potentilla hippiana	Cinquefoil
Psoralea sp.	Scurf-pea
Pseudocymopterus montanus	Mountain parsley
Sisymbrium linearifolium	
Townsendia exscapa	Townsendia
Tragopogon dubius	Goats beard

Verbascum thapsus	Common mullein
Vicia americana	American vetch

Table 2. Con't.

GRASSES

Aristida fendleriana	Fendler's three-awn
Blepharoneuron tricholepis	Hairy drop-seed
Bouteloua gracilis	Blue grama
Festuca arizonica	Arizona fescue
Muhlenbergia montana	Mountain muhly
Muhlenbergia wrightii	Spike muhly
Poa fendleriana	Mutton grass
Sitanion longifolium	Squirreltail
Sporobolus interruptus	Black dropseed

Table 3. An abbreviated animal list for Garland Prairie RNA. Nomenclature and authority follow that of Banks et al. (1987).

Common Name	Scientific Name
BIRDS	
Lark, horned	Eremophila
alpestris	
Meadowlark, western	Sturnella neglecta
MAMMALS:	
Badger	Taxidea taxus
Bear, black	Ursus americanus
Cottontail, desert	Sylvilagus auduboni
Coyote	Canis latrans
Deer, mule	Odocoileus hemionus
Elk	Cervus elaphus
Lion, mountain	Felis concolor
Mouse, brush	Peromyscus boylii
Mouse, little pocket	Perognathus
longimembris	
Mouse, western harvest	Reithrodontomys
megalotis	
Myotis, California	Myotis californicus
Myotis, fringed	Myotis thysonodes
Pipistrelle, western	Pipistrellus
hesperus	
Pronghorn	Antilocapra
americana	
Raccoon	Procyon lotor
Ringtail	Bassariscus astutus
Skunk, western spotted	Spilogale gracilis
Vole, long-tailed	Microtus
longicaudis	
Weasel, long-tailed	Mustela frenata

Watershed Values. The natural area is within the Sycamore Canyon watershed which drains into the Salt-Verde rivers system. There are no live streams. The acreage in Garland Prairie RNA accounts for less than one percent of the watershed's total acreage.

Recreation Values. Recreation use of the area is light due to its location. There are no developed recreation sites planned within or near the area. There do not appear to be any significant adverse impacts on recreation from establishment of Garland Prairie RNA.

Wildlife and Plant Values. Game species known to make light use of the area include elk, deer and pronghorn. These animals could be affected by construction of the exterior boundary fence but wildlife fence standards will minimize this affect. No threatened, endangered, or sensitive plant species are known to occur in the area.

Special Management Area Values. There are no proposals for this area.

Transportation Plans. During dry conditions Garland Prairie RNA can be easily reached by high clearance two-wheel drive vehicles from the south by following for about 0.5 miles (0.8 kilometers) a primitive, two-track road that originates from an all-weather Forest Service System road. The Forest Transportation Map shows the two-track road as an unplanned road crossing through the eastern portion of the natural area. However, it has not been utilized and local native vegetation has grown back. The area can also be easily reached by a service road along the railroad tracks that are immediately adjacent to the area and located along its northern boundary. There are no transportation plans that would adversely affect Garland Prairie RNA.

Utility Corridor Plans. Garland Prairie RNA is immediately adjacent to the Atchison, Topeka, and Santa Fe Railroad along the northern boundary and outside the area. There is a short length of service road associated with the railroad that is outside the boundary area. No other existing or potential utility corridor plans exist in the vicinity of Garland Prairie RNA.

MANAGEMENT PRESCRIPTION

Garland Prairie RNA is included in Management Area 7 in the Kaibab National Forest Plan. Management emphasis is to establish, maintain and protect the area as a part of the system of Research Natural Areas (USDA Forest Service, 1987a).

Vegetation Management. Lightning fires will be permitted to play, as nearly as possible, their ecological role. Person-caused fires will be suppressed when size exceeds one acre (0.4 hectares). Suppression impacts will be minimized so that fire lines or chemical retardants will not be used within the area. The area is assigned no grazing capacity and a standard boundary fence will be constructed with crossing stiles on three sides, but without gates. If necessary, appropriate management actions will be undertaken to maintain the grassland community from invading ponderosa pine forest.

ADMINISTRATIVE RECORDS AND PROTECTION

Administration and protection of Garland Prairie RNA will be the responsibility of Kaibab National Forest. The District Ranger, Chalender Ranger District, Williams, AZ, will have 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. All 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 Garland Prairie 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
Kaibab National Forest, Williams, AZ
Chalender Ranger District, Williams, AZ

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USDA Forest Service. 1987b. Environmental Impact Statement, Kaibab National Forest Plan,. USDA Forest Service, Southwestern Region, Albuquerque, NM.

Garland Dndo

from "Proposed" to Established RNA. This is

Decision Notice
Finding of No Significant Impact

Designation Order
for
Garland Prairie Research Natural Area
Kaibab National Forest
Chalender 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 Garland Prairie Research Natural Area. It shall be comprised of 338 acres (136 hectares) of lands in Coconino County, Arizona, on the Chalender Ranger District of the Kaibab 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 Kaibab National Forest Land and Resource Management 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 Kaibab National Forest Land and Resource Management Plan and Final Environmental Impact statement, which are available to the public.

The Regional Forester has reexamined the Garland Prairie 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 Garland Prairie as an RNA. Alternative A is selected because it provides long-term protection and recognition of the Arizona fescue grassland type. Garland Prairie Research Natural Area will be managed in compliance with all relevant laws, regulations, and Forest Service Manual direction regarding Research Natural Areas, and in accordance with the management direction identified in the Forest Plan with a changed boundary.

from "Proposed" to Established RNA. This is

The alternative considered was Alternative B, the "No Action" alternative which would continue management of Garland Prairie as a "proposed" RNA. Alternative B was not selected because it would only provide short-term protection of the Garland Prairie 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 Garland Prairie area in the Forest Plan. The Kaibab Forest Plan is hereby amended to change the allocation of the Garland Prairie area
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 Kaibab 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 Kaibab 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.

from "Proposed" to Established RNA. This is

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

Final Sent by Kibbe
11/15/95
reprint

Decision Notice
Finding of No Significant Impact

Designation Order
for
Garland Prairie Research Natural Area
Kaibab National Forest
Chalender Ranger District
Coconino County, Arizona

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The Regional Forester has reexamined the Garland Prairie 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 Garland Prairie as an RNA. Alternative A is selected because it provides long-term protection and recognition of the Arizona fescue grassland type. Garland Prairie Research Natural Area will be managed in compliance with all relevant laws, regulations, and Forest Service Manual direction regarding Research Natural Areas, and in accordance with the management direction identified in the Forest Plan with a changed boundary.

The alternative considered was Alternative B, the "No Action" alternative which would continue management of Garland Prairie as a "proposed" RNA. Alternative B was not selected because it would only provide short-term protection of the Garland Prairie 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 Garland Prairie area in the Forest Plan. The Kaibab Forest Plan is hereby amended to change the allocation of the Garland Prairie 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 Kaibab 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 Kaibab 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
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_____ _____

Chief Date

Cleared by Ron Sam
11/17/93 except for notations --
last page due to 11/4/93 change in appeal regs.

Environmental Assessment

Garland Prairie Research Natural Area
Kaibab National Forest
Chalender Ranger District
Coconino County, Arizona

Proposed Action

The proposed action is to establish the Garland Prairie "proposed" Research Natural Area (RNA) identified in the Land and Resource Management Plan (Forest plan) for the Kaibab National Forest as the Garland Prairie RNA with slight boundary change, and to manage it according to the direction provided in the Forest Plan (Management Area 7). 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 Garland Prairie 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). Garland Prairie RNA contributes to this series of RNA's by providing an example of Arizona fescue grassland vegetation 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 Garland Prairie RNA provides long-term protection and recognition of Arizona fescue grassland vegetation type.

The Garland Prairie area was identified in the Forest Plan as a "proposed" RNA based on the relatively undisturbed conditions of Arizona fescue grassland vegetation 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. One change has occurred. The boundaries have changed slightly for convenience of fencing and to provide a better example of the grassland type.

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:

-The area is considered full capacity range with about 30 AUM's grazing capacity. Because current use is light, and permitted livestock use is well within the estimated grazing capacity, withdrawal from grazing will not result in any permitted livestock reductions.

-No known significant mineral resources exist within the area.

-Most of the area is non-forested land and not a part of the timber base. About one fifth of the area is forested but considered non-suitable timber lands.

-Recreation use is light due to its location.

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

-There are no transportation plans that would adversely affect the area.

Designation of alternate RNA's for protection of this vegetation type was considered during Forest Plan development. Garland Prairie was determined at that time to provide the most appropriate site for inclusion in the national network for protection of Arizona fescue grassland vegetation type.

Alternatives and Environmental Consequences

Alternative A, Proposed Action

Alternative A would designate a 338-acre (136 hectares) area as the Garland Prairie 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. Garland Prairie 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 Kaibab 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. Garland Prairie RNA is recommended in Management Area 7 of the Kaibab 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 Kaibab 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 Garland Prairie 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.

Decision Notice
Finding of No Significant Impact

Designation Order
for
Garland Prairie Research Natural Area
Kaibab National Forest
Chalender 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 Garland Prairie Research Natural Area. It shall be comprised of 338 acres (136 hectares) of lands in Coconino County, Arizona, on the Chalender Ranger District of the Kaibab 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 Kaibab National Forest Land and Resource Management 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 Kaibab National Forest Land and Resource Management Plan and Final Environmental Impact statement, which are available to the public.

The Regional Forester has reexamined the Garland Prairie 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 Garland Prairie as an RNA. Alternative A is selected because it provides long-term protection and recognition of the Arizona fescue grassland type. Garland Prairie Research Natural Area will be managed in compliance with all relevant laws, regulations, and Forest Service Manual direction regarding Research Natural Areas, and in accordance with the management direction identified in the Forest Plan with a changed boundary.

The alternative considered was Alternative B, the "No Action" alternative which would continue management of Garland Prairie as a "proposed" RNA. Alternative B was not selected because it would only provide short-term protection of the Garland Prairie 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 Garland Prairie area in the Forest Plan. The Kaibab Forest Plan is hereby amended to change the allocation of the Garland Prairie 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 Kaibab 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 Kaibab 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 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.

_____ _____

Chief Date

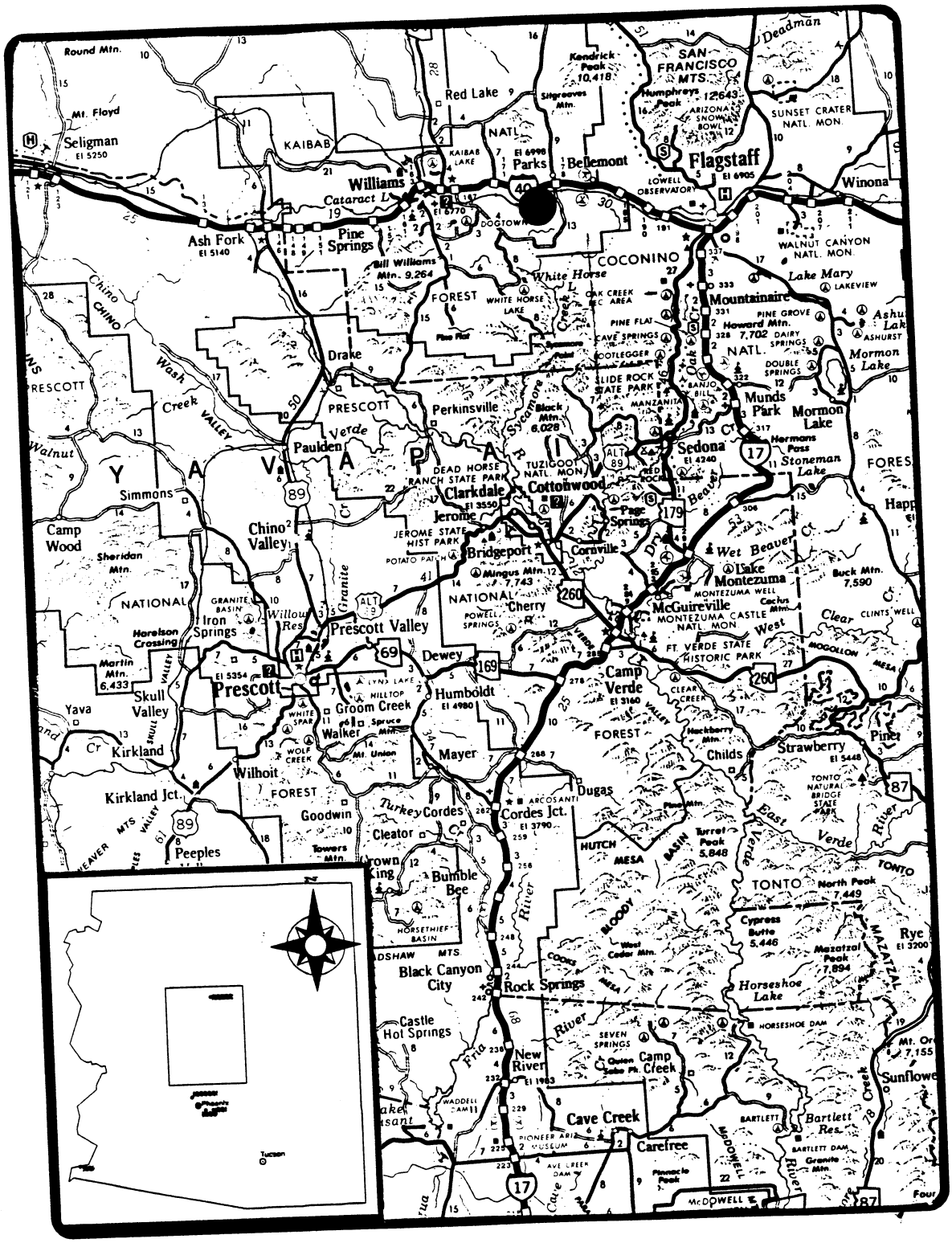


Figure 1. General location of Garland Prairie Research Natural Area, Arizona, showing nearby cities. Scale: 1 inch=16 miles (1 centimeter=10 kilometers).

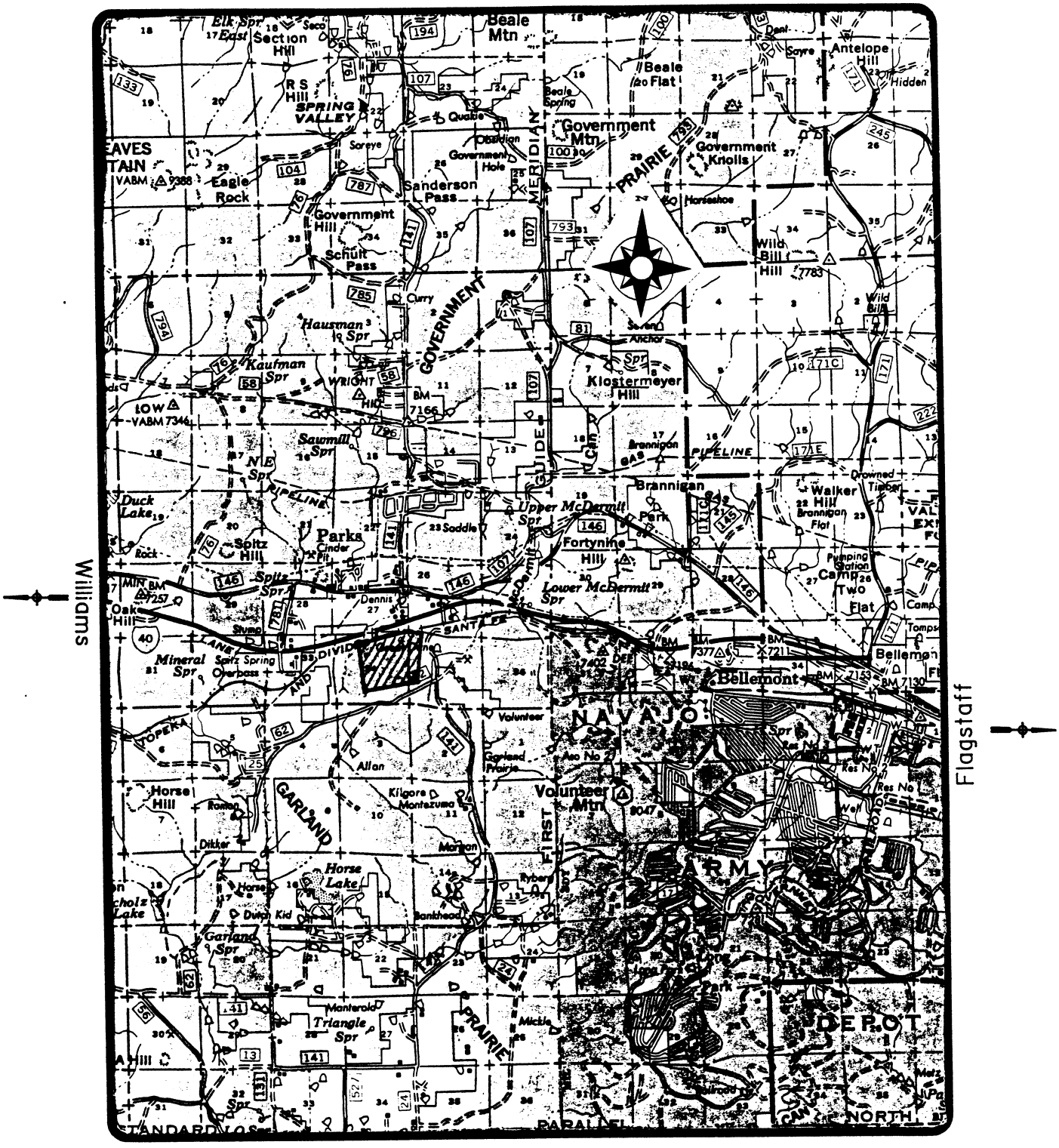


Figure 2. Vicinity map of Garland Prairie Research Natural Area, Arizona, showing recommended access. Scale: 1 inch=2 miles (1 centimeter=1.27 kilometers).

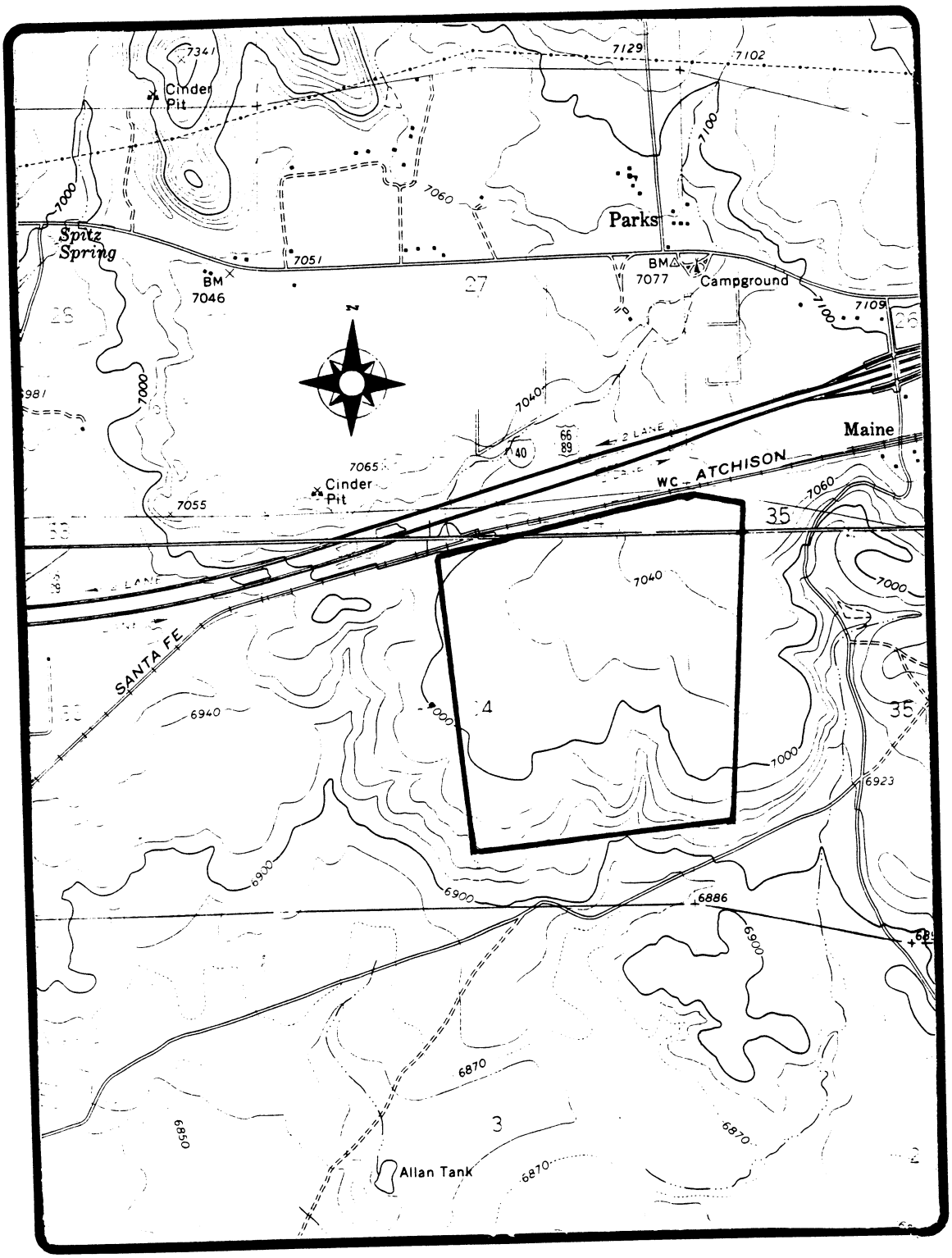
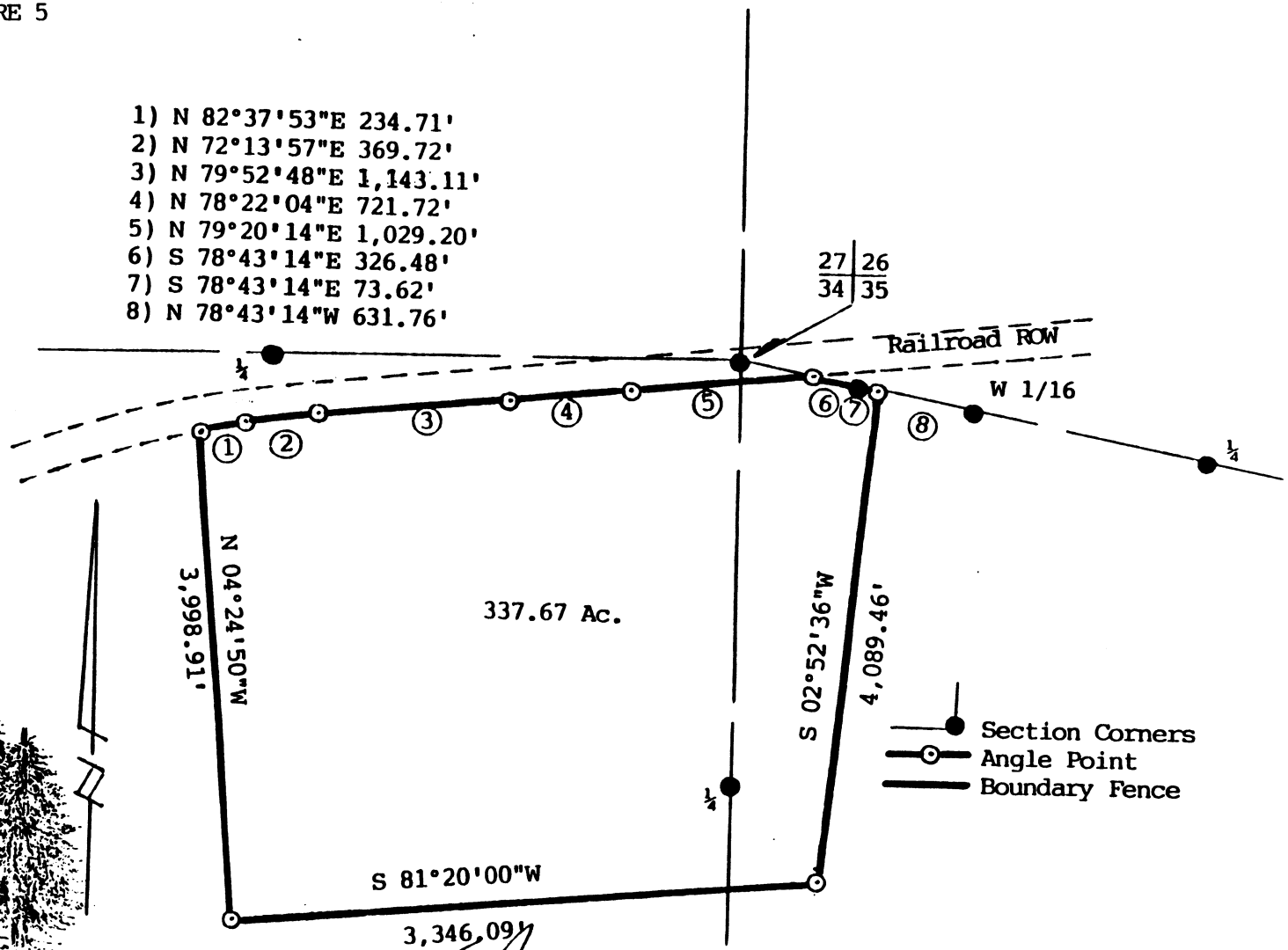


Figure 3. Boundary map of Garland Prairie Research Natural Area, Arizona, with elevations shown in feet. Scale: 2.64 inches=1 mile (42 millimeters=1 kilometer).

FIGURE 5

1) N 82°37'53"E 234.71'
2) N 72°13'57"E 369.72'
3) N 79°52'48"E 1,143.11'
4) N 78°22'04"E 721.72'
5) N 79°20'14"E 1,029.20'
6) S 78°43'14"E 326.48'
7) S 78°43'14"E 73.62'
8) N 78°43'14"W 631.76'



Prepared by:
F. Dwan Utley II, RLS
Forest Surveyor/realty specialist

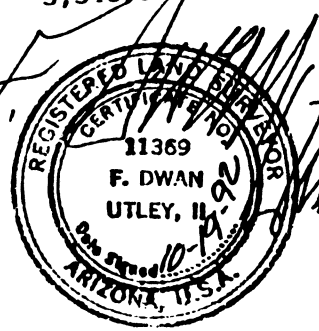
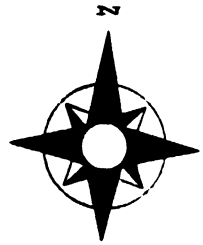
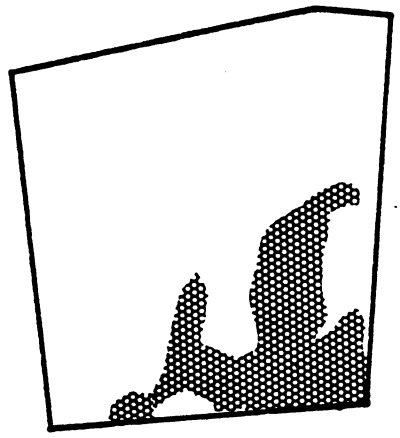


EXHIBIT "A"
GARLAND PRAIRIE RESEARCH NATURAL AREA
Kaibab National Forest
Chalender Ranger District

Figure 6. Küchler PNV types for the Garland Prairie RNA, Kaibab National Forest, Chalender Ranger District. Scale: 2.6" = 1 mile.





Fescue - Mountain muhly Prairie; K-046.

Arizona Pine Forest; K-017.

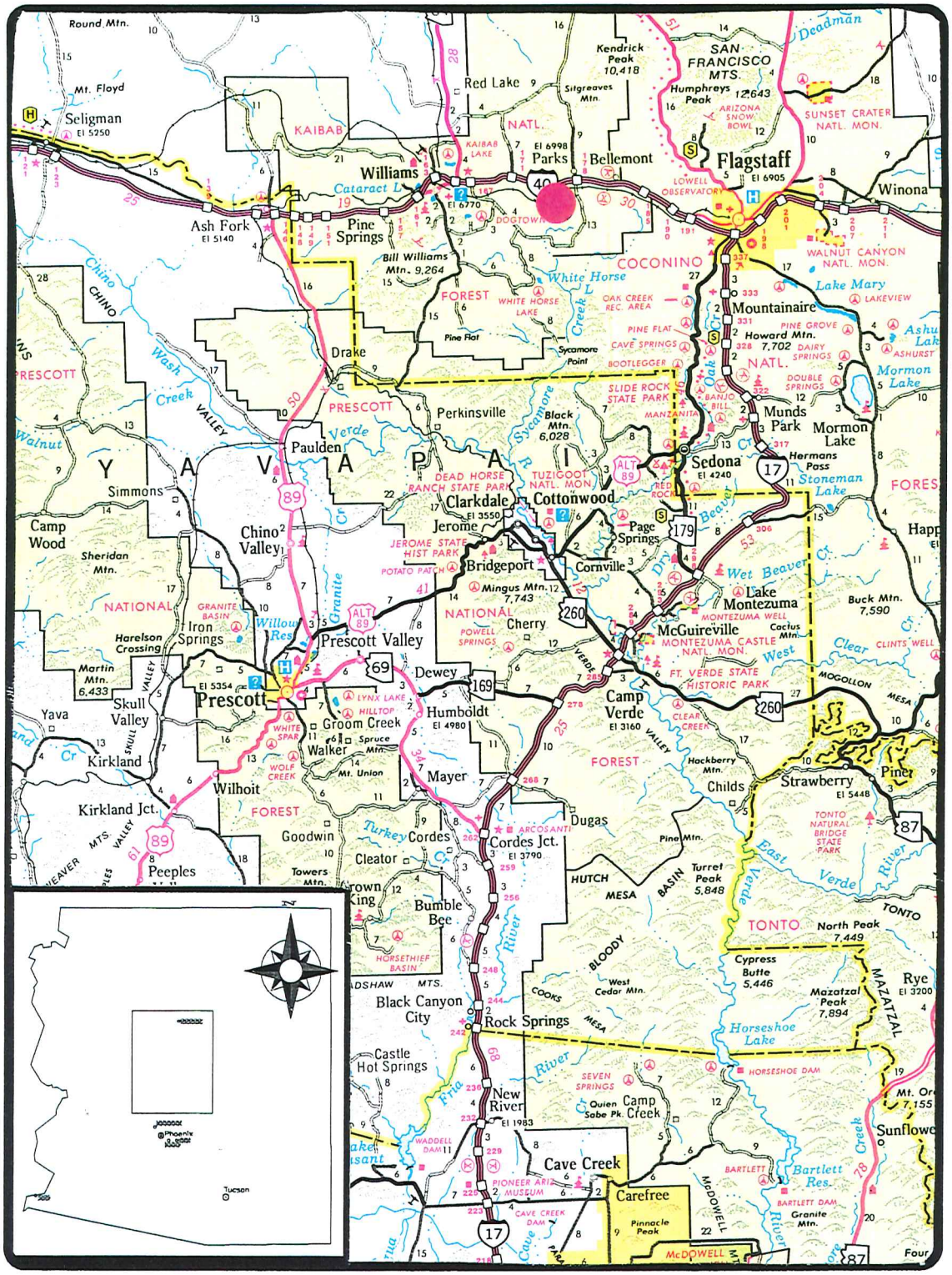


Figure 1. General location of Garland Prairie Research Natural Area, Arizona, showing nearby cities. Scale: 1 inch=16 miles (1 centimeter=10 kilometers).

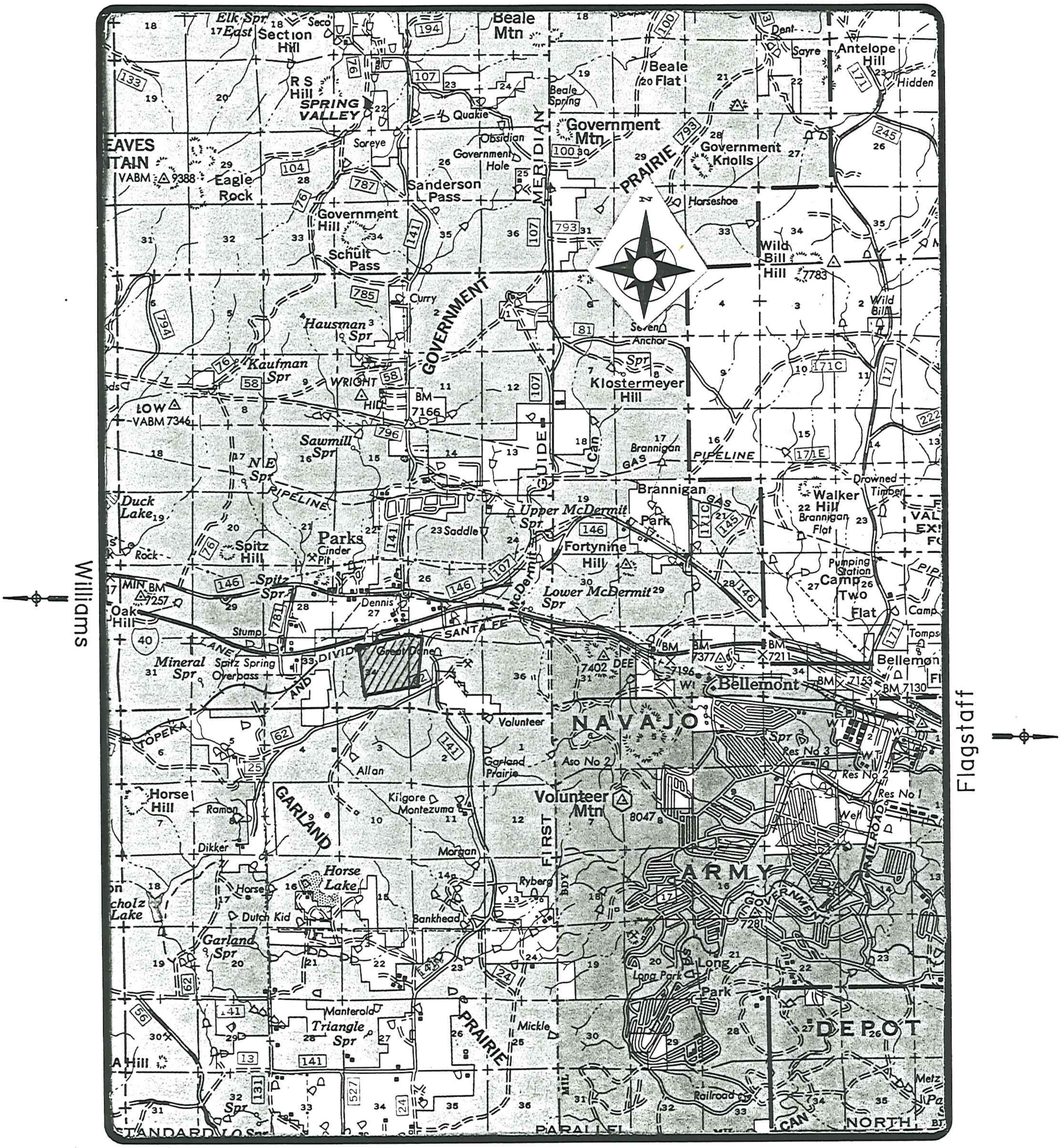


Figure 2. Vicinity map of Garland Prairie Research Natural Area, Arizona, showing recommended access. Scale: 1 inch=2 miles (1 centimeter=1.27 kilometers).

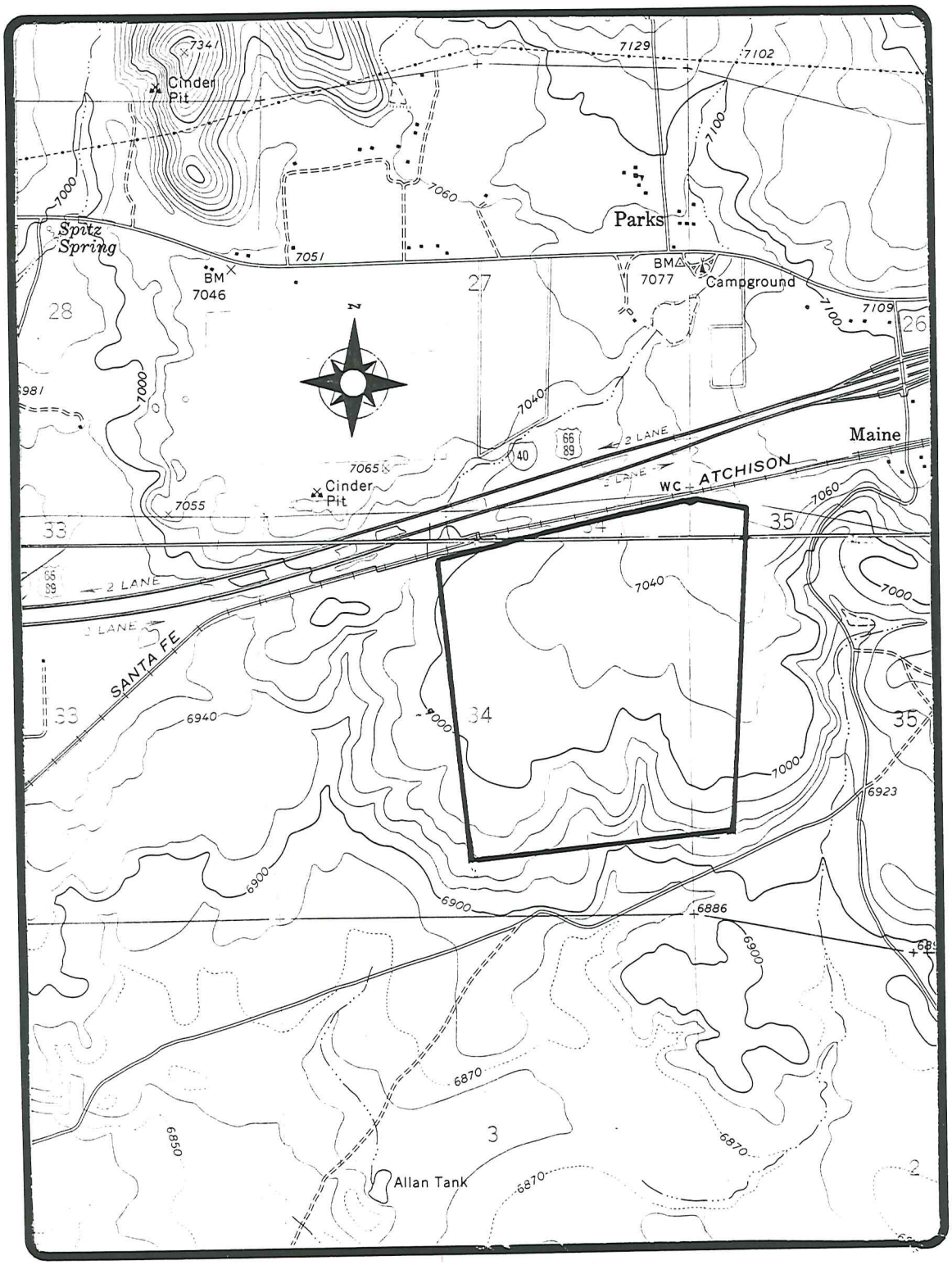


Figure 3. Boundary map of Garland Prairie Research Natural Area, Arizona, with elevations shown in feet. Scale: 2.64 inches=1 mile (42 millimeters=1 kilometer).

USDA FOREST SERVICE PHOTOGRAPHIC RECORD (See FSM 1643.52)	Photographer UNKNOWN	Date Submitted	
	Headquarters Unit	Location	

Initial Distribution of Prints and Form 1600-1:

☐ WO ☐ RO ☐ DIV. ☐ FOREST ☐ DISTRICT ☐ PHOTOGRAPHER Date _____

INSTRUCTIONS: Submit to Washington Office in quadruplicate. Permanent numbers will be assigned and the forms will be distributed as follows: (1) Washington Office; (2) RO or Station; (3) Forest or Center, and; (4) Photographer.

Photograph Number Temp. (1)	Permanent (To be filled in by the WO) (2)	Selected for W.O. Photo Library (3)	Date of Exposure (4)	Location (State, Forests District, County) (5)	Concise Description of View (6)	NEGATIVE (Show size and "BW" for Black and white or "C" for color)
1-5				KAIBAB NF COCONINO NF (ARIZONA)	Miscellaneous views of Garland Prairie RNA	All Color Slides

garland Prairie

To K.Menasco:R03F07A CC D.Richard:R03F07D02a

From: REGGIE A. FLETCHER
Postmark: Aug 30,93 2:45 PM
Status: Certified Confidential Urgent
Subject: Garland Prairie RNA

Message:

Keith, I am mailing you the latest version of the Garland Prairie RNA establishment report package. It has a couple of problems you and Don need to address if you would. First, make sure it is as you want by way of what it says and so on. Second, the boundary has changed so the Description provided by the surveyor in the back needs incorporated into the document on page 2. This made Figs 3 and 4 off and they need to be changed accordingly. Then, as with my last conversation with Don, the EA needs a comment to convince the WO that we had all the needed expertise to put the EA together. While I realize we did not have a for real ID team, a reference to the functional expertise areas asked for input would probably do the trick. I am not sure whether the boundary changes have had an impact which would make this EA in error, that is is it discernable from the Forest Plan. If the Plan had a somewhat nebulous area in mind then all is ok. That is your call and do make sure line is still ok with what we are going with. If the change in area is really discernable then we will have to go with a new signature page. Your call. If I can be of assistance holler. Reggie

deleted from DG 9/10/93

Canelo revision

To J.Whitmore:W01c CC G.Henke:R03a

From: REGGIE A. FLETCHER
Postmark: Jan 10,94 4:22 PM
Status: Certified Confidential Urgent
Subject: Forwarded: Canelo EA

Comments:

From: REGGIE A. FLETCHER:R03A
Date: Jan 10,94 4:22 PM
Enclosed is the revised EA. The vegetation type acreages are as indicated in the report, that is the entire RNA is one type. See top page 5. The maps you have are all we have. Reggie

Previous comments:
From: EMILIA PARRA:R03F05A
Date: Jan 10,94 12:42 PM
here is the revised copy with Boland's comments incorporated. I hope you have the disk with the text of the establishment record for Canelo. I am still trying to get the acerage information and I will just forward you the numbers so you can insert into the text. -mima-

When retrieved from archive there was no content
deleted from D.G. 9/10/98

United States
Department of
Agriculture

Forest
Service

Southwestern
Region

Kaibab National Forest Plan

RECREATION RESIDENCE SITE House or cabin permitted on National Forest land for the recreational use of the owner, but not as a primary residence.

RECREATION VISITOR DAY (RVD) Recreational use of National Forest land which aggregates twelve hours. It may consist of one person for twelve hours, two people for six hours, or any combination that totals twelve hours.

RECREATIONAL RIVER Wild and Scenic Rivers Act Usage. Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some devlopment along their shorelines, and that may have undergone some impoundment or diversion in the past.

REDUCED SERVICE MANAGEMENT Management of developed recreation facilities below optimum maintenance standards.

REFORESTATION The natural or artificial restocking of an area with forest trees.

REGENERATION (1) The actual seedlings and saplings existing in a stand. (2) The act of establishing young trees naturally or artificially.

REGENERATION CUT Removal of trees with the intention of establishing a new crop of seedlings.

REGIONAL FORESTER The Forest Service official responsible for administering a single Region.

REGIONAL GUIDE The plan developed to meet the requirements of the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended, that guides all natural resource management activities and established management standards and guidelines for the National Forest System lands of a given Region. It also disaggregates the RPA objectives assigned to the Region to the Forests within that Region.

REGULATED FOREST Forest land managed for timber production under sustained yield principles.

REGULATIONS 36 CFR refers to the Code of Federal Regulations for implementing the National Forest Management Act.

RESEARCH NATURAL AREAS An area in as near a natural condition as possible which exemplifies typical or unique vegetation and associated biotic, soil, geologic, and aquatic features. This area is set aside to preserve a representative sample of an ecological community primarily for scientific and educational purposes; commercial and general public use is not allowed.

RESOURCE DATA BASE Information about resources stored in a computerized system.

REST-ROTATION A grazing schedule in which the pastures being grazed receive a year of rest for plant recovery.

RETENTION (VQO) A visual quality objective which in general, means man's activities are not evident to the casual forest visitor.

REVEGETATION The reestablishment and development of plant cover. This may take place naturally through the reproductive processes of the existing flora or artificially through seeding, planting, or other action.

United States
Department of
Agriculture

**Forest
Service**

Southwestern
Region

Environmental Impact Statement for the Kaibab National Forest Plan

10. Cultural Resources

Cultural resource management for this National Forest is a narrowly defined program generally limited to site avoidance. In spite of increased efforts to protect and identify cultural resource sites, there are continuing losses of cultural resources from vandalism and accidental destruction. There is a backlog of inventoried cultural resource sites to be evaluated for final disposition, i.e.nomination to the National Register, continuing protection, salvage, etc. Until these evaluations are completed, blanket protection of all sites is necessary.

A portion of the historic Beale Wagon Road is situated within this National Forest. The National Trails System Act, as amended, requires evaluation of this route as a National Historic Trail. A recommendation for the administrative action regarding designation of the Beale Wagon Road as a National Historic Trail is necessary. Designation may affect the yield of other resource outputs. The Kaibab has been designated as lead forest for the trail evaluation.

11. Wilderness and Special Areas

The Arizona Wilderness Act of 1984 established three wilderness areas in this National Forest. Management direction is necessary to guide the use and management of these areas to protect and maintain their wilderness character and value.

The opportunity exists to establish an Arizona Fescue Research Natural Area. Allocation of land for this purpose may reduce or eliminate the yield of other resource outputs from that area. Evaluation of the opportunity to establish this special area, and a recommendation for administrative action is necessary.

Many administrative problems, such as road access, utility rights-of-way, and property encroachment, occur on National Forest lands that are adjacent to other ownerships. This situation is most concentrated in the vicinity of the established communities of Williams and Tusayan. Opportunities exist to adjust the pattern of National Forest land in the vicinity of these communities in order to allow economic growth and improve National Forest administration.

12. Land Ownership Adjustment

Many administrative problems, such as road access, utility rights-of-way, and property encroachment occur on National Forest lands that are adjacent to other ownerships. This situation is most concentrated in the vicinity of the communities of Williams and Tusayan. Opportunities exist to adjust the pattern of National Forest land to allow economic growth and improve National Forest administration.

Alternatives PA and C enhance wilderness characteristics through regular scheduled patrols and visitor contacts in high use areas. The impacts of use in all wilderness opportunity spectrum classifications are closely monitored. More emphasis is placed on identifying opportunities for increasing acreage toward the pristine wilderness opportunity spectrum classification in alternatives PA and C.

ive miles of hiking trail are reconstructed within Kendrick Mountain wilderrness under Alternatives PA and C. Alternative C also provides for the construction of a new trailhead to service the Kendrick Mountain trail system.

The Forest currently does not have any Research Natural Areas. A 300 acre area located east of Williams in Garland Prairie is identified for designation as a RNA. This area represents the Arizona fescue-mountain muhly open prairie bunchgrass vegetation association. A number of sites have been considered Forest-wide and interested and affected parties asked to comment. The area is listed as potential in R-3 Progress Report, Research Natural Area Paper, September 1984, and as a candidate natural area by the State Natural Area Advisory Council. All alternatives provide for designation of this area in this planning period.

Alternatives that protect and enhance wilderness values and provide for special area designation resolve this issue best.

Table 21. Ranking of Wilderness Management Issue by Alternative

	Alternatives					
	PA	A	B	C	D	E
Ranking	2	4	3	1	3	3

Alternatives with the same ranking resolve the issue equally well. A ranking of 1 is the best.

Issue 12- Realty Management

Issues and concerns deal with administrative problems associated with land needs for the expansion of local communities, access to both federal and private lands and the efficient management of special land use permits.

The only new withdrawals contemplated are those needed to protect areas with high resource values such as existing and proposed developed recreation sites involving large capital investments, research natural areas and threatened and endangered plant habitat.

Land Line Location. An accurate, responsive boundary management program is essential for all land use functions particularly with the interspersion and development of private lands within the Forest boundary. Where property lines are not well identified, the Forest has increased efforts to establish property lines through accurate boundary surveys. Lost land lines and corners common to other land ownerships are retraced and re-established according to case priority. The Forest continually maintains corner monuments, accessories, boundary lines and survey records.

Under existing land ownership patterns, approximately 300 miles of interior and exterior Forest boundary need to be surveyed in order to complete the land line location program. This could be accomplished by the latter part of the first planning period if annual land line production rates continue at present levels. It is estimated that, after completion of the land line location program, approximately 45 miles of property boundary will need to be maintained every year.

Natural Areas

The Forest currently does not have any established Research Natural Areas (RNA). RNA needs in the vicinity are largely covered by areas in the Grand Canyon National Park. A 300-acre area located east of Williams in Garland Prairie is identified for designation as a RNA. This area represents the Arizona fescue-mountain muhly open prairie bunchgrass vegetative type. A number of sites have been considered Forest-wide and interested and affected parties given opportunity to comment. The area is listed as potential in R-3 Progress Report, Research Natural Area Paper, September, 1984, and a candidate natural area by the State Natural Area Advisory Council. The plan includes designation of the Garland Prairie Research Natural Area in the first planning period. During the first period other opportunities for RNA's both on and off the Forest will be considered. Potential RNA's consideration will be coordinated with other agencies.

Range

A total of 1,268,714 acres of the Forest are classified as full and potential capacity for livestock grazing. Of this total, 790,707 acres are presently classified as full capacity and 478,007 acres are classified as potential capacity. Areas are classified potential capacity because of accelerated erosion, dense tree overstory, very little forage, lack of access, water developments or other range improvements. Approximately 264,183 acres are classified as no capacity for livestock grazing because of steep slopes, rock outcrops and erodible soils. Table 60 shows the acreage breakdown by vegetative type.

the need for an active right-of-way acquisition program in subsequent planning periods.

Needed right-of-way acquisitions across private lands are greatly reduced under Alternative E. Curtailment of right-of-way acquisitions may reduce Forest resource outputs and public uses by limiting access to portions of the National Forest.

Issuance of road easements to public road agencies continues under all alternatives. The capability for timely review and processing of easement applications is reduced under Alternative E.

Land Line Location

The Forest land line location program is largely tied to support of other resource management activities in each alternative. The alternatives provide for completion of land line survey needs by the end of the first planning period. Approximately 45 miles of property boundary is maintained under the alternatives after completion of the land line location program.

Utility Corridors

Existing major utility corridors can accomodate projected future needs. All of the alternatives allow corridor expansion parallel to existing major powerlines and pipelines. If the need arises for the designation of a new corridor, the selected location will attempt to avoid 1) areas with pristine, primitive and semi-primitive ROS classifications, 2) areas with high cultural resource values, 3) important wildlife habitat areas, 4) areas with special land designations such as research natural areas, 5) visually sensitive areas, 6) ORV closure areas, and 7) land classified as suitable for commercial timber production.

Irreversible and Irretrievable Commitments

No irreversible commitments of resources have been identified from realty management related activities under the alternatives. Minor irretrievable commitments of various Forest resource outputs may occur under Alternative E from reduced right-of-way acquisitions.

NATURAL AREAS

The following is a description of the natural areas proposed in the planning alternatives. During the first planning period, other opportunities natural areas may be considered. Evaluation of additional areas will be coordinated with other agencies.

1. Garland Prairie Research Natural Area (300 acres). This area is proposed for establishment for future non-manipulative research in the high elevation grassland ecotome dominated by Arizona fescue and mountain muhly.

2. Bill Williams Botanical Area (490 acres) This area is proposed as a botanical area for the protection of Cimicifuga arizonica, Arizona bugbane, a candidate plant for threatened status.

3. Franks Lake Geologic-Botanic Area (145) Proposed for the protection of these limestone sinks (karsts), and