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Southwestern
Region

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Draft Environmental Impact Statement for Show Low South Land Exchange

Apache-Sitgreaves National Forests
Coconino National Forest
Prescott National Forest

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Draft Environmental Impact Statement for Show Low South Land Exchange

Apache-Sitgreaves, Coconino, and Prescott National Forests, Arizona

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Abstract: First American Title Insurance Company, as Trustee, and not personally, under Trust No. 8667; for the benefit of SL Land Exchange, LLC (SLL) has proposed a land exchange with the United States Forest Service (USFS) in Apache, Coconino, Greenlee, Navajo, and Yavapai counties, Arizona. The proposed exchange includes several geographically separate land parcels located on three individual national forests: Apache-Sitgreaves National Forests (ASNFs), Coconino National Forest (CNF), and Prescott National Forest (PNF). The proposal to exchange lands in the national forest boundary responds to the Forest Service's need for consolidation of federal land ownership patterns. Non-Federal lands within national forests that are included in this exchange proposal contain special features and habitats such as critical species habitat and perennial waters. These lands are currently subject to development that could diminish those values and support activities that would be incompatible with the surrounding national forest character. The Non-Federal lands currently contribute to the undesirable ownership pattern and are classified as desirable for acquisition.

The proposed exchange involves approximately 1,028 acres of Federal lands for approximately 1,558 acres of Non-Federal lands. There are thirteen (13) parcels total: nine (9) Non-Federal parcels to be conveyed into federal ownership; and four (4) Federal parcels to be conveyed to Non-Federal ownership. The majority of acreage being exchanged is within the ASNFs; therefore, the ASNFs have been established as the lead agency overseeing the Environmental Impact Statement (EIS) process. This Draft EIS (DEIS) also analyzes the No Action Alternative, in which no land exchange would occur.

This DEIS evaluates the potential social and environmental impacts of the Proposed Action and the No Action Alternative on the following resource areas: land use; recreation and public access; socioeconomics; environmental justice; plants; fish and wildlife; grazing; prime and unique farmlands; wetlands and floodplains; water quality, rights, and claims; heritage

resources; mineral resources, roads; fire and fuels; and hazardous materials.

Commenting: It is important that reviewers provide their comments at such times and in such a way that they are useful to the Agency's preparation of the EIS. Therefore, comments should be provided prior to the close of the comment period and should clearly articulate the reviewer's concerns and contentions. The submission of timely and specific comments can affect a reviewer's ability to participate in subsequent administrative review or judicial review. Comments received in response to this solicitation, including names and addresses of those who comment, will be part of the public record for this proposed action. Comments submitted anonymously will be accepted and considered; however, anonymous comments will not provide the respondent with standing to participate in subsequent administrative or judicial reviews.

Send Comments to: Apache-Sitgreaves National Forests: Show Low South LEX, attn. Stephen James; 30 South Chiricahua Drive, P.O. Box 640; Springerville, AZ 85938; Fax number: (928) 368-6476, Email: sgjames@fs.fed.us.

Date Comments Must Be Received: To participate in administrative appeal or judicial reviews, you must submit your comments on this DEIS during the 45-day notice and comment period, which begins the day after the notice of availability (NOA) is published in the Federal Register. The publication date in the Federal Register is the exclusive means for calculating the comment period for this proposal. Interested parties wanting to provide comments should not rely upon dates or timeframe information provided by any other source.

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ACRONYMS

ACHP: Advisory Council on Historic Preservation

ADOC: Arizona Department of Commerce

ADEQ: Arizona Department of Environmental Quality

ADWR: Arizona Department of Water Resources

AGFD: Arizona Game and Fish Department

ASNFs: Apache-Sitgreaves National Forests

ASTM: American Society for Testing Materials

ATI: Agreement to Initiate

BA&E: Biological Assessment & Evaluation

BCC: Birds of Conservation Concern

BMP: Best Management Practices

BO: Biological Opinion

CEQ: Council on Environmental Quality

CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act

CFR: Code of Federal Regulations

CNF: Coconino National Forest

DEIS: Draft Environmental Impact Statement

EIS: Environmental Impact Statement

ESA: Endangered Species Act

FEIS: Final Environmental Impact Statement

FLPMA: Federal Land Policy and Management Act

FPPA: Farmland Protection Policy Act

FR: Federal Register

FS: Forest Service

FSM: Forest Service Manual

GIS: Geographic Information System

GLO: Government Land Office

IBA: Important Bird Areas

ID: Interdisciplinary

LRMP: Land Resources Management Plan

MA: Management Area

MBTA: Migratory Bird Treaty Act

MIS: Management Indicator Species

MOA: Memorandum of Agreement

MSO: Mexican spotted owl

NEPA: National Environmental Policy Act

NFS: National Forest System

NFSR: National Forest System road

NFST: National Forest System trail

NHPA: National Historic Preservation Act

NOA: Notice of Availability

NOI: Notice of Intent

NRHP: National Register of Historic Places

PIF: Arizona Partners in Flight

PILT: Payment in Lieu of Taxes

PNF: Prescott National Forest

PNVT: Potential Natural Vegetation Type

RD: Ranger District

REC: Recognized Environmental Condition

ROD: Record of Decision

ROW: Right-of-way

SHPO: State Historic Preservation Office

SOPA: Schedule of Proposed Actions

SLL: SL Land Exchange, LLC

T&E: Threatened & Endangered

TES: Terrestrial Ecosystem Survey

USDA: U.S. Department of Agriculture

USDI: U.S. Department of the Interior

USFS: U.S. Forest Service

USFWS: U.S. Fish and Wildlife Service

EXECUTIVE SUMMARY

First American Title Insurance Company, a California Corporation, as Trustee, and not personally, under Trust No. 8667; for the benefit of SL Land Exchange, LLC (SLL), an Arizona Limited Liability Company has proposed the following exchange of lands within the Apache-Sitgreaves, Coconino, and Prescott National Forests. The Apache-Sitgreaves National Forests (ASNFs) will serve as the lead for this land exchange.

The proposed land exchange consists of 1,028 acres of Federal (National Forest System [NFS]) lands in the ASNFs, and Coconino National Forest (CNF) in exchange for 1,558 acres of Non-Federal lands (lands currently held in private ownership) in the Prescott National Forest (PNF), CNF, and ASNFs. The affected Federal lands that comprise this proposal are located within four (4) individual parcels within the Lakeside and Alpine Ranger Districts (RDs) of the ASNFs and within the Red Rock RD of the CNF. The corresponding Non-Federal (private) lands consist of nine (9) individual parcels located within the Alpine, Black Mesa, Lakeside, and Clifton RDs of the ASNFs; the Mogollon Rim and Red Rock RDs of the CNF; and the Verde RD of the PNF.

The proposal to exchange lands in the ASNFs responds to the USFS's need for consolidation of federal land ownership patterns. Non-Federal lands within national forests that are included in this exchange proposal contain special features and habitats such as critical species habitat and perennial waters. These lands are subject to development that could diminish those values and support activities that would be incompatible with the surrounding national forest character. The Non-Federal lands currently contribute to the undesirable ownership pattern and are classified as desirable for acquisition in the ASNFs Plan (USDA 1987a). The Federal lands in the exchange consists of four (4) separate parcels located within the boundaries of the ASNFs and CNF and are located in Management Area (MA) 1, described as forested land located outside of special management areas; MA 2, described as woodland; and MA 10 in the grassland and piñon-juniper vegetation type found above the Mogollon Rim in CNF. The ASNFs Plan (1987a) also states federal lands considered for exchange will generally meet one or more of the following criteria: 1) lands needed to meet the needs of expanding communities; 2) isolated tracts or scattered parcels that cannot be efficiently managed; 3) provide for consolidation of the public lands; 4) to improve management or benefit specific resources; 5) to meet overriding public needs. The proposed land exchange would meet Forest Plan direction by benefiting specific resources (acquisition of lands with perennial waters and critical species habitat) and meeting specific criteria such as meeting needs of expanding communities and consolidating ownership patterns. The Responsible Official will determine if the proposed exchange is in the best interest of the public. The Federal lands, if conveyed, could be subject to development.

A formal offer to exchange lands was submitted by SL Land Exchange, LLC, to the acting ASNFs Supervisor on January 25, 2008. The Agreement to Initiate (ATI) the exchange was authorized by the Forest Service Director of Lands and Minerals on March 19, 2010.

The EIS scoping process was initiated on April 28, 2009, with publication in the Federal Register of the Notice of Intent (NOI) to prepare an EIS. The scoping process resulted in identifying new key issues and previously unknown potential environmental effects of the Proposed Action. The main issue identified during the EIS scoping process was the potential adverse social and economic impacts (including a possible decrease in the availability of recreational lands) due to the possible development on the Federal lands (if exchanged). The measures developed to address this key issue include a qualitative discussion of the implication of potential development on the social and economic attributes that were raised as concerns, including impacts associated

with the potential loss of recreational opportunities if the Federal lands leave federal ownership and are subject to future development.

A full range of alternatives to the Proposed Action, including the No Action Alternative, were considered during the environmental analysis. Alternatives considered in detail include the Proposed Action and No Action. A more detailed description of these alternatives and other alternatives considered but eliminated from detailed study is included in Chapter 2 of this document.

A Notice of Availability (NOA) of the DEIS was published in the Federal Register on November 2, 2012. Following this DEIS, a NOA of the FEIS will be published in the Federal Register and a Record of Decision (ROD) document made available.

Major conclusions include*:* The proposed land exchange would result in federal acquisition of 1,558 acres in the ASNFs, CNF, and PNF and conveyance of 1,028 acres of land in the ASNFs and CNF. The Forest Service would receive a net gain 530 acres of land in this exchange. These areas obtained by the NFS as a result of this exchange contain vital species habitat for federally listed native wildlife including the loach minnow, Chiricahua leopard frog, Little Colorado spinedace, Mexican spotted owl, Apache trout, Gila chub, and Southwestern willow flycatcher. If the exchange occurs, development would be precluded on the Non-Federal lands proposed for exchange.

The conveyed Federal lands would be subject to future development. The reasonable and foreseeable use of these parcels include an expanded Waste Water Treatment Facility on the City of Show Low 70-acre Parcel, a mixed-use low-density residential development on the approximately 948-acre Show Low South Parcel and single rural residential area on the approximately 8-acre Soda Springs Ranch Adjustment Parcel. No further development is anticipated on the Sierra Blanca 2-acre Adjustment Parcel. This is based upon the stated intent of the proponent and the history of development by the proponent on federal lands that were conveyed in a prior exchange in the area. Development on the conveyed Federal lands, if an exchange occurs, could result in impacts to upland ponderosa pine and juniper habitat and grassland. Riparian habitat, aquatic habitat, and wetland habitat found on Show Low Creek and its associated watershed could be impacted because these habitats exist on the Federal lands proposed for exchange. Future uses or development on the lands conveyed out of federal ownership would become subject to all applicable laws, regulations, and zoning authorities of state and local governing bodies. If development on the conveyed lands were to occur, minimal impact to riparian, aquatic, and wetland habitats would be expected.

If the No Action Alternative is selected, 1,028 acres of the Federal lands would continue to be managed by the Forest Service. The 1,558 acres of Non-Federal lands, which include special features such as critical species habitat and perennial waters including Juan Miller Creek, Boneyard Creek, Wet Beaver Creek, Red Tank Draw, Brookbank Canyon, and Beaver Creek, would remain subject to future development.

Based upon the effects of the alternatives, the responsible official will decide if the lands offered for exchange are desirable, in the public interest, and suitable for inclusion in the National Forest System.

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CHAPTER I: PURPOSE AND NEED

Document Structure

The United States Department of Agriculture, Forest Service (USFS) has prepared this Draft Environmental Impact Statement (DEIS) in compliance with the National Environmental Policy Act (NEPA) 42 United States Code §§ 4321-4370d, as implemented by the Council on Environmental Quality (CEQ) Regulations, 40 Code of Federal Regulations Parts 1500-1508, and other relevant federal and state laws and regulations. The interdisciplinary analysis is documented in the Project Record. An index of the Project Record is available upon request. The document is organized into six chapters as follows.

Chapter 1: Purpose and Need for Action

This chapter includes information on the history of the project proposal, details how the USFS informed the public of the proposal, and summarizes how the public responded. This chapter describes the Purpose and Need for action, the federal Proposed Action, the Decision Framework, and issues raised during scoping. The Proposed Action details who is proposing what, and where the proposed project would occur. The Decision Framework describes the nature of the decision and who will make it, allowing for selection of the No Action Alternative required by 36 CFR 1502.14(d). Based on input from the public and Interdisciplinary (ID) Team, resources to be analyzed and topics to be discussed in the DEIS have been developed.

Chapter 2: Comparison of Alternatives

This chapter provides a more detailed description of the agency's Proposed Action and the No Action Alternative, as well as alternative methods for achieving the stated purpose. These alternatives were developed based on issues raised by the public, the USFS ID Team assigned to this project, and other agencies. This discussion also includes possible mitigation measures and identification of alternatives that were considered but eliminated from detailed study. Finally, this section provides a summary table of the environmental consequences associated with the alternatives.

Chapter 3: Affected Environment and Environmental Consequences

This section describes the environmental effects of implementing the Proposed Action and the No Action Alternative. Within each section, the affected environment is described followed by the effects of the Proposed Action and the No Action Alternative, which provides a baseline for comparison with the Proposed Action.

Chapter 4: List of Preparers

This section provides a list of preparers, members of the ID Team, and other Forest Service contributors to the completion of the DEIS.

Chapter 5: Consultation and Coordination

This section provides a list of agencies, municipalities, organizations, and individuals consulted during the development of the DEIS.

Chapter 6: References

This chapter contains literature cited and references used in the preparation of the DEIS.

Appendices

The appendices provide more detailed information to support the analyses presented in the DEIS.

Additional documentation, including more detailed analyses of project-area resources, is available in the Project Record, located at the Apache-Sitgreaves National Forests (ASNFs) Supervisors' Office, 30 South Chiricahua Drive, Springerville, Arizona 85938.

The DEIS is available for public review at the ASNFs Supervisor's Office, 30 S. Chiricahua Dr., Springerville, Arizona 85938, and on the ASNFs website at http://www.fs.fed.us/r3/asnf/projects/. The NOA was published in the Federal Register on November 2, 2012, and is the only means for calculating the comment period. The comment period is 45 days. All comments received will be reviewed and considered in the Final Environmental Impact Statement (FEIS).

Background

This land exchange was proposed by SL Land Exchange, LLC (SLL), in January 2004 and was formally accepted by ASNFs in February 2008. During this time period, discussions continued relative to specific parcels that were deemed favorable to be acquired by the USFS as well as federal land parcels that were available to be transferred into private ownership.

The USFS is considering this proposal under the authorities of the General Exchange Act of March 1922 (42 Stat. 465, as amended; 74 Stat. 205; 16 U.S.C. 485, 486, 7 U.S.C. 2201), the Federal Land Policy and Management Act of October 1976 (43 U.S.C. §§ 1701-1782, October 21, 1976, as amended 1978, 1984, 1986, 1988, 1990-1992, 1994 and 1996), the Federal Land Exchange Facilitation Act of 1**987 and the Weeks Act of March 1, 1911**.

This proposed project includes several geographically separate land parcels located on three individual National Forests: ASNFs, Coconino National Forest (CNF), and Prescott National Forest (PNF). Figures depicting the Federal and Non-Federal parcels are included in Appendix A. Each national forest has developed a Forest Land and Resource Management Plan (Forest Plan), adopted in 1986 (PNF) and 1987 (ASNFs and CNF). The Forest Plans set forth broad programmatic direction for management of National Forest System (NFS) lands. Where appropriate, this document tiers to the Forest Plan FEIS and Record of Decision (ROD) for each of the three Forests.

The Wallow Fire

On May 29, 2011, a human caused wildfire was ignited on the ASNFs. The Wallow Fire burned more than 538,000 acres in Apache, Greenlee, Graham, and Navajo Counties, Arizona. The wildfire destroyed 68 residences and outbuildings and impacted lands and resources on 504,500 acres of the ASNFs (USDA 2011). Over 58% of the total area burned at a moderate to high severity, resulting in loss of >50% of forest basal area (USDA 2011). Additional tree mortality is anticipated over the next three years, resulting from root and cambium damage and insect and disease infestations. The ASNFs have a history of implementing restoration-based fire and fuels treatments, which have proven effective at safeguarding local communities and reducing the fire severity in treated areas. These mechanical and prescribed fire treatments are ongoing and are expected to continue in areas unaffected by the wildfire. Efforts of regeneration and reforestation are planned for areas affected by the wildfire.

Two of the nine Non-Federal parcels (Sierra Blanca Ranch and Sprucedale parcels) and one Federal parcel (Sierra Blanca Ranch Adjustment Parcel) were burned by the Wallow Fire. These parcels were visited post-fire to determine the potential impacts of the fire and assess the feasibility of continuation of the land exchange. Given that these parcels are mostly comprised of grasslands, meadows, and forest edge, the fire effects were minimal. The fire burned through at a low intensity in these areas, providing nutrient cycling. The parcels will likely

benefit from the fire in future growing seasons with high quality regrowth. With no major long-term damage or negative impacts to any of the parcels in question, the land exchange will continue on its current trajectory without any additional analysis related to the wildfire.

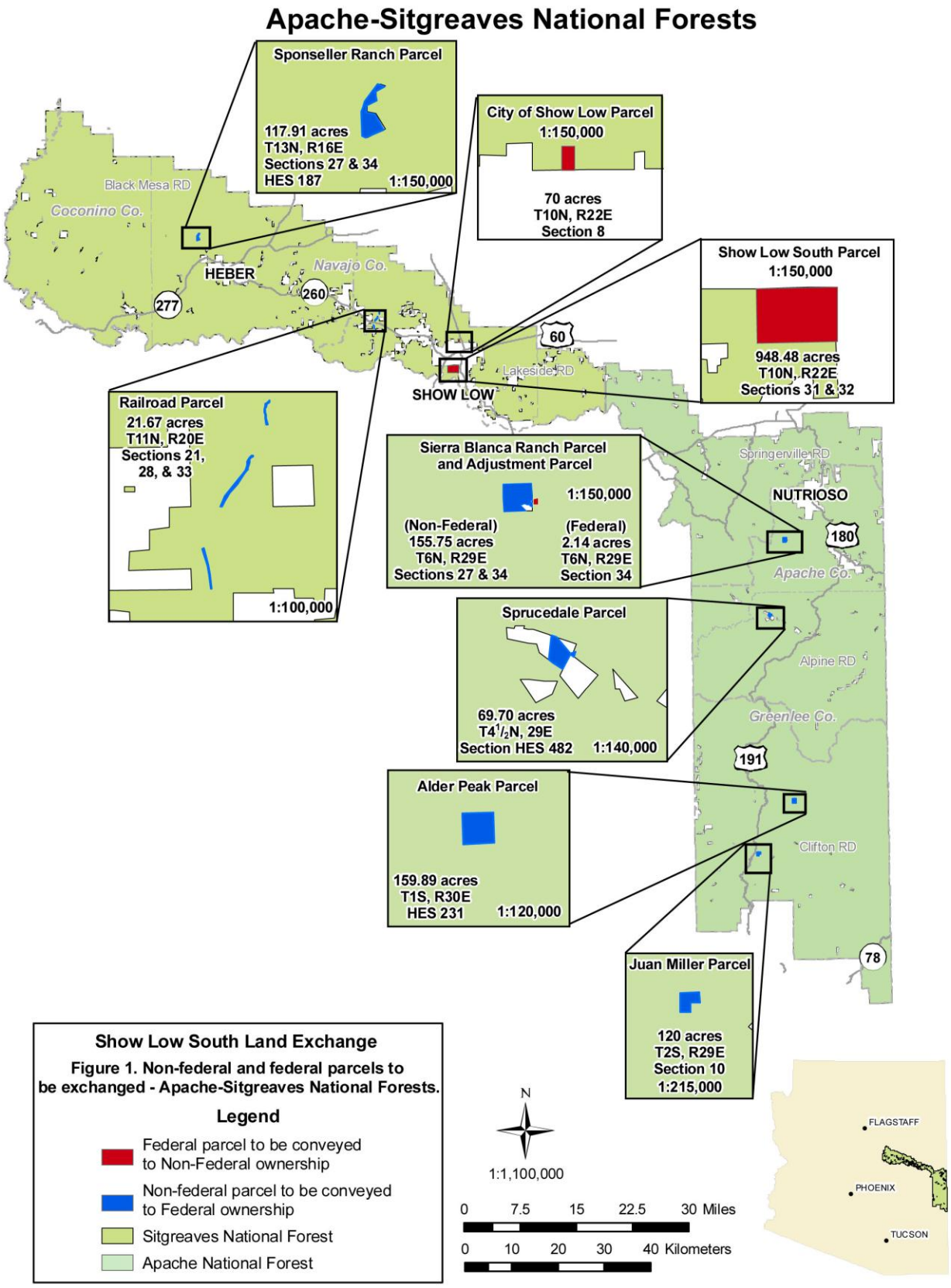

Figure 1. Non-Federal and Federal parcels to be exchanged on the Apache-Sitgreaves National Forests.

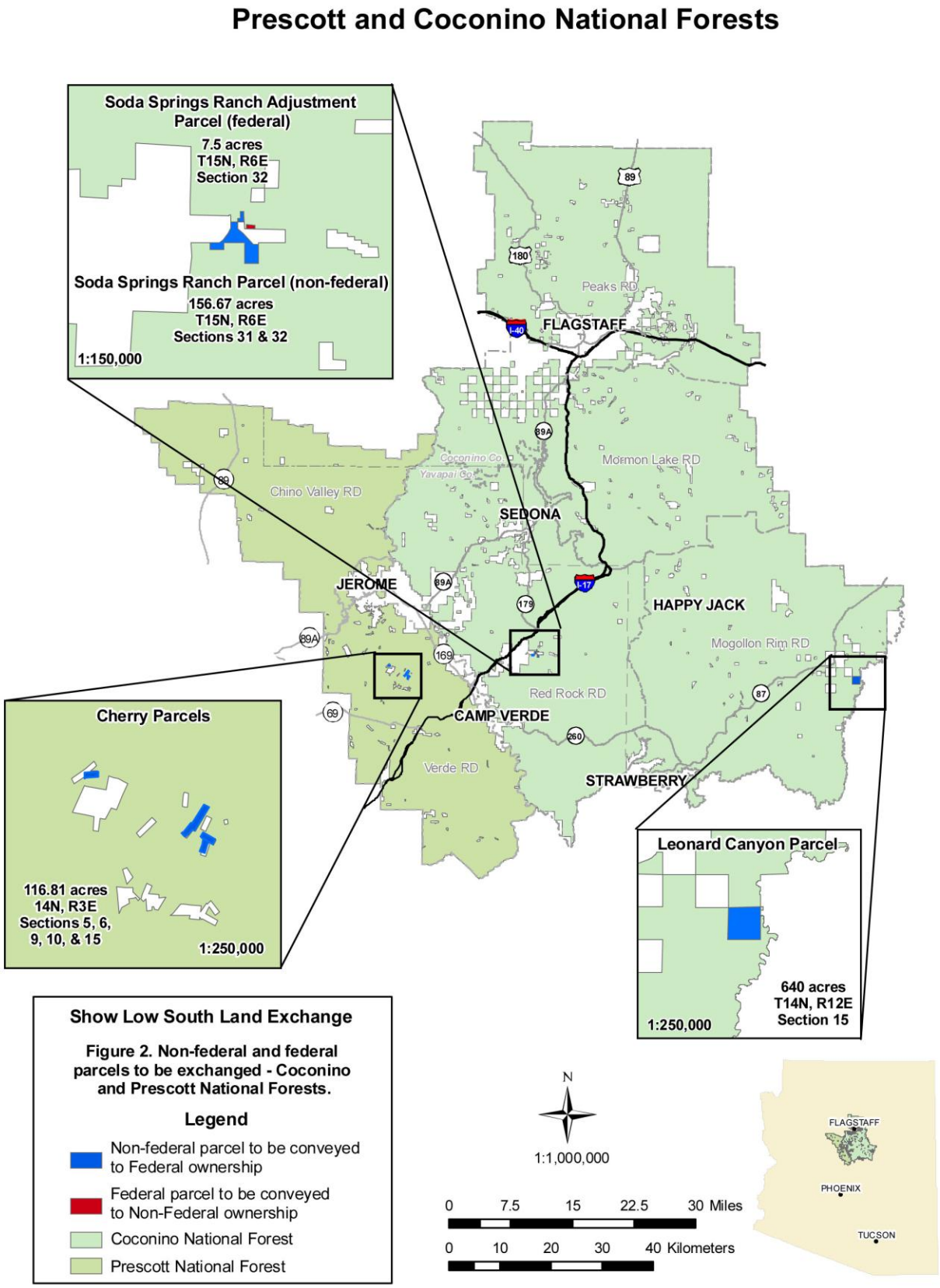

Figure 2. Non-Federal and Federal parcels to be exchanged on the Coconino and Prescott National Forests.

Proposed Action

The proposal exchanges approximately 1,028 acres of Federal lands for approximately 1,558 acres of Non-Federal land within the ASNFs, CNF, and PNF (*Figure 1 and Figure 2*). There are thirteen (13) parcels total: nine (9) Non-Federal parcels to be conveyed into Federal ownership; and four (4) Federal parcels to be conveyed to Non-Federal ownership. The majority of acreage being exchanged is within the ASNFs; therefore, the ASNFs have been established as the lead agency overseeing the EIS process. Other resource agencies along with the SLL and the City of Show Low were involved in developing alternatives, as well as mitigation measures specifically regarding the relocation of the Buena Vista Trailhead for potential impacts and to insure continued public access to the trail. A brief overview of the components proposed for the land exchange, as well as other related actions, is provided in Table 1.

Table 1. Summary of Proposed Action

Non-Federal Lands To Be Acquired by USFS		
Parcel Name	**Acreage**	**Forest**
Alder Peak	160	ASNFs
Juan Miller	120	ASNFs
Railroad	22	ASNFs
Sierra Blanca Ranch	156	ASNFs
Sponseller Ranch	118	ASNFs
Sprucedale	70	ASNFs
Leonard Canyon (632 acres on ASNFs and 8 acres on CNF)	640	ASNFs/CNF
Soda Springs Ranch	157	CNF
Cherry	117	PNF
Total for Non-Federal Lands	**1,558**	
Federal Lands To Be Conveyed Into Private Ownership		
Parcel Name	**Acreage**	**Forest**
Show Low South	948	ASNFs
City of Show Low	70	ASNFs
Sierra Blanca Ranch Adjustment	2	ASNFs
Soda Springs Ranch Adjustment	8	CNF
Total for Federal Lands	**1,028**	
Other Actions		
Relocation of a portion of the Buena Vista Trail and Construction of a New Trailhead	N/A	ASNFs
NFSR 249A Road Easement (Sierra Blanca Ranch Parcel)	N/A	ASNFs

The Non-Federal and Federal lands are located within Apache, Coconino, Greenlee, Navajo, and Yavapai Counties, Arizona.

Objectives

The USFS has the responsibility to manage NFS lands for appropriate public uses. There is a need to meet Forest Plan goals and objectives, including making adjustments in land ownership that serves the public interest and is consistent with land management planning objectives. The purpose of the Proposed Action is to meet the following USFS objectives:

1) Acquisition of Non-Federal lands within existing NFS boundaries that contain habitat

for federally listed and protected species and aquatic and riparian habitats associated with streams and creeks (*see Tables 2 and 3, below*);

2) The elimination of several miles of landline boundaries and controlling corners between NFS lands and private lands.
3) Acquisition of Non-Federal lands within existing NFS boundaries that would contribute to consolidation of public land ownership, reduce the likelihood of trespass on or degradation of NFS lands, and facilitate fire and resource management.

For the exchange to take place, both parties of the exchange must agree on the total package. The Non-Federal trustee First American Title Insurance Company, under Trust 8667, for the benefit of SLL, agrees the exchange satisfies the SLL's requirements for consolidating their real estate.

Purpose and Need

The proposal to exchange lands in the ASNFs, CNF, and PNF responds to the Forest Service's need for consolidation of Federal land ownership patterns and the need to enhance management of the Public's natural resources. There is a need to acquire lands that 1) protect habitat for several threatened, endangered, and sensitive species; 2) facilitate public access to Federal lands; 3) improve wetlands, floodplains, and riparian areas; 4) decrease the complexity of maintaining property boundaries; and, 5) improve the efficiency of resource management by focusing the Forest's funding and staff on consolidated ownerships.

Additional discussion of the Purpose and Need for the Proposed Action is discussed below in terms of existing conditions, desired conditions, and the conformance of the Proposed Action to the respective Forest Plans.

Due to the size and number of parcels being exchanged, the parcels will be described in two separate categories: "Non-Federal lands" and "Federal lands". Non-Federal lands are private lands that are proposed for acquisition into the NFS, and Federal lands are those proposed for private acquisition.

Existing Condition

Non-Federal Lands

The Non-Federal lands consist of nine (9) separate parcels totaling approximately 1,558 acres located within the boundaries of the ASNFs, CNF, and PNF (*see Appendix A for Parcel Maps of Non-Federal Lands*). Privately owned parcels that are partially or completely surrounded by NFS lands are often referred to as "in-holdings," and are difficult to manage surrounding landscapes by NFS lands administration. The presence of in-holdings often increases costs associated with resource management and protection, including fire suppression. In-holdings may cause fragmentation of wildlife habitat and limit wildlife access to dependable water sources. Demand for undeveloped in-holdings for rural residential and/or subdivision development continues to increase. This type of development may result in negative impacts to resources on adjacent NFS lands and in general prevent a unified approach to forest management. Once in-holdings have been developed, they are rarely available for future acquisition by the USFS.

Non-Federal lands within the ASNFs, CNF, and PNF that are included in this exchange proposal contain potential habitat for numerous federally listed and protected species (*Table 2;* AGFD 2010) and valuable perennial waters (*Table 3*). These lands are currently subject to development that could diminish those values and support activities that would be incompatible with the surrounding NFS land character. At the present time, the Non-Federal lands contribute

to the undesirable ownership pattern depicted in Appendix A and are classified as desirable for acquisition. These in-holdings increase land management complexity because of the miles of common, or shared, landline boundaries that add to administrative costs and increase the potential for encroachments on NFS lands.

Table 2. Federally Listed or Protected Species with Potential Habitat on the Non-Federal Parcels

Parcel Name	Species	Status	Forest
Alder Peak (160 acres)	Bald eagle (winter population)	Bald and Golden Eagle Protection Act	ASNFs
	Loach minnow	Endangered with Critical Habitat	
	Mexican gray wolf (10J area)	Nonessential experimental population	
	Western yellow-billed cuckoo	Candidate	
Cherry (117 acres)	No Federally Listed Species		PNF
Juan Miller (120 acres)	Bald eagle (winter population)	Bald and Golden Eagle Protection Act	ASNFs
	Mexican gray wolf (10J area)	Nonessential experimental population	
Leonard Canyon (640 acres)	Bald eagle (winter population)	Bald and Golden Eagle Protection Act	ASNFs
	Chiricahua leopard frog	Threatened with Critical Habitat as of 3/20/2012 (77 FR 16324)	
	Little Colorado spinedace	Threatened with Critical Habitat	
	Mexican spotted owl	Threatened with Critical Habitat	
Railroad (22 acres)	Bald eagle (winter population)	Bald and Golden Eagle Protection Act	ASNFs
Sierra Blanca Ranch (156 acres)	Apache trout	Threatened	ASNFs
	Bald eagle (winter population)	Bald and Golden Eagle Protection Act	
	Chiricahua leopard frog	Threatened with Critical Habitat	
	Loach minnow	Endangered with Critical Habitat as of 2/23/2012 (77 FR 10810 10932)	
	Mexican gray wolf (10J area)	Nonessential experimental population	
	Mexican spotted owl	Threatened with Critical Habitat	
	New Mexico meadow jumping mouse	Candidate	
	Three forks springsnail	Endangered with Critical Habitat	
Soda Springs Ranch (157 acres)	Bald eagle (winter population)	Bald and Golden Eagle Protection Act	CNF
	Gila chub	Endangered with Critical Habitat	
	Roundtail chub	Candidate	
	Southwestern willow flycatcher	Endangered	
	Western yellow-billed cuckoo	Candidate	
Sponseller (118 acres)	No Federally Listed Species		ASNFs
Sprucedale (70 acres)	Apache trout	Threatened	ASNFs
	Bald eagle (winter population)	Bald and Golden Eagle Protection Act	
	Mexican spotted owl	Threatened with Critical Habitat	
	Mexican gray wolf (10J area)	Nonessential experimental population	
	New Mexico meadow jumping mouse	Candidate	
	Roundtail chub	Candidate	

Table 3. List of Perennial Creeks and Streams within the Non-Federal Parcels

Parcel Name	Creek/Stream	Approximate Length (miles)	Forest Location
Juan Miller	Juan Miller Creek	0.25	ASNFs
Sierra Blanca Ranch	Boneyard Creek	0.64	ASNFs

Parcel Name	Creek/Stream	Approximate Length (miles)	Forest Location
Soda Springs Ranch	Wet Beaver Creek	0.17	CNF
	Red Tank Draw	0.29	
Sponseller Ranch	Brookbank Canyon	1.27	ASNFs
Sprucedale	Beaver Creek	0.52	ASNFs

Federal Lands

The Federal lands consist of four (4) separate parcels totaling approximately 1,028 acres located within the boundaries of the ASNFs and CNF (*see Appendix A for Parcel Maps of Federal Lands*).

Federal land resource objectives for the parcels located within the boundary of the ASNFs are based upon existing Management Area (MA) designation as presented in the 1987 ASNFs Forest Plan (USDA 1987a). The Federal parcels on the ASNFs are located in MA 1 and MA 2. MA 1 is described as forested land located outside of special management areas. Management emphasis includes a combination of multiple uses including: sustained yield of timber and fuel-wood production, wildlife habitat, livestock grazing, watershed, and dispersed recreation. MA 2 is described as woodland. Management emphasis includes fuel-wood production, wildlife habitat, watershed condition, and livestock grazing.

Federal land resource objectives for the parcel located within the boundary of the CNF, Soda Springs Ranch Adjustment Parcel, as presented in the 1987 CNF Forest Plan (USDA 1987b) is based upon MA 10 in the grassland and sparse piñon-juniper vegetation type above the Mogollon Rim. Management emphasis includes range management, watershed condition, and wildlife habitat.

Show Low Creek, located within the City of Show Low Parcel, is the only perennial water within the four Federal parcels. Approximately 0.16-mile of Show Low Creek flows through the southwest corner of the City of Show Low Parcel. Potential habitat for federally listed and protected species within the Federal parcels is shown in *Table 4* (AGFD 2010).

Table 4. Federally Protected or Candidate Species with Potential Habitat on the Federal Parcels

Parcel Name	Species	Status	Forest
City of Show Low	Bald eagle (winter population)	Bald and Golden Eagle Protection Act	ASNFs
	Little Colorado Spinedace	Threatened	
Show Low South	Bald eagle (winter population)	Bald and Golden Eagle Protection Act	ASNFs
Sierra Blanca Ranch Adjustment	Bald eagle (winter population)	Bald and Golden Eagle Protection Act	ASNFs
	Mexican gray wolf (10J area)	Nonessential experimental population	
	Mexican spotted owl	Threatened	
Soda Springs Ranch Adjustment	Western yellow-billed cuckoo	Candidate	CNF

Desired Condition

Non-Federal Lands

The desired condition is that the Non-Federal lands are accepted and included into the NFS. Nine fewer private in-holdings would exist in the ASNFs, PNF, and CNF. Lands containing

perennial waters that are valuable as habitat for federally listed species would be acquired. Multiple benefits would be expected with the addition of the offered Non-Federal lands to the NFS. These would include the acquisition of potential habitat for the federally listed species shown in Table 2 and acquisition of aquatic and riparian habitats associated with the creeks, streams, and rivers listed in Table 3. Additional management benefits would include a reduction in complex ownership patterns that would consolidate public land ownership; elimination of numerous miles of landline boundaries and controlling corners that would contribute to management efficiency; and the elimination of any possible future subdivision/residential development on these remote private in-holdings within the boundaries of the ASNFs, CNF, and PNF.

The Non-Federal properties to be acquired would contribute to the preservation of resource values for wildlife habitat and, in a few instances, riparian habitat. When the proposed land exchange is completed, each Non-Federal parcel would be incorporated into the adjacent land MA on the national forest in which it is located. Certain parcels identified for exchange into Federal ownership may be located within multiple MAs and may be classified into multiple MAs once the proposed exchange is completed. All of the Non-Federal parcels are within the proclaimed boundaries of NFS lands within Arizona. The acquisition of all the parcels would contribute to the management efficiency of NFS lands.

The Non-Federal lands offered in this exchange meet several of their respective Forest Plans' criteria for acquisition. These criteria include: provide for consolidation of the public lands; reduce property and boundary line maintenance through the reduction of intermingled ownerships; assure continued public access to NFS lands through acquisition of necessary public road rights-of-way; acquire private lands with development potential adjacent to designated areas; improve management or benefit-specific resources and research needs; and increase total wetland and floodplain acreage.

Federal Lands

The conveyance of the Federal lands to SLL would result in more functional and consolidated private land holdings more suitable for development. Exchange of 1,558 acres of Non-Federal lands for 1,028 acres of Federal lands would result in a net gain of 530 acres of Federal lands into the NFS. The NFS lands being considered for exchange in the Show Low South Land Exchange meet several of the criteria for conveyance contained within the ASNFs and CNF Forest Plans. Specifically, these criteria include: forest management efficiency; lands needed to meet the needs of expanding communities; consolidation of the public lands; improved management of benefit-specific resources; resolution of trespass issues; and meeting overriding public needs.

Forest Plan Consistency

The proposed exchange is consistent with the management direction, goals, and objectives of the ASNFs, CNF, and PNF Forest Plans and is in the public interest (36 CFR 254.3(b)(2)). The Non-Federal lands meet the Forest Plan standards and guidelines that identify them as desirable for acquisition (ASNFs Forest Plan, p. 101; CNF Forest Plan, p. 84; PNF Forest Plan 1986, p. 57) and the Federal lands as available for conveyance under land exchange authorities (ASNFs Forest Plan, p. 100; CNF Forest Plan, p. 86; PNF Forest Plan, p. 56).

The Non-Federal lands would be incorporated into the MAs in which they are located (36 CFR 254.3(f)). Management objectives for the parcels would be the same as surrounding federal lands, unless otherwise changed by future amendment of the respective Forest Plans.

Connected Actions

Following the exchange, the Forest Service would relocate the Buena Vista Trail #637 and trailhead to Forest Service lands near the current location on the ASNFs (*see Figure 11*).

With regard to the Sierra Blanca Ranch Parcel, an easement would be granted to the private landowner for the existing Forest Road (FR) 249A that is currently under a Special Use Permit. Concurrently with the establishment of that easement, a previously recorded road easement that was established for the property across undisturbed NFS lands would be terminated.

Scope of Analysis and Decision Framework

The Forest Supervisor of the ASNFs will be the Deciding Official to determine if the land exchange should take place as described in the Proposed Action. The Forest Supervisor was officially designated as the Deciding Official by the Regional Office. The decision would include the Proposed Action, connected actions, mitigation, and monitoring. The Forest Supervisor may decide to modify the Proposed Action or choose the No Action Alternative.

Public Involvement

Public involvement for the proposed Show Low South Land Exchange was initiated on April 28, 2009, with publication of the Notice of Intent (NOI) to prepare an EIS for the proposed Show Low Land Exchange in the Federal Register. The project was placed on the ASNFs Schedule of Proposed Actions (SOPA) on April 2, 2009, and published quarterly thereafter. Scoping for the DEIS included a Land Exchange Notice publication and Notice of Public Open-house in the *White Mountain Independent* (36 CFR 254.8); direct mailing of an “Interested Party” letter to over 160 county, state, and congressional delegations and other potentially interested agencies, individuals, and organizations; and one public open-house held on April 28, 2009, to provide information about the proposed exchange and solicit comments on the Proposed Action. The Project Record contains records of public involvement. To date, 36 comments have been received.

A letter was sent to those who submitted scoping comments and other interested stakeholders notifying them that the DEIS was available for public comment on the ASNFs website. Notice of availability of the document was sent to other federal agencies, federally recognized tribes, and State and local governments. The official Notice of Availability (NOA) of the DEIS was published in the Federal Register on November 2, 2012. A legal notice for public comment on the DEIS was also published in the *White Mountain Independent* newspaper on November 2, 2012. The DEIS was made available for public review at the Lakeside Ranger District, 2022 West White Mountain Blvd., Lakeside, Arizona 85929, and on the ASNFs website. Hardcopies of the DEIS were made available upon request.

Tribal Consultation

The ASNFs consulted with eight tribes and one Navajo Nation chapter that use the ASNFs, CNF, and/or PNF for traditional, cultural, or spiritual activities. The following Native American tribes and chapter were consulted: Hopi Tribe, Navajo Nation, the Ramah Chapter of the Navajo Nation, Pueblo of Zuni, San Carlos Apache Tribe, Tonto Apache Tribe, White Mountain Apache Tribe, Yavapai-Apache Tribe, and Yavapai-Prescott Tribe.

These tribes were informed about the proposed land exchange in April 2009 as part of the NEPA process. Two tribes provided written responses: the Hopi Tribe and Navajo Nation. The Hopi Tribe commented that they wish to be provided with copies of the cultural resources survey report and treatment plan if any prehistoric cultural sites are located within the Federal parcels that would be adversely impacted. The Navajo Nation commented that they have no concerns

with the land exchange, as it is not expected to impact any cultural sites important to the Navajo Nation.

The Heritage Program Manager of the ASNFs attended a meeting with the Hopi Tribe on January 12, 2011, to discuss the proposed land exchange, among other topics. The Hopi Tribe agreed to a mitigation plan as the appropriate action to prevent adverse impacts to cultural resources by pursuing data recovery.

Issues

The ASNFs analyzed all comments to identify issues, which are defined as cause-effect relationships directly or indirectly resulting from implementation of the Proposed. The issues defined as within the scope of the project, and directly or indirectly resulting from Proposed Action implementation, were used to develop the alternatives. Other comments eliminated from detailed study were identified as those: (1) outside the scope of the Proposed Action; (2) already decided by law, regulation, forest plan, or other higher level decision; (3) irrelevant to the decision to be made; or (4) conjectural and not supported by scientific or factual evidence.

The CEQ NEPA regulations explain this delineation in Sec. 1501.7: "…identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)…" The following issues were used to develop alternatives and focus the analysis for this project. All comments and the forests' response to these comments are located in the project record.

Issue 1: Trails/Access/Recreation

Concern: Land exchange would remove access to Buena Vista Trail #637.

Response: To maintain access and recreational opportunities, the Proposed Action Alternative would relocate the Buena Vista Trailhead and a segment of Trail #637 to be realigned on Forest Service lands to the south of the existing route.

Unit of Measure: Distance between current trailhead and proposed trailhead for the Buena Vista Trail #637. Discussed in Chapter 3: Affected Environment and Environmental Consequences, Recreation and Public Access.

Issue 2: Future Development of Lands including Density and Type of Development

Concern: Land exchange would reroute additional traffic through Sierra Pines neighborhood.

Response: The Sierra Pines neighborhood would experience increased traffic as a result of the Proposed Action Alternative; however, since the direction of the resulting traffic is not known, it is not possible to predict the precise impact. To prevent all new traffic from being funneled through a single neighborhood, multiple entrances into the development of the Show Low South Parcel would be constructed.

Unit of Measure: Number of entrances (4) into the Show Low South Parcel, as guided by City of Show Low building codes and regulations. Discussed further in Chapter 3: Affected Environment and Environmental Consequences, Roads.

Issue 3: Land Values/Use/Character

Concern: Residents in the Sierra Pines neighborhood raised the concern that additional development within the community of Show Low would add to the oversupply of available housing and may affect land values. The land exchange would also reduce forest access and existing recreational opportunities that give Show Low its distinctive mountain forest community character.

Response: In consideration of the present economy and general oversupply of housing, the land within the Show Low South Parcel would likely remain vacant until development would be a profitable enterprise. Development on the Show Low South Parcel would not take place until the demand exists for new residences. When development becomes economically feasible on the Show Low South Parcel, development is not expected to negatively affect land values of adjacent landowners. The Show Low South Parcel would be zoned similarly to the Sierra Pines neighborhood, no high density residential development would occur, and no mobile homes would be constructed. If land values of nearby land owners change, it would likely be from other factors related to the housing market.

The Proposed Action Alternative would not eliminate forest access or recreational opportunities, though it would require residents of the Sierra Pines neighborhood to travel a greater distance to reach ASNFs land. If the land exchange occurs, the proponent is considering a 400-foot buffer between the existing neighborhoods (e.g., Sierra Pines) and the planned development to help minimize impacts to the mountain forest character of the area.

Unit of Measure: There is no definitive unit of measure that can accurately predict how a proposed development would affect adjacent land values. For forest access concerns: distance to access the ASNFs for the residences in the northern half of the Sierra Pines subdivision would increase by approximately one mile. Discussed further in Chapter 3: Affected Environment and Environmental Consequences, Recreation and Public Access.

Issue 4: Wildlife Use and Migration Routes

Concern: Land exchange could impact migration routes, habitat, and water availability for wildlife on the City of Show Low and Show Low South parcels.

Response: Under the Proposed Action Alternative, the City of Show Low Parcel, except for the expansion area of the waste water treatment facility, would remain undeveloped, allowing for the continued use of habitat, water availability, and migration routes for wildlife. The Show Low South Parcel would be developed as low-density and mixed-use residential area and would maintain treed areas and open habitat available for wildlife use and migration. Additionally, ASNFs lands would be located immediately adjacent to the west and south of the Show Low South Parcel.

The Proposed Action may result in loss of habitat for wildlife species on the parcels going out of forest ownership if parcels are developed following the land exchange; however, the lands coming into forest ownership are of greater acreage and the land exchange would result in a net gain of high value wildlife habitat.

Unit of Measure: Acres maintained as open space within the City of Show Low Parcel. Lot size on the Show Low South Parcel. Discussed further in Chapter 3: Affected Environment and Environmental Consequences, Plants and Wildlife, Management Indicator Species (MIS).

Issue 5: Noise and General Pollution

Concern: Development of the Federal parcels would increase tree removal, noise, and pollution.

Response: Upon transfer to private ownership, there would be an anticipated increase in tree removal and local noise pollution on the City of Show Low, Show Low South, and Soda Springs Ranch Adjustment parcels. However, the land exchange would consolidate development and involve a net gain of 530 acres for the Forest Service. The lands gained by the Forest Service would come under federal protection and management, and no further development would occur.

Unit of Measure: Noise and other forms of pollution would adhere to local codes and regulations.

CHAPTER 2: COMPARISON OF ALTERNATIVES

Introduction

This chapter describes and compares the alternatives considered for the Show Low South Land Exchange proposal on the ASNFs, CNF, and PNF. The alternatives are presented in comparative form, defining the differences between the alternatives and providing a clear basis for analysis by the decision-maker and the public.

Alternatives Considered but Eliminated from Detailed Study

Federal agencies are required by NEPA to rigorously explore and objectively evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). Public comments received in response to the Proposed Action provide suggestions for alternative methods for achieving the Purpose and Need. Some of these alternatives may have been outside the scope of consideration for land exchanges or may already be addressed in the alternatives considered in detail.

The range of alternatives considered in a discretionary land exchange is limited by the exchange process itself. A balanced exchange package is arrived at by a series of proposals and counter proposals until both the non-federal and federal parties agree on an acceptable configuration of parcels. Once both parties agree upon an acceptable allocation of lands, the USFS proposes to go forward with an analysis of the Proposed Action. The exchange proposal analyzed in this document reflects lands mutually agreed upon by the Non-Federal landowner and the USFS. The Federal lands, if not already classified as base-for-exchange, would be reclassified when it has been determined they meet required criteria as identified in the Forest Plans and a decision has been made to exchange the selected lands.

Sale of Private Lands to the Forest Service for Acquisition Purposes

Other means of acquiring the Non-Federal lands were considered but eliminated from further study. The sale of Non-Federal lands to the USFS is an alternative to a land exchange; however, funds to purchase these privately owned parcels are presently not available and it appears funds for land purchases will continue to be limited. Even if funds were available, the land exchange proponent has made the Non-Federal lands available to the USFS on the basis of exchange only.

Require Deed Restrictions for In-holdings

Some scoping comments suggested that deed restrictions be used to control potential future development on the Federal lands once conveyed into private ownership. The purpose of a deed restriction should be to limit use or development on the Federal lands after conveyance as a means of addressing environmental concerns. A deed restriction alternative on the Federal lands was considered but eliminated from further study because no environmental concerns exist that require the reservation of rights by the United States (36 CFR 254.3(h)). In addition, any potential future development on the exchanged Federal lands would be subject to all laws and regulations of the State of Arizona and zoning ordinances, including subdivision development requirements, of Apache, Navajo, and Yavapai Counties, as applicable. The relevant laws, regulations, and zoning ordinances contain adequate measures to assure the conveyed Federal lands, adjacent private land, and remaining adjacent NFS lands are not adversely affected. Changes in zoning typically require public review and comment at the county or city level. Protection of the Federal lands through deed restriction is not necessary,

as the intended use of the conveyed land would not substantially conflict with the established management objectives on the adjacent NFS lands. Deed restrictions are not required in order to fulfill the Purpose and Need. Restrictions, if imposed, also require continued federal administration or oversight of the lands exchanged out of federal ownership. A principle objective of the exchange is to reduce administrative requirements. The USFS has long taken the position that zoning and regulation of uses on private land are within the responsibility of state and local governments. Deed restrictions are not to be considered unless there is a need to protect the public interest where state or local regulations are not adequate. "Except as authorized by law, order, or regulation, Forest Service policies, practices, and procedures shall avoid regulating private property use" (USDA 2003). "Reservations and restrictions should not be used to address a social or political issue" (USDA 1995; Chapter 33.41c).

Alternatives Considered in Detail

Alternative 1 - Proposed Action

Exchange approximately 1,558 acres of Non-Federal land for approximately 1,028 acres of Federal land, including connected actions. Figures depicting individual Federal and Non-Federal parcels are included in Appendix A. Forest Service databases would be updated to reflect these changes (e.g., GIS layers, Infra database, heritage database, NRIS, etc.)

Alternative 2 - No Action

Under Alternative 2, the No Action Alternative, no exchange of lands would occur between the USFS and SLL. Lands would remain in current ownership.

Detailed Description of Federal and Non-Federal Lands Proposed for Exchange

Non-Federal Lands to be Conveyed into Federal Ownership: 1,558 acres

The Non-Federal lands are located in Apache, Coconino, Greenlee, Navajo, and Yavapai Counties, Arizona. Many of the parcels are surrounded by federal land. Table 5 presents legal descriptions and acreages of each of the Non-Federal parcels proposed for exchange followed by descriptions of each parcel.

Table 5. Legal Descriptions of Non-Federal Lands to be Conveyed to Federal Ownership

Parcel Name	Section	Township	Range	Approximate Acreage
IN-HOLDINGS WITHIN APACHE-SITGREAVES NATIONAL FORESTS				
Alpine Ranger District				
Sierra Blanca Ranch Parcel	27 & 34	6N	29E	156
Sprucedale Parcel	unsurveyed Section 35	4½N	29E	70
Clifton Ranger District				
Alder Peak Parcel	unsurveyed Section 4	1S	30E	160
Juan Miller Parcel	10	2S	29E	120
Black Mesa Ranger District				

Parcel Name	Section	Township	Range	Approximate Acreage
Leonard Canyon Parcel (also within CNF)	15	14N	12E	8
Sponseller Ranch Parcel	27 and 34	13N	16E	118
Lakeside Ranger District				
Railroad Parcels	21, 28, & 33	11N	20E	22
IN-HOLDINGS WITHIN COCONINO NATIONAL FOREST				
Mogollon Rim Ranger District				
Leonard Canyon Parcel (also within ASNFs)	15	14N	12E	632
Red Rock Ranger District				
Soda Springs Ranch Parcel	31 & 32	15N	6E	157
IN-HOLDINGS WITHIN PRESCOTT NATIONAL FOREST				
Verde Ranger District				
Cherry Parcels	5, 6, 9, 10, & 15	14N	3E	117
TOTAL ACREAGE OF NON-FEDERAL LANDS TO BE CONVEYED				**1,558**

Alder Peak Parcel *(160 acres):* This private parcel is surrounded by the Clifton Ranger District, Apache National Forest, and located within unsurveyed Section 4, Township 1 South, Range 30 East. The Alder Peak Parcel is located approximately 22 miles north of Clifton, Arizona. Elevations on the property range from approximately 6,000 to 6,400 feet above mean sea level (amsl). A minor drainage flows south to north into Burns Tank located near the central-western section of the parcel. This tract is rural with an open meadow and a small water body. Vegetation on the parcel is primarily ponderosa pine and alligator juniper with a variety of low-lying shrubs and grasses.

Cherry Parcels *(117 acres):* The Cherry Parcels (which are comprised of three separate parcels) are located on private in-holdings surrounded by the Verde Ranger District, PNF. The Cherry Parcels are located approximately 8 miles south of Cottonwood, Arizona. The three parcels (Cross Cut/Gulch Parcel; Ida/Gold Ring/Potomac Parcel; and Sitting Bull Parcel) are located in five sections of Township 14 North, Range 3 East. The parcel boundaries of the Cross Cut/Gulch Parcel and Ida/Gold Ring/Potomac Parcel are located within Sections 9, 10, and 15 and are surrounded by federal land. Located in Sections 5 and 6, the Sitting Bull Parcel's northwest corner adjoins private land and the remaining boundaries are connected to federal lands. Steep surface topography exists for the Cherry Parcels. The Cherry Creek drainage crosses a portion of the Sitting Bull Parcel, and other minor drainages occur on the Cross Cut/Gulch Parcel and Ida/Gold Ring/Potomac Parcel. Vegetation within the Cherry Parcels is characterized by dense manzanita with occasional interspersed junipers.

Juan Miller Parcel *(120 acres):* This parcel is surrounded by the Clifton Ranger District, Apache National Forest, and located within Section 10, Township 2 South, Range 29 East. The Juan Miller Parcel is located approximately 15 miles north of Clifton, Arizona. The elevation of the parcel ranges from 5,800 to 6,400 feet amsl. Access to the parcel is from Coronado Road (FR 475), which intersects the parcel and leads to campgrounds to the east. The Juan Miller Creek bisects the parcel, with surface topography becoming steeper to the north and south of the creek. The area along Juan Miller Creek is characterized by a single large sycamore and several native riparian vegetation species. North of Juan Miller Creek is a south facing slope

with scrub-live oak, agave, juniper, prickly pear, and blue grama. The area north of Juan Miller Creek drainage is predominantly ponderosa pine.

Leonard Canyon Parcel *(640 acres):* A total of 632 acres of the Leonard Canyon Parcel is bordered by the Mogollon Rim Ranger District, CNF, while the remaining 8 acres (that portion located east of Leonard Canyon) is bordered by the Black Mesa Ranger District, Sitgreaves National Forest. The parcel is the full Section 15, Township 14 North, Range 12 East, and is surrounded by federal lands. The Leonard Canyon Parcel is located approximately 14 miles northeast of Happy Jack, Arizona. The elevation of the parcel ranges from 6,200 to 6,860 feet amsl. Approximately 0.3 miles of Leonard Canyon is located within this parcel. This 0.3 miles of Leonard Canyon is considered a perennial pool stream reach, which means it has pools of water that remain year-round, while water flows throughout the entire 0.3 miles of Leonard Canyon for a portion of the year. This perennial pool stream reach flows into East Clear Creek north of the parcel. General vegetation within the parcel consists of ponderosa pine, gamble oak, alligator juniper, and various grasses. Cacti species are present along the open areas on south facing slopes.

Railroad Parcels *(22 acres):* The Railroad Parcels, surrounded by the Lakeside Ranger District, Sitgreaves National Forest, and located within Sections 21, 28, and 33, Township 11 North, Range 20 East, consist of three separate parcels of land that are approximately 100 feet wide. The Railroad Parcels are located approximately 1 mile east of Pinedale, Arizona. These three parcels of land are situated along abandoned Standard Lumber Mill, Inc. railroad grades. Elevations on the parcels remain relatively flat at approximately 6,300 feet amsl. Mortesen Wash runs through the middle and southern sections, and Pine Tank is located immediately adjacent to the southern section. Vegetation within the Railroad Parcels consists primarily of native grasses, various thistles, and ponderosa pine. Evidence of the Rodeo-Chediski Fire which occurred in 2002 is present.

Sierra Blanca Ranch Parcel *(156 acres):* This private parcel is primarily bordered by the Alpine Ranger District, Apache National Forest, in Sections 27 and 34, Township 6 North, Range 29 East. The southeast corner of this parcel borders private land. The Sierra Blanca Ranch Parcel is located approximately 6.5 miles northwest of Alpine, Arizona. Elevations on the property range from approximately 8,430 to 8,600 feet amsl. The general vegetation is mixed conifer forests with grasslands and open meadows. The parcel includes a wetland area approximately 82 acres in size. Three creeks meet within the wetland area. Boneyard Creek enters the parcel near the northeast corner and exits the parcel on the western boundary. Another creek (spillway from Sierra Blanca Lake) enters at the southern boundary and drains into Boneyard Creek. The third creek enters from the northern boundary and also drains into Boneyard Creek. This parcel is currently encumbered by a conservation easement held by The Nature Conservancy.

Soda Springs Ranch Parcel *(157 acres):* This private parcel is partially bordered by the Red Rock Ranger District, CNF within Sections 31 and 32, Township 15 North, Range 6 East. The Soda Springs Ranch Parcel is located approximately 7 miles northeast of Camp Verde, Arizona. The parcel also borders Montezuma Castle National Monument to the west and private land on part of the east boundary. Elevations on the parcel range from 3,575 to 3,700 feet amsl. The prominent hydrologic features include Wet Beaver Creek and Red Tank Draw, both of which cross the parcel. Montezuma Well and Soda Spring are located within ¼ mile of the parcel.

Sponseller Ranch Parcel *(118 acres):* This parcel is surrounded by the Black Mesa Ranger District, Sitgreaves National Forest, and is located within Sections 27 and 34, Township 13 North, Range 16 East. The Sponseller Ranch Parcel is located approximately 3 miles northwest

of Heber, Arizona. Elevations on the property remain relatively flat at an elevation of approximately 6,600 feet amsl. The center of the parcel is dominated by blue grama and other grasses, while a number of ponderosa pine and junipers occur along the edges of the parcel. Brookbank Canyon is the prominent drainage and crosses the length of the parcel.

Sprucedale Parcel *(70 acres):* This parcel is partially bordered by the Alpine Ranger District, Apache National Forest, within unsurveyed Section 35, Township 4½ North, Range 29 East. The Sprucedale Parcel is located approximately 14 miles southwest of Alpine, Arizona. The parcel borders ASNFs on the southwest and northwest corners and along the eastern boundary of the parcel. The remaining boundaries adjoin private land. Elevations on the property remain relatively flat at approximately 7,550 feet amsl. The prominent drainages in the area include Beaver and Horton creeks, both intermittent streams. Vegetation within the parcel consists almost entirely of grasses, while dense ponderosa pine stands surround the area.

Federal Lands to be Conveyed into Non-Federal Ownership: 1,028 acres

The Federal lands consist of approximately 1,020 acres of land within the ASNFs and 8 acres within the CNF. *Table 6* presents legal descriptions and acreages of each of the Federal parcels proposed for exchange. Descriptions of the parcels follow Table 6.

Table 6. Legal Descriptions of Federal Lands to be Conveyed to Non-Federal Ownership

Parcel Name	Section	Township	Range	Approximate Acreage
APACHE NATIONAL FOREST				
Alpine Ranger District				
Sierra Blanca Ranch Adjustment Parcel	34	6N	29E	2
COCONINO NATIONAL FOREST				
Red Rock Ranger District				
Soda Springs Ranch Adjustment Parcel	32	15N	6E	8
SITGREAVES NATIONAL FOREST				
Lakeside Ranger District				
City of Show Low Parcel	8	10N	22E	70
Show Low South Parcel	31 & 32	10N	22E	948
TOTAL ACREAGE OF FEDERAL PARCELS TO BE CONVEYED				**1,028**

City of Show Low Parcel *(70 acres):* This parcel is located just north of the City of Show Low, Arizona, within the Lakeside Ranger District, Sitgreaves National Forest, in Section 8, Township 10 North, Range 22 East. Elevations on the parcel remain relatively flat at an elevation of approximately 6,300 feet amsl. The southern boundary of the parcel adjoins private land, while the west, north, and east boundaries adjoin ASNFs lands. The parcel, which remains undeveloped, contains a short segment of Show Low Creek in the southwest corner. The parcel's southwest corner also extends over the City of Show Low's sewage pipeline. Vegetation within this parcel consists primarily of juniper woodland with some gamble oak and ponderosa pines. Show Low Creek canyon contains riparian grasses, willows, and other vegetation.

Show Low South Parcel *(948 acres):* This parcel is located just south of the City of Show Low, Arizona, within the Lakeside Ranger District, Sitgreaves National Forest, in Sections 31 and 32 of Township 10 North, Range 22 East. Elevations on the property range from approximately 6,550 feet to 6,850 feet amsl. ASNFs lands flank the west and south, while private lands border

the north and east sides. The parcel is contiguous to urban/transitional lands, such as the Sierra Pines subdivision. The Show Low South Parcel is located within a vegetation transition zone between ponderosa pine and piñon-juniper habitat. Several small unnamed drainages cross the parcel and Lost Tank is located near the center of the parcel.

Sierra Blanca Ranch Adjustment Parcel *(2 acres):* This parcel is located within the Alpine Ranger District, Apache National Forest, in Section 34, Township 6 North, Range 29 East. The Sierra Blanca Ranch Adjustment Parcel is located approximately 6.5 miles northwest of Alpine, Arizona. Elevations on the parcel range from approximately 8,430 to 8,580 feet amsl. The parcel is encumbered by an existing residential structure contiguous to the retained portion of Sierra Blanca Ranch. The general vegetation is mixed conifer forests with grasslands and open meadows. The northeastern section of the property is forested, while the southwestern area is open grassland and meadow habitat. No hydrologic features occur within the property, though Lake Sierra Blanca is located directly southeast of the parcel.

Soda Springs Ranch Adjustment Parcel *(8 acres):* This parcel is located within the Red Rock Ranger District, CNF, in Section 32, Township 15 North, Range 6 East. The Soda Springs Ranch Adjustment Parcel is located approximately 7 miles northeast of Camp Verde, Arizona. Elevations on the parcel range from approximately 3,580 to 3,620 amsl. The parcel borders private lands to the west and south and CNF lands to the north and east. This area of CNF is exposed to the management issues associated with urban and rural boundaries. The vegetation on this parcel is diverse as the southern half is characterized by an open irrigated non-native grassy field, while the northern section is primary desert scrub habitat. No hydrologic features are present within the parcel, though Wet Beaver Creek is located immediately south of the parcel.

Connected Actions

Following the exchange, the project proponent would formally grant responsibility for the Buena Vista Trail to the City of Show Low for incorporation into the Community Public Urban Trail System. The trailhead to the Buena Vista Trail would be relocated, as well as a portion of the trail itself.

Furthermore, NFSR 249A would be improved within the Sierra Blanca Ranch Adjustment Parcel.

Comparison of Alternatives

Table 7 compares the impacts of the alternatives to the key issues that were raised during the scoping process. More detail concerning the environmental consequences of the alternatives can be found in Chapter 3 of this EIS.

Table 7. Comparison of Alternatives

OWNERSHIP	ALTERNATIVE 1 PROPOSED ACTION	ALTERNATIVE 2 NO ACTION
Land Use		
Non-Federal	The nine Non-Federal parcels would not undergo any further development.	The Non-Federal parcels would be developed as rural and low-density housing.
Federal	The four Federal parcels would be developed including expansion of the waste water treatment facility, low-density. mixed-use residential housing.	No change.
Recreation and Public Access		
Non-Federal	An additional 1,558 acres would become available for public access and use for recreation, hunting, fishing, camping, and other outdoor activities.	Remain private property with no public access or use.
Federal	Approximately 1,028 acres would be removed from public access and recreation opportunities. The Buena Vista Trail and Trailhead (#637) would be relocated to the south on retained Forest Service lands.	No change.
Socioeconomics		
Non-Federal	Counties would decrease real estate tax base by a total of 1,558 acres; however, there would be corresponding increase in the Payment in Lieu of Taxes and Secure Rural Schools and Community Self-Determination Act of 2000 funds to each county to offset the lands moving into Federal ownership. May also increase tourism in the area bringing additional revenue.	Development would increase base property tax values in five Arizona counties.
Federal	The private land tax base would decrease by a total of 1,558 acres; however, there would be corresponding increase in the PILT and Secure Rural Schools and Community Self-Determination Act of 2000 funds to each County to offset the lands moving into Federal ownership. It is not anticipated to have a measurable effect on tourism for the three communities due to the close proximity to other Federal lands.	No change.
Environmental Justice		
Non-Federal	No direct or indirect impacts to minority and low-income populations.	Development may bring jobs to several rural communities. No adverse effects are anticipated.
Federal	No direct or indirect impacts to minority and low-income populations.	No change.

OWNERSHIP	ALTERNATIVE 1 PROPOSED ACTION	ALTERNATIVE 2 NO ACTION
Plants, Fish, and Wildlife		
Non-Federal	Generally, the Non-Federal parcels contain more valuable habitat for special-status species, primarily due to the presence of perennial waters and riparian habitat on many of the parcels. Protection of species and habitat would be assured with Federal acquisition.	Parcels would likely be developed reducing the quality and availability of wetland, riparian, and upland habitat.
Federal	Federal parcels provide low quality habitat for T&E species, which would be offset by the acquisition of over 1,500 acres of high quality riparian and upland habitat suitable for several T&E and other special-status species. Best Management Practices (BMP) would be implemented to limit the spread of invasive plant species.	No change.
Grazing		
Non-Federal	A total of 1,558 acres would be added to the NFS. An evaluation would determine the inclusion of these parcels into specific allotments.	Development on the Leonard Canyon and Soda Springs Ranch parcels would remove 797 acres from exiting grazing leases.
Federal	A total of 1,028 acres would be removed from current grazing allotments.	No change.
Prime and Unique Farmlands		
Non-Federal	No prime and unique farmlands are known to exist.	No change.
Federal	No prime and unique farmlands are known to exist.	No change.
Water Quality		
Non-Federal	A total of 1,040.26 acre feet in annual volume of water rights would be conveyed to Federal ownership. No direct or indirect effects to water quality would occur.	Change in water quality or availability would be guided by city, county, or State of Arizona regulations.
Federal	A total of 0.09 acre feet in annual volume of water rights would be conveyed to private ownership. Development of these parcels after conveyance is not expected to impact water quality in any way. Specifically, the City of Show Low parcel, which will house the expansion of the city waste water treatment facility, will not allow effluent to enter Show Low Creek, maintaining the current water quality value. No direct or indirect effects to	No change.

OWNERSHIP	ALTERNATIVE 1 PROPOSED ACTION	ALTERNATIVE 2 NO ACTION
	water quality are anticipated.	
Wetlands and Floodplains		
Non-Federal	Approximately 112.3 acres of wetlands and 167 to 170 acres of delineated floodplains would be conveyed to Federal ownership. An additional ~6.5 to 62 acres of land that may be subject to flooding would also be conveyed.	These parcels would likely be developed reducing their quality and habitat availability to wildlife and other species of interest.
Federal	Approximately 1.8 acres of wetlands and 3.7 acres of delineated floodplains would be conveyed to private ownership. An additional 0.9 acres of land that may be subject to flooding would also be conveyed.	No change.
Heritage Resources		
Non-Federal	Any future proposed actions would be subject to historic preservation laws.	No protection of cultural resources exists, except human burials.
Federal	The Federal lands have been surveyed and three sites were eligible to the NRHP.	No change.
Mineral Resources		
Non-Federal	Alder Peak, Juan Miller, Leonard Canyon, Sierra Blanca Ranch, Soda Springs Ranch, Sponseller Ranch, and Sprucedale have little to no potential for mineral commodities. Alder Peak Parcel has low to moderate potential for geothermal resources. Cherry Parcel has little to no potential and is not prospectively valuable for leasable minerals.	Mineral estates would remain the same.
Federal	There is little to no potential for mineral commodities. None of the parcels are considered prospectively valuable.	Mineral estates would remain the same.
Roads		
Non-Federal	Any roads or road segments located on Non-Federal parcels conveyed to Federal ownership would be evaluated to determine their inclusion in the Forest Service transportation system.	Additional roads may be built to provide access to developed lots.
Federal	The segments of roads located on the parcels would be removed from the Forest Service transportation system upon issuance of patent. No non-system roads would be affected by the land exchange.	No change.
Fire and Fuels		
Non-Federal	Fire and fuels management would need to be consistent with the	Private owners would be responsible for implementation of any fire and fuel

OWNERSHIP	ALTERNATIVE 1 PROPOSED ACTION	ALTERNATIVE 2 NO ACTION
	respective Forest Plans.	treatments during and following development.
Federal	The Forest Service would be responsible for vegetation management within the urban interface to reduce the risk of wildfires from spreading from forest land to the newly acquired private parcels.	No change.
Hazardous Materials		
Non-Federal	No hazardous material is known to exist.	No change.
Federal	No hazardous material is known to exist.	No change.

Chapter 3: Affected Environment and Environmental Consequences

Introduction

This chapter summarizes the physical, biological, cultural, and socioeconomic environments of the project area and the effects of implementing each alternative on that environment. It also presents the scientific and analytical basis for the comparison of alternatives presented in Chapter 2. In the development of the environmental analyses that follow, the best available science was considered and documented in the Project Record. The environmental analysis focuses on resources identified by the ASNFs interdisciplinary resource specialists' team (ID team) and through the scoping process. The resources analyzed in this chapter include land use; recreation and public access; socioeconomics; environmental justice; plants and wildlife; grazing; prime and unique farmlands; wetlands and floodplains; water quality, rights, and claims; heritage resources; mineral resources; roads; fire and fuels; and hazardous materials. Existing conditions for each parcel are described followed by a comprehensive effects analysis for the Federal parcels. The Non-Federal parcels receive a cursory evaluation of effects with the exception of the hazardous materials, which receive a required full and thorough evaluation. An environmental effect, impact, or consequence is defined as a modification of or change in the existing environment brought about by the proposed action taken. Effects are direct, indirect, or cumulative and may be temporary (short-term) or permanent (long-term). Effects can vary by degree, ranging from only a slightly discernible change to a drastic alteration of the environment. Mitigation measures that could reduce or prevent adverse impacts identified during the impact analyses are also described.

Short-term Uses and Long-term Productivity

NEPA requires consideration of "the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity" (40 CFR 1502.16). As declared by the Congress, this includes using all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans (NEPA Section 101).

The proposed land exchange would not result in long-term loss of productivity of ASNFs lands and resources. The land exchange would result in benefits to long-term productivity through a net increase in NFS lands that contain higher wildlife values, increase recreational opportunities, reduce private in-holdings, and increase forest management efficiency. A description of impacts by resource can be found in this chapter.

Unavoidable Adverse Effects

Unavoidable adverse effects of the land exchange would be primarily to those individuals that utilize the ASNFs lands adjacent to their private residences for recreational purposes, particularly on the parcels near the City of Show Low (City of Show Low Parcel and Show Low South Parcel). These individuals would have to travel further to enjoy the recreational opportunities offered by ASNFs lands. The severity of the effects would be minimized by adhering to mitigation measures that are developed and included in the EIS. A description of impacts expected by alternative can be found by resource area in this chapter. Some unavoidable impacts could include heritage resources, recreation and public access, land use, and wildlife, among others.

Irreversible and Irretrievable Commitment of Resources

An irreversible effect is a change in a natural resource that cannot be reversed. An irreversible commitment of resources refers primarily to the use of non-renewable resources such as minerals, the loss of cultural resources, or the extinction of a wildlife species. An irretrievable effect is a loss of production or use of a renewable natural resource for a period of time, but is reversible, such as the loss of soil productivity or wildlife habitat from the presence of a road. By definition, cultural resource sites and traditional cultural properties are not renewable and damage to them cannot be reversed.

Under the Proposed Action, cultural resources located on the Federal parcels would be mitigated as required by the State Historic Preservation Office (SHPO), which would result in irretrievable but no adverse effects to cultural resources. In addition, the Proposed Action would likely result in loss of forest soil productivity and loss of habitat for wildlife species on the Federal parcels, if parcels are developed following the land exchange; however, the Non-Federal parcels are of greater acreage and the land exchange would result in a net gain of high value wildlife habitat. While some surface waters located on Federal parcels would be irretrievably lost, a greater amount of surface waters would be brought into forest ownership. See the affected resources discussions below for each resource category analyzed.

Other Required Disclosures

NEPA at 40 CFR 1502.25(a) directs "to the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with other environmental review laws and executive orders." As a proposed federal project, the proposed land exchange decision is subject to compliance with other federal and state laws. The following actions have been taken to document and ensure compliance with other laws.

Consultation with Arizona SHPO – Compliance with the National Historic Preservation Act (NHPA) is required for the proposed land exchange. Cultural resources located on the Federal lands would require mitigation in consultation with the SHPO. A treatment plan for mitigation has been prepared and the Advisory Council on Historic Preservation (ACHP) and SHPO have agreed that the proposed mitigation would satisfy legal requirements for the identification, evaluation, and treatment of historic properties. Concurrence was received from the SHPO on October 4, 2010 and is located in the project record.

Consultation with U.S. Fish and Wildlife Service (USFWS) – Compliance with the Endangered Species Act (ESA) is required. A Biological Assessment & Evaluation (BA&E) has been prepared for the Proposed Action. Lands going out of federal ownership were surveyed for federally listed species protected by the ESA. No federally listed threatened, endangered, proposed threatened, or proposed endangered species occur on the Federal parcels. No surveys for federally listed species were conducted on the Non-Federal parcels, since any listed species present on the Non-Federal parcels would be protected by the USFS under the proposed land exchange. Therefore, biological resources on the private lands were briefly characterized in the BA&E based on habitat and information available for adjacent federal lands. Due to the fact that no federally listed species protected under the ESA were identified on the Federal lands, no formal or informal consultation with the U.S. Fish and Wildlife Service (USFWS) is required. Biological resources are discussed and evaluated in the "Plants and Wildlife" section of this chapter.

Land Use

Affected Environment

The land use evaluations disclose the "reasonable and foreseeable use" of Non-Federal parcels if the land exchange is not executed, and the "reasonable and foreseeable use" of Federal parcels if the land exchange is executed and they are conveyed into private ownership. The reasonable and foreseeable use, as defined by 36 CFR 254 Subpart A, means an appraiser's supported opinion of the most probable and legal use of a property, based on market evidence, as of the date of valuation.

Federal Parcels: The City of Show Low Parcel (70 acres; Lakeside Ranger District, ASNFs) is not currently encumbered and remains undeveloped and unoccupied. FR 9701K5 provides access to the northern portion of this parcel. The City of Show Low's force main sewer pipeline crosses through the parcel's southwest corner. The sewer line is authorized by a Federal Land Policy and Management Act (FLPMA) Utility Easement.

The Show Low South Parcel (948 acres; Lakeside Ranger District, ASNFs) is not currently encumbered and remains undeveloped and unoccupied. The municipal boundaries of the City of Show Low share a border with the Show Low South Parcel on its north and east sides. Recreationists utilize a number of designated forest roads that cross the Show Low South Parcel. A segment of Buena Vista Trail #637 extends through a portion of the parcel, with a trailhead also located on the parcel. Navopache Electric Cooperative, Inc. has an overhead transmission line that crosses diagonally through the parcel from the southeast to northwest. All facilities and lines associated with this transmission line are authorized by a Master Special Use Permit that includes a 20' wide right-of-way (ROW) that expires 12/31/2027.

The Sierra Blanca Ranch Adjustment Parcel (2 acres; Alpine Ranger District, ASNFs) is encumbered by a caretaker house (guest house) with a detached shed and access road (FR 249A). Use of this development is currently authorized by the ASNFs under a Special Use Permit that covers 3.4 acres and 1.01 miles with an action date of 1/12/2007 and an expiration date of 12/31/2013, FLPMA; 10/21/1976, GOC, LLC.

The Soda Springs Ranch Adjustment Parcel (8 acres; Red Rock Ranger District, CNF) is not currently encumbered and remains undeveloped and unoccupied. Arizona Public Service Company has a permit for a powerline in the proximity of the Soda Springs Ranch Adjustment Parcel. There is currently an unauthorized irrigated turf field maintained as a lawn located within the parcel. A portion of FR 121 extends through the southeastern corner of the parcel accessing additional private in-holdings that share the southern and eastern boundaries with the Soda Springs Ranch Adjustment Parcel.

Non-Federal Parcels: The Alder Peak Parcel (160 acres) is surrounded by the Clifton Ranger District, ASNFs. The parcel is undeveloped, unoccupied, and has no evidence of recent use.

The Cherry Parcels consist of three separate parcels (117 acres): the Sitting Bull Parcel (the NW parcel), Cross Cut and Gulch Parcel (the middle parcel), and Ida, Gold Ring, and Potomac Parcel (the SE parcel). The middle and SE parcels are completely surrounded by federal land (Verde Ranger District, PNF), while the NW parcel is partially bordered by the Verde Ranger District of PNF and partially bordered by private land. Together, the Cherry Parcels contains six patented mineral surveys (mining claims). No other development activities are evident.

The Juan Miller Parcel is surrounded by federal land (120 acres; Clifton Ranger District, ASNFs). FR 475 (Juan Miller Road) runs through the parcel and provides access to the Upper and Lower Juan Miller campgrounds. No other development is present. The Upper and Lower Juan Miller campgrounds are located to the southwest of the parcel.

The Leonard Canyon Parcel (8 acres on the CNF; 632 acres on the ASNFs) is mostly surrounded by federal land (Mogollon Rim Ranger District, CNF, on the north, west, and southern boundaries; Black Mesa Ranger District, ASNFs, on the eastern boundary). A section of private land exists diagonally to the northwest of the parcel. FR 137B and FR 137E cross the property; however, no other development is present. No proposed changes to the existing road status have been identified.

The Railroad Parcels consist of three separate strips of land (total of 22 acres) that are surrounded by federal land (Lakeside Ranger District, ASNFs). Overhead electrical lines and a service road follow sections of the middle and southern strips of land. FR 129 intersects the northern strip at two locations. The Railroad Parcels are situated along abandoned railroad grades (railroad material has been removed).

The Sierra Blanca Ranch Parcel (156 acres) is mostly surrounded by federal land (Alpine Ranger District, ASNFs) except for privately owned land to the southeast. No development is present within the Sierra Blanca Ranch Parcel. It is currently encumbered by a conservation easement held by The Nature Conservancy. A segment of FR 249A crosses the parcel and provides road access to the adjacent private land.

The Soda Springs Ranch Parcel (157 acres) is generally bordered by the Montezuma Castle National Monument to the west, CNF land to the north and south (Red Rock Ranger District, CNF), and private land to the east. An unmarked dirt road runs through the middle of the property and FR 121 crosses a small northern portion of the property. No other development is present.

The Sponseller Ranch Parcel (118 acres) is surrounded by federal land (Black Mesa Ranger District, ASNFs). Remains of the Wyrick Ranch (formally S.A. Sponseller) are evident within the parcel including a dilapidated structure, water derrick, and water well.

The Sprucedale Parcel (70 acres) is part of a larger in-holding tract of private land. The parcel is bordered by federal land (Alpine Ranger District, ASNFs) on a small section of the eastern, northern, and southern boundary. No development is present.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Federal Parcels: Under the Proposed Action Alternative, the four Federal parcels would be transferred to private ownership. As such, the parcels would not be available for public use, including recreation, travel, timber, grazing operations, etc. The following describes the reasonable and foreseeable use of each of the parcels if the Proposed Action Alternative is chosen.

The City of Show Low Parcel would be directly transferred to the City of Show Low through the land exchange proponent. The City of Show Low Parcel would house the expansion of the City's waste water treatment facility (see *Figure 3*). The remainder of the parcel would remain undeveloped. The City of Show Low would apply a zoning designation of AR-43 (Agricultural-Residential) to the parcel.

The Show Low South Parcel is currently within the municipal boundaries of the City of Show Low and would likely be developed as low-density residential and mixed-use residential (*Figure 4*). Transfer of the Show Low South Parcel to private ownership would not affect the powerlines that exist on the parcel, because the Master Use Permit would include the transfer of the easement within the private parcel. The segment of Buena Vista Trail #637 within the City of Show Low Parcel would be realigned, and the trailhead would be relocated. A report prepared by the Arizona Department of Water Resources (ADWR) concluded that the City of Show Low has sufficient water supplies which are continuously and legally available for one hundred years after the report's approval in the year 1999 (updated May 25, 2011). The City of Show Low would employ a zoning designation of AR-43 (Agricultural-Residential) to the parcel.

No further development is anticipated if the Sierra Blanca Ranch Adjustment Parcel is transferred to private ownership. The Special Use Permit for the existing caretaker house would terminate. A private road easement with a 33-foot-wide right-of-way (ROW) would be granted to the proponent for use of FR 249A, extending from FR 249 to the boundary of the Sierra Blanca Ranch Adjustment Parcel. Concurrently with the establishment of that easement, a previously recorded road easement that was established for the property across undisturbed NFS lands would be terminated.

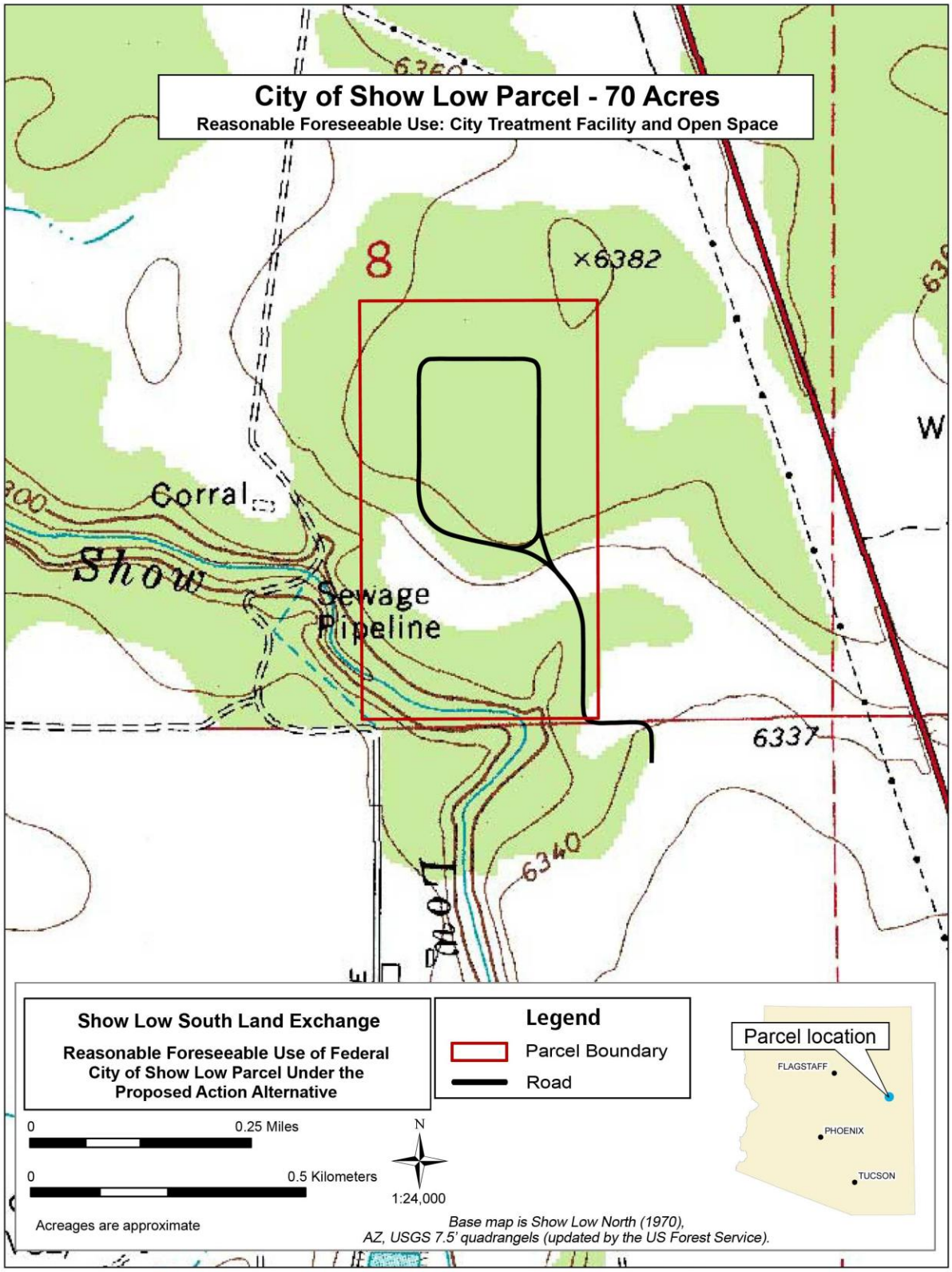

Figure 3. Reasonable and foreseeable use map showing the planned expansion of the City of Show Low Waste Water Treatment Facility.

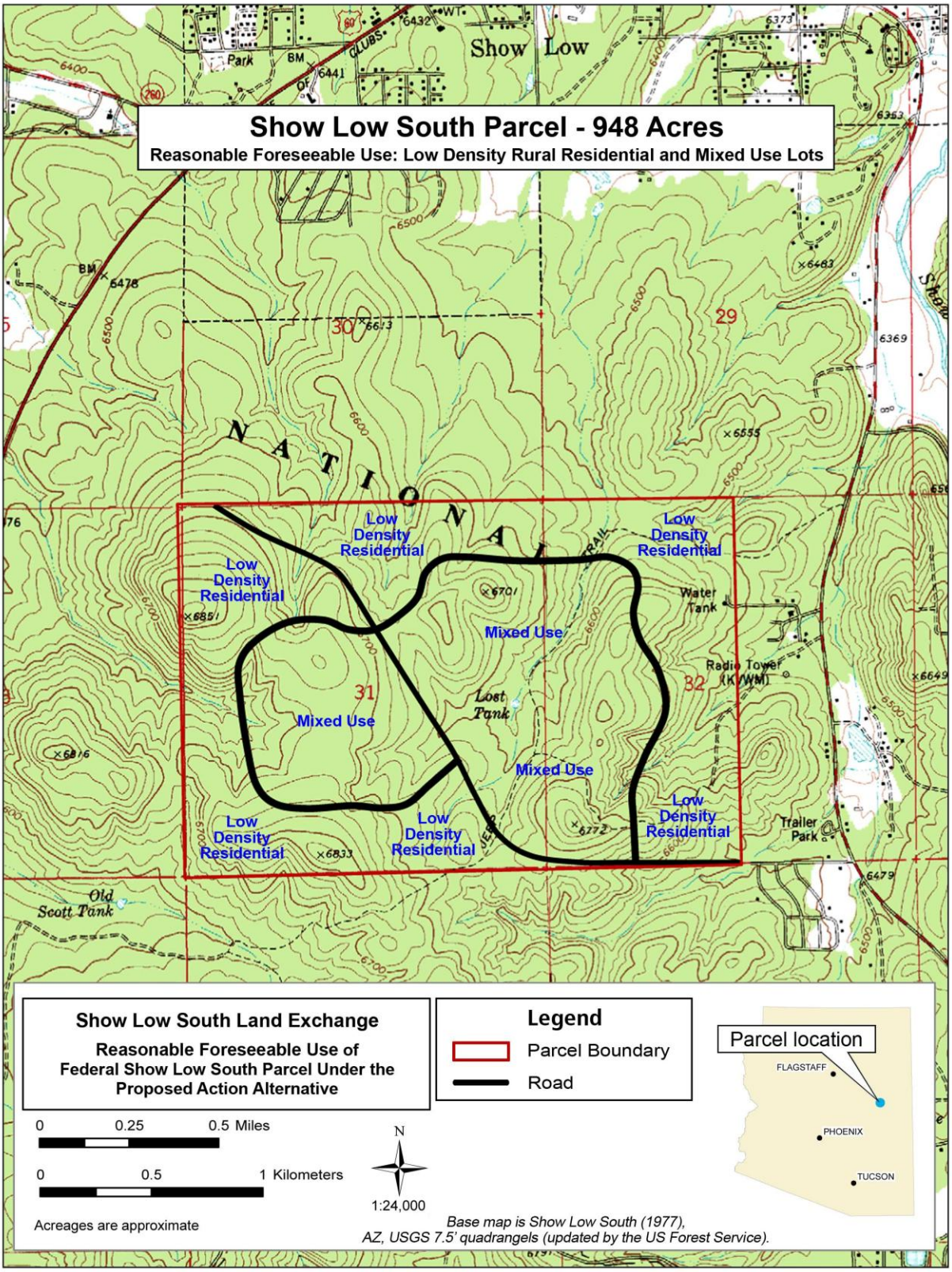

Figure 4. Reasonable and foreseeable use map showing the planned development of the Show Low South Parcel.

The Soda Springs Ranch Adjustment Parcel would likely be developed as a single rural residential area. No effects to the Arizona Public Service Company powerline would occur because it is outside of the parcel boundary. The transfer of the parcel to private ownership would not affect the access of other private parcels via FR 121.

Non-Federal Parcels: Upon transfer to federal ownership, the nine Non-Federal parcels would not undergo any further development. The parcels would be integrated into the NFS, which would allow the public to utilize the lands for recreation and other uses. The parcels would be managed as directed under respective Forest Plans. Because the ASNFs would acquire the Sierra Blanca Ranch Parcel, the conservation easement managed by The Nature Conservancy would be terminated.

Cumulative Effects

The cumulative effects analysis considers past, present, and foreseeable future actions that could contribute to the direct and indirect effects of the land exchange. The existing condition described above reflects the current land use within the project area. Past, present, and future projects, as listed in Appendix B cumulatively would have little effect on land use within the project region. Residential zoning within the City of Show Low General Plan would ensure a limited amount of public land use within the immediate vicinity of the City of Show Low, though ASNFs land is open for public use in the surrounding area. The Camp Tatiyee Land Exchange, which would involve a trade of federal and private lands, would allow consolidation of NFS lands and provide for a children's camp on private lands. Overall, a net gain of land for the NFS resulting from the Show Low South Land Exchange would result in no substantial cumulative impacts regarding land use.

Alternative 2 – No Action

Direct and Indirect Effects

Federal Parcels: Under the No Action Alternative, the four Federal parcels would not be conveyed to private ownership and would remain within the NFS. As such, no effects to the current land use of the Federal parcels would occur.

Non-Federal Parcels: If the nine Non-Federal parcels are not transferred to federal ownership, the parcels would remain in private ownership and would likely be further developed. The parcels would not be available for public use. The following are the most reasonable and foreseeable uses of each of the Non-Federal parcels under the No Action Alternative based on current zoning.

The Alder Peak Parcel would likely be developed as a remote ranch or cabin site.

The Cherry Parcels would likely be developed as rural residential cabin lots. Each lot would be 20 acres or greater in size.

The Juan Miller Parcel would likely be developed as five rural residential cabin lots. Each of the five lots would be approximately 24 acres in size (*Figure 5*).

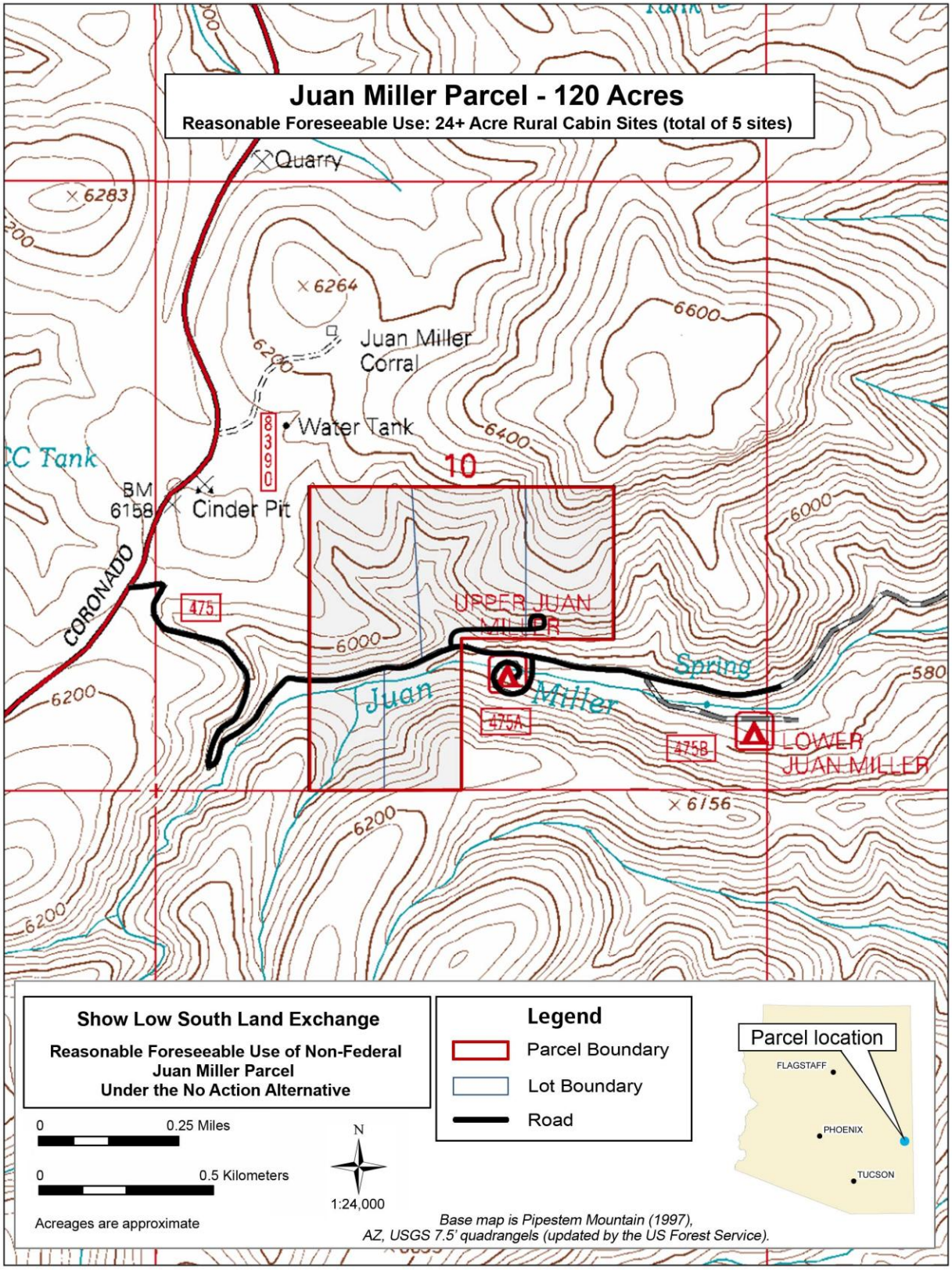

Figure 5. Reasonable and foreseeable use map showing the planned development of the Juan Miller Parcel.

The Leonard Canyon Parcel would be developed as a rural residential area. There would be a total of 45 lots that are ten acres or greater in size (*Figure 6*).

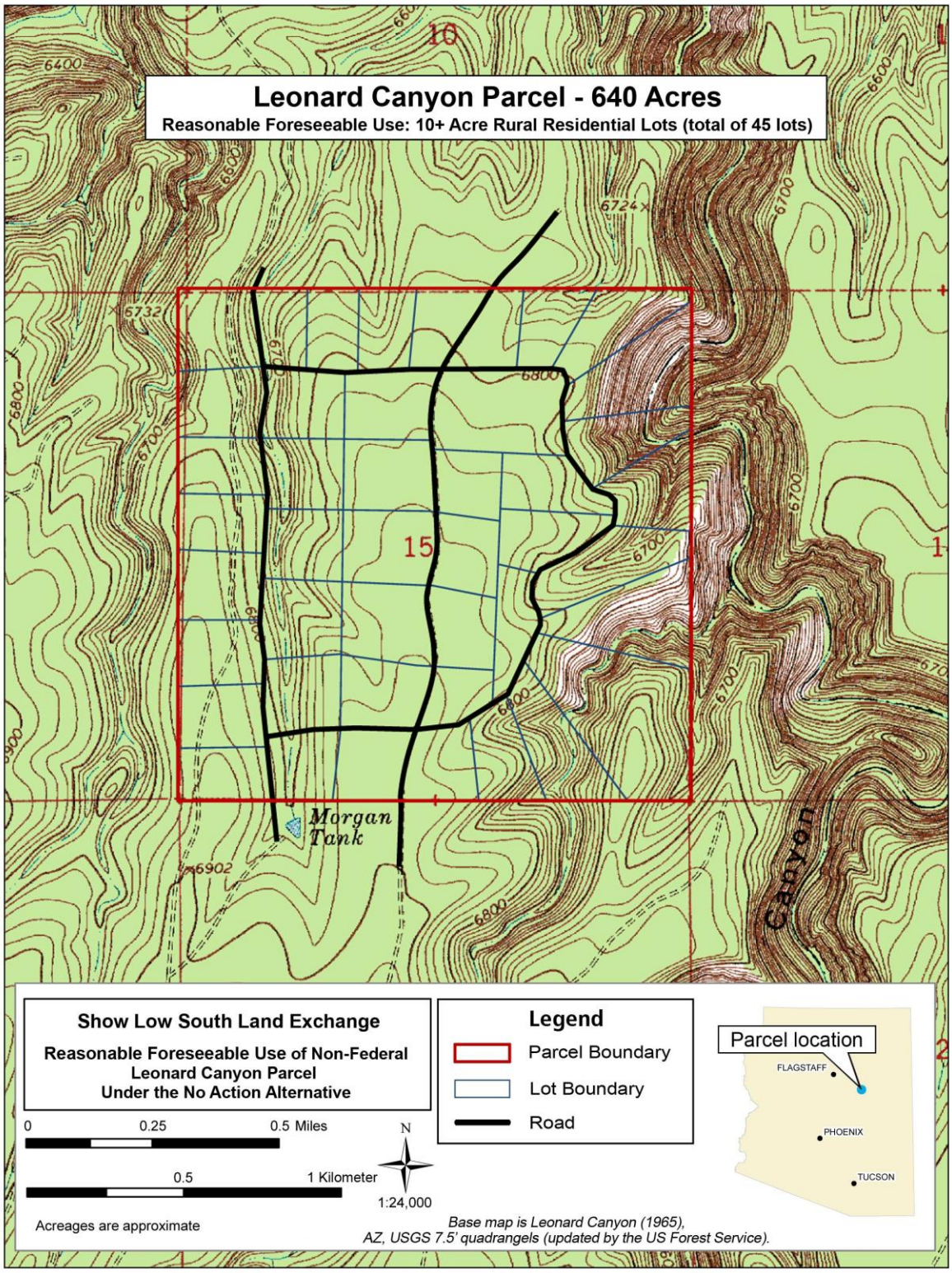

Figure 6. Reasonable and foreseeable use map showing the planned development of the Leonard Canyon Parcel.

The Railroad Parcels would be developed as rural cabin sites. There would be five tracts, each approximately one acre or more in size, within each of the three strips of land that comprise the Railroad Parcels (*Figure 7).*

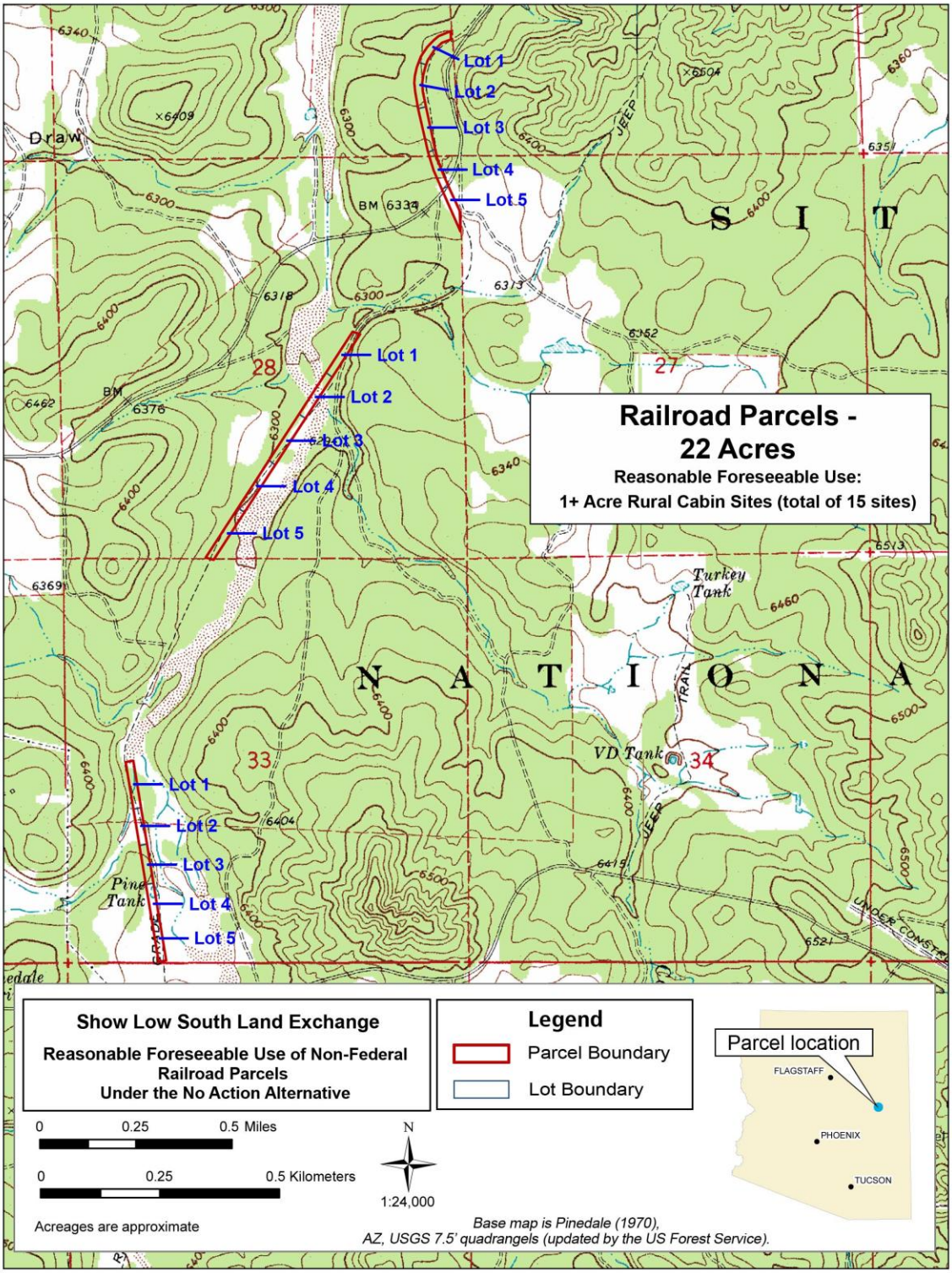

Figure 7. Reasonable and foreseeable use map showing the planned development of the Railroad Parcels.

The Sierra Blanca Ranch Parcel would continue to be managed as a conservation easement held by The Nature Conservancy. The most reasonable and foreseeable uses of the parcel include several possible scenarios: construction of one single family residence (with accessory buildings and structures); operation of a ecotourism, bed and breakfast; retreat center; and/or use as a ranch for up to 36 horses with barns and corrals (Special Warranty Deed with Reservation of Conservation Easement dated 1-11-2006).

The Soda Springs Ranch Parcel would be developed as a rural residential area. There would be a total of 41 lots that are 3.5 acres or greater in size (*Figure 8*).

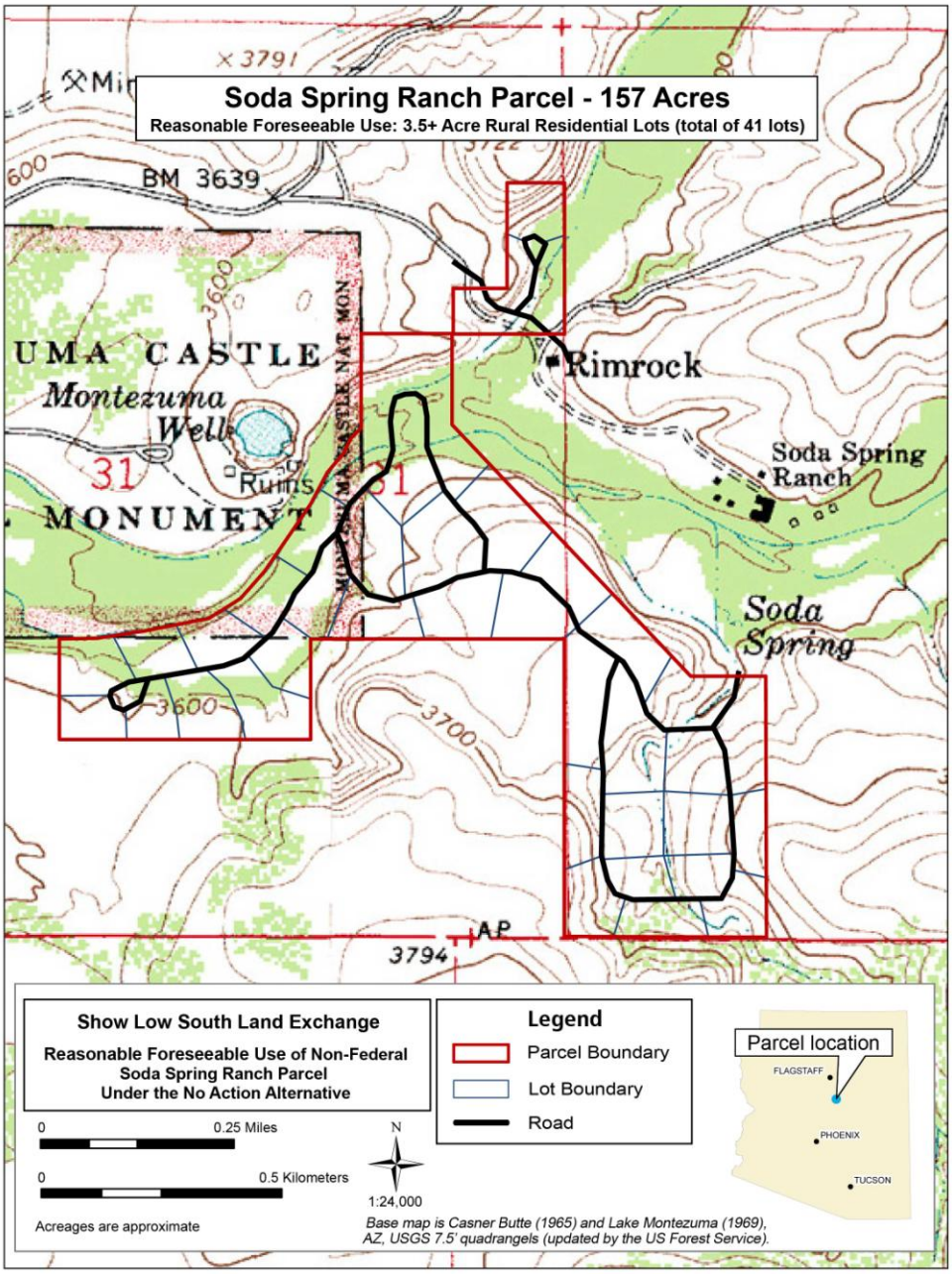

Figure 8. Reasonable and foreseeable use map showing the planned development of the Soda Springs Ranch Parcel

The Sponseller Ranch Parcel would be developed as a rural residential area. There would be a total of 42 lots that are 2.5 acres or greater in size (*Figure 9*).

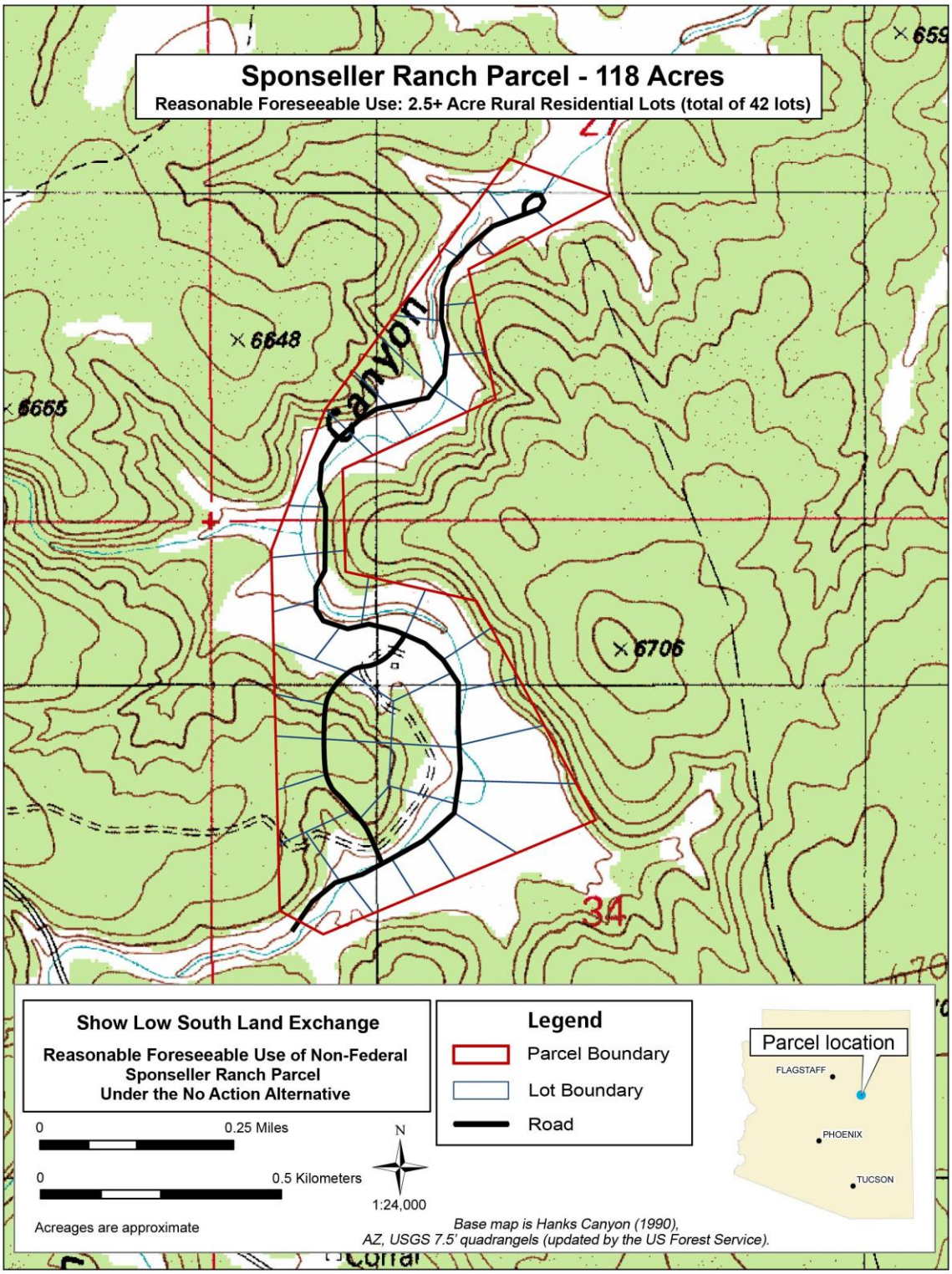

Figure 9. Reasonable and foreseeable use map showing the planned development of the Sponseller Ranch Parcel

The Sprucedale Parcel would be developed as a rural residential area. There would be a total of 13 lots that are five acres or greater in size (*see Figure 10*).

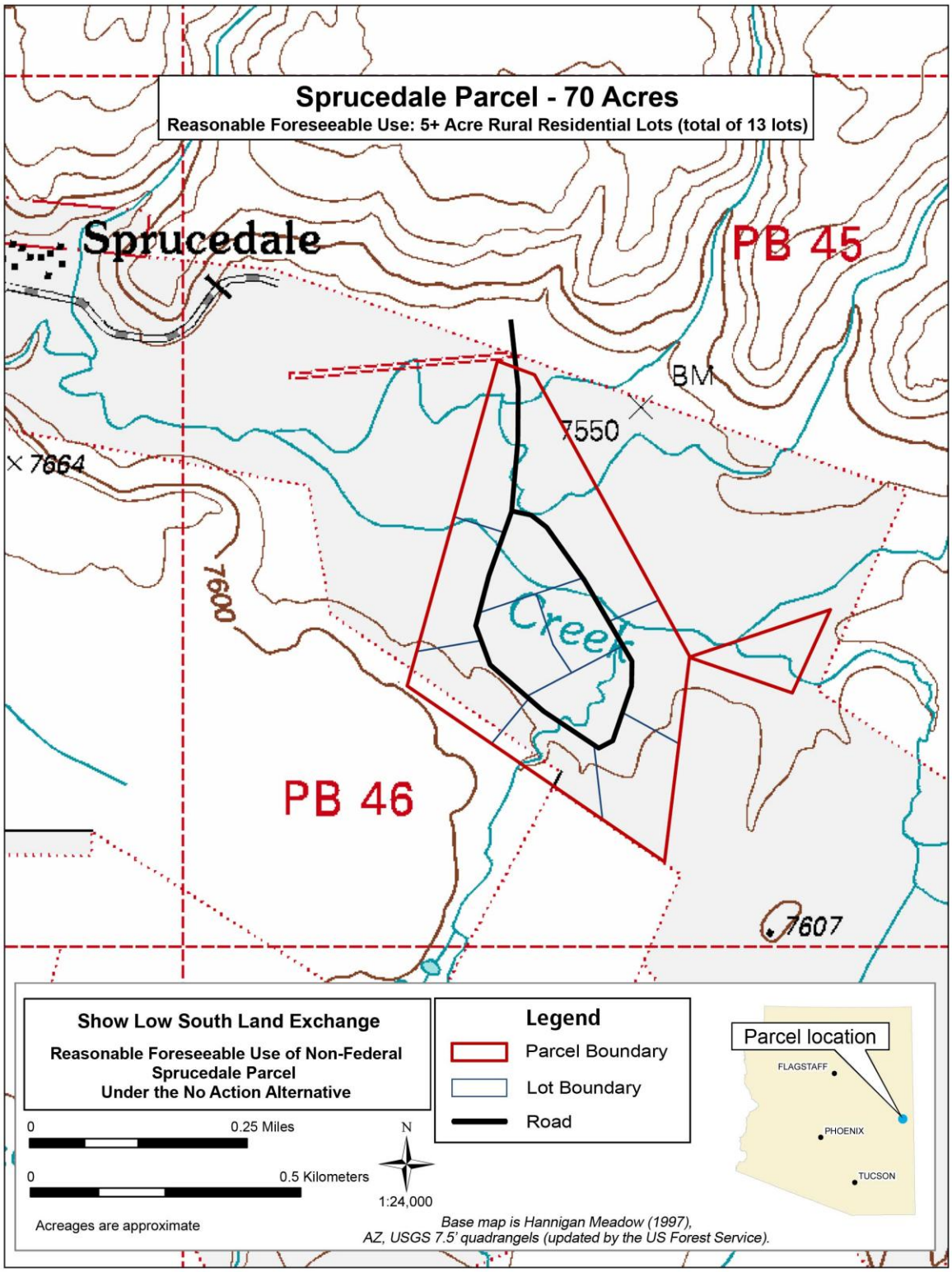

Figure 10. Reasonable and foreseeable use map showing the planned development of the Sprucedale Parcel

Cumulative Effects

Under the No Action Alternative, the parcels would remain under their current ownership and no changes to public land use would occur. No cumulative effects are anticipated.

Recreation and Public Access

Affected Environment

Federal Parcels: The Federal parcels are open to public use and offer a wide range of dispersed recreation opportunities, including hiking, biking, horseback riding, camping, nature viewing, hunting, all-terrain vehicle use, and winter sports (e.g., cross country skiing, sledding, snow-shoeing, and snowmobile use).

The only established forest trail on any of the four Federal parcels is Buena Vista Trail #637 (Figure 11), a portion of which is located on the Show Low South Parcel. Due to the proximity of the Show Low South Parcel to the City of Show Low to the north and a subdivision and trailer park to the east, the parcel is utilized by recreationists fairly frequently. The same is the case for the City of Show Low Parcel, which is located directly north of the City of Show Low and contains a portion of Show Low Creek.

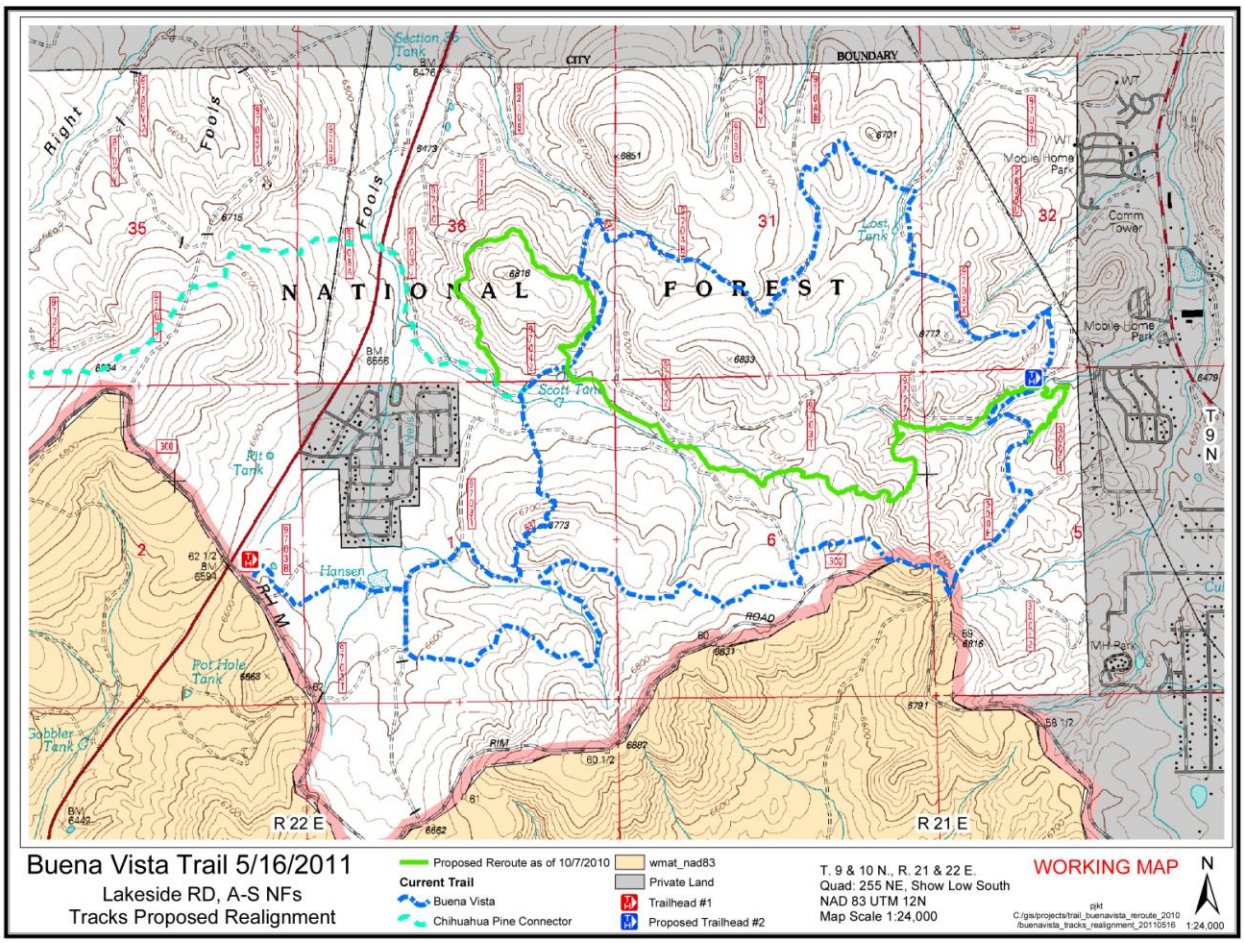

Figure 11. A topographic map of the Buena Vista Trail

Non-Federal Parcels: The Non-Federal parcels are private property and, therefore, are not legally open to public use. However, because many of the parcels are not fenced or identified as private land with signs, evidence of dispersed recreation is apparent on some of the parcels (e.g., Leonard Canyon, Juan Miller, and Soda Springs Ranch parcels).

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Federal Parcels: Under the Proposed Action Alternative, the exchange would occur and the four Federal parcels would transfer to private ownership. Approximately 1,028 acres of NFS lands would be removed and be unavailable for public use and recreational activities. The forest roads extending through the various parcels would be removed from the NFS transportation database system and would no longer be available for public access. The Buena Vista Trail #637 would be realigned south of its current location outside of the land exchange boundary. In addition, a new trailhead for the Buena Vista Trail would be established on NFS lands approximately 2.5 miles east of its current location. This would place it much closer to the residence of the Sierra Pines subdivision. No other established trails would be affected by the land exchange.

Transfer of the Show Low South Parcel to private ownership would directly affect public access to the ASNFs for residents in the northern half of the Sierra Pines neighborhood. If the Proposed Action Alternative occurs, these Sierra Pines residents would have to travel about one mile south to access ASNFs land and the new Buena Vista Trailhead (*Figure 11*).

Non-Federal Parcels: The proposed exchange would result in an increase of approximately 1,558 acres (net gain of 530 acres) under NFS management. The nine Non-Federal parcels would be open to public use and dispersed recreation. Because all of the Non-Federal parcels are partially or completely surrounded by federal land, use of surrounding lands for recreational purposes would be enhanced.

In addition to the general enhancement to recreation and public access of acquiring the Non-Federal parcels, there is an added benefit to the management of Montezuma Castle National Monument. According to the Feasibility Analysis conducted by the Forest Service, the acquisition of the Soda Springs Ranch Parcel (Non-Federal) would result in improvements to the management of the adjoining Montezuma Castle National Monument in several ways. First, the acquisition of this parcel would limit the amount of development that could potentially adversely affect the National Monument. The acquisition of the Soda Springs Ranch Parcel would also increase the total acreage of NFS land within the CNF that would be available for recreation, while protecting both the landscape and open space characteristics of this property which is directly connected to Montezuma Castle National Monument. Finally, the acquisition of the Soda Springs Ranch Parcel would result in a reduction in management cost by eliminating greater than two miles of landline boundary, while allowing for maintenance of forest type lands that are directly adjacent to Montezuma Castle National Monument (USDA Forest Service Feasibility Analysis 2010).

Cumulative Effects

The following past, present, and reasonably foreseeable future projects listed in Appendix B would contribute to the direct and indirect effects to recreation and public access listed above.

- An existing road will provide access to the proposed Second Knoll Shooting Range in the Lakeside Ranger District of ASNFs.
- The Woodland Lake Park Tract Town Site Act Purchase project would result in a net loss of 583 acres of land administered by ASNFs.
- The Pueblo Park Mineral Materials Pit in the Alpine Ranger District of ASNFs would be developed to provide materials for road improvement in Greenlee County, resulting in a benefit for recreation and public access resources.
- Under the Camp Tatiyee Land Exchange, there would be a increase in NFS land on the Coronado, Prescott, and Tonto National Forests, and therefore increased recreational opportunities, and a decrease in NFS land on the ASNFs.

Since under the Show Low South Land Exchange the Forest Service would acquire a net gain of 530 acres which would be largely available to recreationists, no substantial negative cumulative adverse effects regarding recreation or public access are anticipated.

Alternative 2 – No Action

Direct and Indirect Effects

Federal Parcels: Under the No Action Alternative, no change would occur to the current use and management of the Federal parcels. Recreation and public access would remain unchanged.

Non-Federal Parcels: With no land exchange, development would likely occur on the existing Non-Federal parcels. Since the parcels are privately owned, there would be no direct impact regarding public access and recreation within the parcels. Once the parcels are developed, individuals using surrounding forest lands would experience a negative impact to overall aesthetics and their forest experience by the increase in casual use of the forest and increased use of access roads serving the developments. In conjunction with development, there would be more fencing, signage, and noise which may cause the public to recreate in places further away from the Non-Federal parcels.

Cumulative Effects

Development of the Second Knoll Shooting Range, the Woodland Lake Park Tract Town Site Act Purchase project, the Pueblo Park Mineral Materials Pit, and the Camp Tatiyee Land Exchange (see Appendix B) would contribute to the direct and indirect effects to recreation and public access resulting from the No Action Alternative. Overall, there would cumulatively be a general increase in development in the region of the ASNFs, specifically within NFS in-holdings, which would cumulatively affect recreationists in pursuit of wilderness settings.

Socioeconomics

Affected Environment

This analysis on socioeconomic conditions focuses on the communities in closest proximity to the four Federal parcels: the City of Show Low and the Town of Camp Verde. Because there is no U.S. Census Bureau data for the unincorporated community of Alpine, Arizona (which is located near the Sierra Blanca Ranch Adjustment Parcel), specific socioeconomic information on this community was limited. Socioeconomic data is summarized in *Table 8*.

Table 8. Summary of the Socioeconomic Composition for the City of Show Low and the Town of Camp Verde (According to the 2005-2009 American Community Survey)

	RACE (Percentages)							POVERTY		INCOME	UNEMPLOYMENT RATE (%)
	White	Black or African American	American Indian or Alaska Native	Asian	Pacific Islander	Some Other Race	Two or more Races	% Individuals in Poverty	% Families in Poverty	Per Capita Income ($)	
United States	74.5	12.4	0.8	4.4	0.1	5.6	2.2	13.5	9.9	27,041	7.2
State of Arizona	77.6	3.6	4.5	2.4	0.2	9.1	2.6	14.7	10.5	25,203	6.8
Show Low	87.8	2.0	5.9	0.8	0.0	1.7	1.8	16.1	11.9	20,416	5.8
Camp Verde	83.2	1.2	8.2	0.0	0.2	5.4	2.0	16.6	8.8	20,609	5.6

Tourism and Recreation

According to the Arizona Department of Commerce (ADOC), tourism and recreation are important economic activities for the City of Show Low, Town of Camp Verde, and community of Alpine (ADOC 2009a; ADOC 2009b; ADOC 2009c).

ADOC (ADOC 2009a) states that "tourism and recreation are the foundations of the economy of Show Low." Show Low serves as the entry point for many visitors to the White Mountains and offers a variety of year-round recreational opportunities and points of scenic interest. Because of its location, Show Low also serves as a center of regional trade with southern Navajo County and portions of southern Apache County. The ASNFs has 58 campgrounds, trails, and pristine lakes, along with the scenic White Mountain and Mogollon Rim areas that are nearby for campers and sport fishermen. Arizona's only covered bridge is located 15 miles west of Show Low in Pinedale. Apache, Navajo, Hopi, and Zuni Indian Reservations are also nearby. The City has an indoor aquatic center, eight 18-hole golf courses within 20 miles, and numerous hotel, motel, and RV accommodations. Boating and fishing are popular in the many lakes and streams surrounding Show Low. Winter activities include snow skiing at Sunrise Park Resort on the nearby White Mountain Apache Indian Reservation and cross-country skiing in surrounding Forest Service lands.

The Town of Camp Verde also offers a variety of tourism and recreation opportunities. Montezuma Castle National Monument contains some of the nation's best preserved cliff dwellings and Montezuma Well features a large natural limestone sink, whose waters were used for a network of prehistoric irrigation canals (ADOC 2009b). Other attractions include the Fort Verde Historic State Park, Tuzigoot National Monument, as well as excellent hunting, fishing, and other recreational opportunities. Beasley Flats is operated by the Forest Service, which serves as a major starting point for Verde River trips. Cliff Castle Casino, operated by the Yavapai-Apache Nation, also attracts numerous visitors (ADOC 2009b). These recreational and tourism activities bring visitors from near and far and generate retail and service trade in the community.

ADOC states that tourism is the economic base for the Alpine community (ADOC 2009c). Alpine offers year-round tourism and recreation opportunities including big-game hunting,

fishing, camping, horseback riding, rock hounding, cross-country skiing, sledding, and designated areas for snowmobiling. Alpine's cool summers, mountain air, and scenic beauty attract vacationers and retirees. Their year-round activities bring more than 50,000 people to the ASNFs annually. There are 11 lakes and more than 200 miles of trout streams within a 30-mile radius of Alpine (ADOC 2009c). Developed campsites are available at Luna Lake, the Alpine Divide, and the Black and Blue Rivers. Luna Lake wildlife refuge is home to bald and golden eagles, swans, geese, and much more. Alpine's Ranger Station has a herbarium with hundreds of area wildflowers for visitors to view. Local annual events include dog-sled races in January, Independence Celebration in July, Alpine Chili Cook-off in August, and campground programs supporting the local economy (ADOC 2009c).

Lifestyle and Cultural Values

According to the 2005-2009 American Community Survey (U.S. Census Bureau 2009), the level of education received by the population within the demographic group of 25 years or older in the City of Show Low was comparable with national statistics. For populations within the demographic group of 25 years or older, 84.6% of the U.S. population had graduated from high school or higher, and 27.5% had received a Bachelor's degree or higher. In comparison, 87.2% of the City of Show Low's population had graduated from high school or higher and 17.5% had gained a Bachelor's degree or higher. There were 4,475 total occupied housing units in the City of Show Low. Family households made up 3,235 of this total, or 72.3%. The average household size was 2.55 inhabitants, while the average family size was 2.88.

The level of education received by the population of Camp Verde was comparable to but slightly lower than national statistics. For the population of 25 years or older, 84.6% of the U.S. population has graduated from high school or higher, and 27.5% has received a Bachelor's degree or higher. In comparison, 83% of the population of Camp Verde graduated from high school or higher, and 14.2% had a Bachelor's degree or higher. There were 3,832 total occupied households in Camp Verde. Family households made up 2,435 of this total, or 63.5%. The average household size was 2.77 inhabitants, while the average family size was 3.51.

Community Infrastructure

According to the Arizona Department of Commerce (ADOC 2009a), the City of Show Low has a broad range of community facilities including a library, bowling alley, one 18-hole golf course, a 27-hole golf course, several lighted racquetball and tennis courts, an exercise fitness course, soccer fields, and movie theaters. Other facilities available include an indoor aquatic center pool, lighted softball and baseball fields, handball and basketball courts, and picnic areas. The City of Show Low has a full range of educational institutions including elementary, middle, and high schools, a community college, and a technical school. The City has six banks, several hotels, a fire department, police department, and a regional medical center. The Show Low Regional Airport has two paved runways, a paved taxi-way, self-service fuel facilities, and a terminal. Show Low has access to all utilities, including electricity, natural gas, telephone, internet, cable, water, and sewer services.

Community facilities within Camp Verde include a library, a museum, recreation center, a tennis court, several softball and football fields, skateboard park, a horse arena, community swimming pool, and 18 acres of park land and picnic areas along the Verde River (ADOC 2009b). Camp Verde has educational facilities consisting of elementary, middle, and high schools. This town has three banks, fire department, a town marshal, and one health care facility. The Town of Camp Verde has two privately owned air-strips and multiple hotel options. Camp Verde has access to all utilities.

The community of Alpine also offers a broad range of community facilities (ADOC 2009c), including a library, a country club, and a golf course. Alpine has a winter sports recreation area with maintained cross country ski trails and designated snowmobiling and sledding areas. Alpine also has a county-owned public library. Alpine has a public elementary school, two banks, a volunteer fire department, Sheriff's office, and lodging facilities. The community has access to electricity, propane, telephone, internet, water, and sewer services.

Property Taxes

The Forest Service makes payment to counties with respect to federal lands under three statutes known as the Twenty-Five Percent Fund, the Payments in Lieu of Taxes (PILT) Act, and the Secure Rural Schools and Community Self-Determination Act of 2000. The Twenty-Five Percent Fund of May 23, 1908, provides for counties to receive 25 percent of the gross receipts and revenues from timber sales and other income generating activities on federal lands. The PILT Act of 1976 authorizes payments to counties based on the number of acres of "entitlement lands" within the county. For purposes of this discussion, entitlement lands are NFS lands. The Secure Rural Schools and Community Self-Determination Act of 2000 stabilizes payments for fiscal years 2001 through 2006 (extended through 2011) to counties that received a 25-percent payment during fiscal years 1986 through 1999 to provide funding for schools and roads that supplements other available funds. Non-federal landowners make payments to counties in the form of property taxes.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Federal Parcels: Under the Proposed Action the Federal parcels would be transferred to private ownership, and the lands would no longer be available for public use (with the exception of the Buena Vista Trail within the Show Low South Parcel). The primary socioeconomic impact would be in the form of recreational effects. These impacts would be largely confined to social effects of impeding Forest use rather than substantial economic impact. Residents and tourists who wish to recreate on the Federal parcels would be forced to travel to other areas of the ASNFs, PNF, and CNF. With vast amount of forest land available to the public in close proximity to these four parcels, effects are not considered adverse.

It is not anticipated that implementation of the Proposed Action Alternative would have a measurable effect on tourism for the three communities (Show Low, Camp Verde, and Alpine) in close proximity to the Federal parcels.

The private land tax base for Apache (2 acres), Navajo (1,018 acres), and Yavapai (8 acres) Counties would increase by a total of 1,028 acres. Based on information provided by Navajo County and estimated tax rates from Apache and Yavapai Counties, tax revenues would increase by over a million dollars among the three counties (*Table 9*) as a result of the Proposed Action. However, there would be an associated decrease in the PILT and Secure Rural Schools and Community Self-Determination Act of 2000 funds to each county to offset the lands moving out of Federal ownership. It is difficult to quantify these revenue sources because of the patchy nature of their implementation; however it was expected to generate minimal revenue. Overall, the Proposed Action is anticipated to provide a net increase in revenue for Navajo County.

Table 9. Federal Parcels Zoning and Estimated Tax Rates under the Proposed Action

Parcel Name	County	Zoning Designation	Acres	Estimate per acre	Taxes (estimated)
City of Show Low[1]	Navajo	City AR-43	70.00	$1000.00	$70,000
Show Low South[1]	Navajo	City GA-5	948.48	$1000.00	$948,480
Sierra Blanca	Apache	Ag. Gen	2.14	$41.84	$89.53
Soda Springs	Yavapai	RCU-2A	7.50	$22.62	$169.65
TOTAL					**$1,018,739.18**

[1] Data Provided by Darlene Fraley, Navajo County Tax Assessor, September 22, 2011.

Non-Federal Parcels: Socioeconomic effects on the Non-Federal parcels would be largely confined to social effects rather than substantial economic impacts. However, for Non-Federal parcels, recreational effects would be beneficial. With a net gain of approximately 530 acres throughout the three forests, more land would be available to the public for recreational purposes.

The private land tax base for Apache (155 acres), Coconino (640 acres), Greenlee (350 acres), Navajo (140 acres), and Yavapai (273 acres) counties would decrease by a total of 1,558 acres; however, there would be corresponding increase in the PILT and Secure Rural Schools and Community Self-Determination Act of 2000 funds to each County to offset the lands moving into Federal ownership.

Currently, tax revenues generated through private ownership of the Non-Federal parcels contribute a total of $16,409.74 to the tax base divided among 5 counties (*Table 10*). Each county assesses the tax rate based on parcel size and current zoning of the land. Under the Proposed Action, Apache County would see a reduction in tax revenue of $6,526.28; Coconino County would see a reduction in tax revenue of $15.78; Greenlee County would have a reduction in tax revenue of $2,272.20; Navajo County would have a reduction in tax revenue of $4,044.08; and Yavapai County would see a reduction in tax revenue of $3,551.40.

Table 10. Non-Federal Parcels Zoning and Tax Rates

Parcel Name	County	Parcel Number(s)	Zoning Designation	2011 Taxes
Alder Peak	Greenlee	200-09-001	RU-36	$4.12
Cherry	Yavapai	403-01-003	RCU-2A	Exempt
Cherry	Yavapai	403-02-003	RCU-2A	Exempt
Cherry	Yavapai	403-02-004	RCU-2A	Exempt
Cherry	Yavapai	403-02-004, 005A, 005B	RCU-2A	Exempt
Juan Miller	Greenlee	200-25-001	RU-36	$24.14
Leonard Canyon	Coconino	403-13-006F	General	$15.78
Railroad	Navajo	205-19-004	Ag. Gen.	$237.10
Sierra Blanca	Apache	101-40-001A	Ag. Gen.	$4,122.14
Sierra Blanca	Apache	101-40-002A	Ag. Gen.	$2,404.14

Parcel Name	County	Parcel Number(s)	Zoning Designation	2011 Taxes
Soda Springs	Yavapai	405-30-001A & 001B	RCU-2A	$3,551.40
Sponseller	Navajo	201-02-001A	Special Development	$3,322.72
Sponseller	Navajo	201-02-001B	Special Development	$222.74
Sponseller	Navajo	201-02-001C	Special Development	$261.52
Sprucedale	Greenlee	100-02-004E	RU-36	$2,243.94
TOTAL				**$16,409.74**

Cumulative Effects
As depicted in Tables 9 and 10, Navajo County would have an estimated annual net gain of tax revenues close to $1,000,000 as a result of the Proposed Action Alternative, while the other four counties would have negligible decreases in tax revenue. A number of other projects that may result in cumulative effects are listed in Appendix B, which could have economic impacts on the five counties. However, these changes in economic impacts are immeasurable while planning processes is in progress and the full impacts can only be measured after implementation. No substantial negative cumulative impacts regarding socioeconomic issues are expected.

Alternative 2 – No Action

Direct and Indirect Effects
There would be no direct or indirect impacts to socioeconomic conditions on the Federal parcels as a result of the No Action Alternative. On the Non-Federal parcels, development would likely occur, which would likely add to the counties' (Apache, Coconino, Greenlee, Navajo, and Yavapai) real estate property tax base.

Cumulative Effects
With no direct or indirect negative impacts to socioeconomics resulting from the No Action Alternative, no negative cumulative impacts would occur.

Environmental Justice

Affected Environment

Under Title VI of the Civil Rights Act of 1964, federal agencies are required to ensure that no person is excluded from participation in, denied benefits of, or subjected to discrimination under any program or activity receiving federal financial assistance on the grounds of race, color, religion, national origin, sex, age, or handicap. In addition, Executive Order 12898, Federal Actions to address Environmental Justice in Minority and Low-Income Populations, signed by President Clinton on February 11, 1994, requires federal agencies to identify and address as appropriate, as part of project planning and decision making, and as an integral component of the NEPA process, the occurrence of disproportionately high and adverse effects on minority and low-income populations. The demographic composition of the project region for the Federal parcels was analyzed using data from the 2005-2009 American Community Survey (U.S. Census Bureau 2009. Information specific to the City of Show Low (nearest community to the

City of Show Low Parcel and Show Low South Parcel) and Town of Camp Verde (nearest community to Soda Springs Ranch Adjustment Parcel) was queried which provided demographic data including racial, ethnic, elderly, disabled, low-income, and female head of household population demographics within the project area. There is no U.S. Census Bureau data for the unincorporated community of Alpine, Arizona (nearest community to Sierra Blanca Ranch Adjustment Parcel).

The demographic characteristics of the population located near the City of Show Low and the Town of Camp Verde were reviewed to evaluate whether protected populations would be disproportionately affected by the proposed project. Protected populations include people of a minority race; of Hispanic ethnicity; older than 16 years of age who are either work-disabled, have self-care limitations, or have a mobility disability; members of households below poverty level; people 60 years of age and older; and/or are females who maintain a household with no spouse present while living with one or more people related to her by birth, marriage, or adoption.

Minority racial populations, as defined by the Federal Census, include the following racial categories: African American, American Indian/Eskimo and Aleut (Native American), Asian and Pacific Islander, and "other race." In the census, the category "Hispanic" is not a racial category, but is instead an ethnicity. Therefore, the category "Hispanic" was used for all Hispanics (regardless of race) even for those who identified themselves as "White."

Employment and Income

According to the 2005-2009 American Community Survey (U.S. Census Bureau 2009), the unemployment rate in Show Low was 5.8% and in Camp Verde was 5.6%, which compares to the State of Arizona (6.8%) and United States (7.2%). The percent of individuals in poverty in Show Low (16.1%) and Camp Verde (16.6%) is higher than both the State of Arizona (14.7%) and United States (13.5%), while the percent of families in poverty is higher in Show Low (11.9%) but lower in Camp Verde (8.8%) when compared to family poverty levels in Arizona (10.5%) and the United States (9.9%). The per capita income between 2005 and 2009 in Show Low was $20,416 and in Camp Verde was $20,609 (*see* Table 8), while the median household income in Show Low was $41,611 and in Camp Verde was $41,750.

Demographic Trends

According to the 2005-2009 American Community Survey, the total population of Show Low was 11,420 inhabitants. The City of Show Low has seen a 127.4% increase in population since 1990 and a 48.4% increase in population since the year 2000 (ADC 2009a). The majority of this population was Caucasian, though American Indians made up a relatively large percentage of the minority population in comparison to the rest of the United States (U.S. Census Bureau 2009). Table 8 shows the race distribution of the population in the study area. Males made up 50.7% of Show Low's population, while females consisted of 49.3% of the population. The median age of the City of Show Low was 36.3 years, while 73% of the population was 18 years or older and 16.3% was 65 years or older.

The Town of Camp Verde had a population of 10,670 people according to the 2005-2009 American Community Survey. This population includes a 70.9% increase from the recorded 1990 population and a 12.9% increase from the recorded 2000 population (ADC 2009b). The majority of this population was Caucasian, though American Indians made up a relatively large percentage of the minority population in comparison to the rest of the United States (U.S. Census Bureau 2009). Males made up 50.5% of Camp Verde's population, while females

consisted of 49.5% of the population. The median age of the Town of Camp Verde was 43 years, while 76.2% of the population was 18 years or older and 20.1% was 65 years or older.

According to the 2005-2009 American Community Survey (U.S. Census Bureau 2009), female head of household percentages (11.8% for Show Low; 9.4% for Camp Verde) are relatively comparable to the corresponding averages for the State of Arizona (11.7%) and United States (12.4%). The percentage of those whose age is 60 years and over (22.1% for Show Low; 26.1% for Camp Verde) is considerably higher than the corresponding averages for the State of Arizona (17.6%) and the United States (17.4%). Disabled populations were not reported for Show Low or Camp Verde.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Under the Proposed Action Alternative, the four Federal parcels would be conveyed to private ownership and nine Non-Federal parcels conveyed to Forest Service ownership. Through this land exchange, there would be no negative direct or indirect impacts to minority and low-income populations or other persons based on race, color, religion, national origin, sex, age, or handicap. Development of the City of Chow Low and Show Low South parcels may contribute to the local economy and create jobs that could indirectly benefit local minority and low-income populations through employment.

Cumulative Effects

Given that there are no negative direct or indirect impacts regarding environmental justice associated with the Proposed Action Alternative, no cumulative negative effects would occur.

Alternative 2 – No Action

Direct and Indirect Effects

Under the No Action Alternative, the land exchange would not occur and current ownership would be maintained. There would be no direct or indirect impacts to minority and low-income populations or other persons based on race, color, religion, national origin, sex, age, or handicap as a result of this alternative.

Cumulative Effects

There are no direct or indirect impacts associated with the No Action Alternative; therefore, no cumulative effects would occur.

Plants, Fish, and Wildlife

The ASNFs completed a BA&E (Biological Assessment and Evaluation), which focused on the Federal parcels involved in the proposed land exchange (EnviroSystems 2011a). The BA&E evaluated impacts to federally protected species listed as Threatened and Endangered (T&E) under the Endangered Species Act; Forest Service sensitive species, Management Indicator Species (MIS) listed by the ASNFs, CNF, and PNF; and migratory birds protected under the Migratory Birds Treaty Act (MBTA) as a result of implementing the Proposed Action Alternative. The BA&E did not analyze effects to plants and wildlife as a result of the No Action Alternative

because no change would occur to Federal parcels. A summary of the BA&E results are presented below.

The Forest Service consulted on the eleven Land and Resource Management Plans (LRMP) for all National Forests and Grasslands in the Southwestern Region, and a final Biological and Conference Opinion (LRMP BO) was issued on June 10, 2005. In order to address a number of issues concerning the LRMP BO, the Forest Service reinitiated Endangered Species Act (ESA) Section 7 consultation with USFWS in May 2010. Consultation was completed on April 30, 2012 with individual Biological Opinions for each Forest in the Southwestern Region. The new ASNFs LRMP BO (ASNFs LRMP BO, 2012) will henceforth be utilized. It is the current direction of the Southwestern Region to conduct a consistency check to determine whether an amendment to a LRMP would be consistent with the requirements of the ASNFs LRMP BO. A LRMP amendment is considered to be consistent with the ASNFs LRMP BO if: 1.) It results in effects (to species and/or designated critical habitat) that were analyzed in the BO; 2.) It does not result in exceeding the amount of take issued in the BO; 3.) It meets the assumptions stated in the BO; and 4.) It would result in continuing to implement the Terms and Conditions of the BO. Based on a review of the ASNFs LRMP BO in relation to proposed project activities, implementation of any of the alternatives proposed would be consistent with the new Apache-Sitgreaves LRMP Biological Opinion and no amendment to the LRMP would be necessary.

Threatened and Endangered Species Affected Environment

As part of the BA&E, biological surveys were performed on each of the four Federal parcels. Habitat was not analyzed in detail on Non-Federal parcels for suitability. A total of four federally listed threatened, endangered, proposed, or candidate species (*Table 11)* were identified as having potential habitat within the Federal lands which is Designated Critical Habitat for Mexican spotted owl, and suitable habitat for the western yellow-billed cuckoo, Mexican gray wolf, and Little Colorado spinedace. Federal status protecting several species analyzed in the DEIS and supporting documents were updated to reflect designation of critical habitat for Chiricahua Leopard frogs on 3/20/2012, and designation of critical habitat for Loach minnow on 2/23/2012.

Table 11. Threatened and Endangered Species with Potential Habitat in the Federal Parcels

Common Name	Scientific Name	Preferred Habitat Description	USFWS Status	Parcel
Birds				
Mexican spotted owl (Designated Critical Habitat)	*Strix occidentalis lucida*	Nests in canyons and dense forests with multi-layered structure of mixed conifer or ponderosa pine/gambel oak; seemingly prefers sites with cool microclimates.	Threatened	Sierra Blanca Ranch Adjustment
Western yellow-billed cuckoo	*Coccyzus americanus*	In Arizona, streamside cottonwood, willow groves, and larger mesquite bosques for migrating and breeding preferred.	Candidate	Soda Springs Ranch Adjustment
Mammals				
Mexican gray wolf (10-j area)	*Canis lupus baileyi*	Found in a variety of habitats as long as the habitat is adequate to support sufficient prey populations such as elk and deer.	Non-essential experimental population	Sierra Blanca Ranch Adjustment

Common Name	Scientific Name	Preferred Habitat Description	USFWS Status	Parcel
Fish				
Little Colorado spinedace	*Lepidomeda vittata*	Most common in slow to moderate water currents, over fine gravel bottoms.	Threatened	City of Show Low

Designated Critical Habitat for Mexican Spotted Owl: Designated Critical Habitat for the Mexican spotted owl (MSO) occurs on the Sierra Blanca Ranch Adjustment Parcel (2 acres). This parcel does not contain all of the primary constituent elements necessary to support nesting and roosting habitat needs of the MSO. None of the other Federal parcels contain suitable habitat for the MSO. Though not designated as Critical Habitat, two years of MSO surveys were completed on the Show Low South Parcel and a ½-mile buffer surrounding the parcel boundary as requested by the district biologist. No MSO were found during the surveys and the areas were found to not have the primary constituent elements necessary for MSO.

Three of the Non-Federal parcels are located within areas mapped as MSO Critical Habitat, including the Leonard Canyon Parcel (640 acres), Sierra Blanca Ranch Parcel (156 acres), and Sprucedale Parcel (70 acres). However, 50 CFR Part 17, Final Designation of Critical Habitat For the Mexican Spotted Owl (USDOI 2004) states that private lands are not included by definition in the designation of Critical Habitat; private lands are not considered essential to the conservation of the MSO.

Western Yellow-billed Cuckoo: The Soda Springs Ranch Adjustment Parcel (8 acres) may provide habitat characteristics for foraging yellow-billed cuckoos, but there is no riparian vegetation that would provide suitable nesting habitat. None of the other three Federal parcels proposed in the land exchange contain habitat characteristics suitable for this species.

One Non-Federal parcel (Soda Springs Ranch Parcel) provides approximately 10 acres of potential habitat for the western yellow-billed cuckoo. The Soda Springs Ranch Parcel has portions of Wet Beaver Creek (0.17 miles) and Red Tank Draw (0.29 miles), both of which contain flowing water. Wet Beaver Creek has a well-developed cottonwood gallery overstory with a shrubby riparian understory that would provide high quality foraging and nesting habitat for this species.

Mexican Gray Wolf: On January 12, 1998, the USFWS published an ESA section 10(j) rule on the Mexican gray wolf that provided for the designation of specific populations of listed species in the United States as “experimental populations.” Under 10(j), a population of a listed species re-established outside its current range but within its probable historic range may be designated as an experimental population. Non-essential experimental populations located outside of National Wildlife Refuges or National Park lands are treated as if they are proposed for listing. The reintroduced Mexican gray wolf population has been designated a non-essential experimental population, providing for greater management flexibility.

The Sierra Blanca Ranch Adjustment Parcel (approximately 2 acres) occurs within the Blue Range Wolf Recovery Area and is therefore considered to have potential habitat for the Mexican gray wolf. The following Non-Federal parcels are also located within the Blue Range Wolf Recovery Area: Alder Peak Parcel (160 acres), Juan Miller Parcel (120 acres), Sierra Blanca Ranch Parcel (156 acres), and Sprucedale Parcel (70 acres).

Little Colorado Spinedace: The Little Colorado spinedace was designated as threatened with critical habitat (September 16, 1987) by the FWS. Based on a species 5 Year Review by FWS, Little Colorado spinedace is recommended for reclassifying to endangered status primarily due to dewatering of habitat and interactions with non-native fish and crayfish (USFWS 2008). The species is currently not present in the area of Show Low Creek. Spinedace may have been present historically in area streams including upper Brown Creek, Show Low Creek, Porter Creek and Billy Creek. These drainages will be considered as potential or suitable habitat for the species. Critical habitat is not present in the area.

The City of Show Low parcel (70acres) contains approximately 0.16 miles of Show Low Creek which provides potential habitat for the Little Colorado spinedace. No other Federal or Non-Federal parcel provide habitat for this species.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Under the Proposed Action Alternative, the four Federal parcels would be conveyed to private ownership and nine Non-Federal parcels conveyed to Forest Service ownership.

Designated Critical Habitat for Mexican Spotted Owl: As discussed above, the only Federal parcel that contains MSO critical habitat is the Sierra Blanca Ranch Adjustment Parcel. This parcel does not contain the canopy cover or snag requirements to support MSO or its necessary prey abundance level. Additionally, if this parcel is conveyed to private ownership, it would be covered under a conservation easement administered by The Nature Conservancy, protecting the area from future development. The three Non-Federal parcels located within areas mapped as MSO Critical Habitat (i.e., Leonard Canyon Parcel, Sierra Blanca Ranch Parcel, and Sprucedale Parcel) would be transferred to Federal ownership and would not undergo future development. The project would have a beneficial effect to MSO Critical Habitat in the net gain of approximately 606 acres.

Western Yellow-billed Cuckoo: The CNF would exchange marginal foraging habitat for the western-yellow billed cuckoo within the Federal Soda Springs Ranch Adjustment Parcel for high-quality foraging and nesting habitat within the Non-Federal Soda Springs Ranch Parcel. This would be a beneficial effect to the western yellow-billed cuckoo in the net gain of approximately 10 acres of high quality habitat.

Mexican Gray Wolf: The only Federal parcel that contains habitat for the Mexican gray wolf is the Sierra Blanca Ranch Adjustment Parcel. If this parcel is conveyed to private ownership, it would be covered under a conservation easement administered by The Nature Conservancy, protecting the area from future development. The four Non-Federal parcels located within the Blue Range Wolf Recovery Area would be conveyed to Federal ownership, increasing the current protection and potential availability of habitat to wolves in the area by a net gain of approximately 503 acres. The project would not affect the Mexican gray wolf non-essential experimental population.

Little Colorado Spinedace: The ASNF would lose approximately 0.16 miles of Show Low Creek through the land exchange. This stretch of Show Low Creek does provide potential

habitat for the species but no known population current exists in that location. Potential indirect effects from development after the land exchange, to this species' habitat would be minimal. Proposed expansion of the City of Show Low wastewater treatment facility will only occur on the upland area of parcel, away from the potential habitat for the Little Colorado spinedace. Show Low Creek would be maintained as open space as designated by the deed restriction imposed on the property by the City of Show Low to conserve and protect the area along Show Low Creek. This easement would thereby maintain any and all potential habitat for the spinedace even under Non-Federal ownership.

Cumulative Effects

With only beneficial direct or indirect effects through the gain of potential habitat in the land exchange to any T&E species, no detrimental cumulative effects would occur.

Alternative 2 – No Action

Direct and Indirect Effects

Under the No Action Alternative, the Federal parcels would remain under federal ownership, no development would occur, and T&E species would continue to receive protection. The Non-Federal parcels, however, would likely be developed as provided by the reasonable foreseeable use document (with the exception of the Sierra Blanca Ranch Parcel), and T&E species and their habitat, if present, could be impacted.

Mexican Spotted Owl: As stated above, the Leonard Canyon Parcel, Sierra Blanca Ranch Parcel, and Sprucedale Parcel are located within areas mapped as Critical Habitat for the MSO. However, according to 50 CFR Part 17, Final Designation of Critical Habitat for the Mexican Spotted Owl (USDOI 1994), private lands are not included by definition in the designation of Critical Habitat; private lands are not considered essential to the conservation of the MSO. With this conclusion, no effects to MSO Critical Habitat would occur.

Western Yellow-billed Cuckoo: The only Non-Federal parcel with suitable habitat for the western yellow-billed cuckoo is the Soda Springs Ranch Parcel. Wet Beaver Creek has a well-developed cottonwood gallery overstory with a shrubby riparian understory that could provide high quality foraging and nesting habitat for this species. Under the No Action Alternative, the land exchange would not occur; leaving the Soda Springs Ranch Parcel in private ownership and that would likely be developed as rural residential lots approximately 3.5+ acres in size. While an indirect effect of the land exchange, potential habitat for the western yellow-billed cuckoo would likely be negatively affected as a result of this type of development.

Mexican Gray Wolf: There are four Non-Federal parcels located within the Blue Range Wolf Recovery Area: Alder Peak Parcel, Juan Miller Parcel, Sierra Blanca Ranch Parcel, and Sprucedale Parcel. With the exception of the Sierra Blanca Ranch Parcel, these lands would likely undergo varying degrees of development. These lands are considered suitable hunting and denning habitat for the Mexican gray wolf and would likely be degraded by indirect effects of development. The Mexican gray wolf would likely avoid these private developments.

Little Colorado Spinedace: The only parcel that has potential habitat for this species is the City of Show Low parcel. Under the No Action Alternative, this parcel would remain under Federal ownership and no change to potential habitat would occur.

Cumulative Effects

With no direct or indirect effects to the MSO or its Critical Habitat or Little Colorado spinedace habitat, no cumulative effects would occur.

Present and foreseeable future actions resulting from development of Non-Federal parcels may cumulatively affect the western yellow-billed cuckoo and Mexican gray wolves. Any projects that include development and noise (i.e. Second Knoll Shooting Range and the Pueblo Park Mineral Materials Pit projects) could affect the habitat use by Mexican gray wolf. Wildfires can reduce or degrade habitat quality. Given the scale of these potential developments relative to the scale of existing habitat, no adverse cumulative effects to T&E species would occur.

Forest Service Sensitive Species Affected Environment

Within the Biological Assessment and Evaluation (EnviroSystems 2011a), a total of 36 Forest Service Sensitive species (not including T&E species that are analyzed in the section above) were identified as having potential habitat within the four Federal parcels (*Table 12*). These species were identified from the Regional Foresters Sensitive Species list (USDA 2007). Forest Service sensitive species were analyzed in detail in the BA&E (EnviroSystems 2011a) for Federal parcels only. For a list of potential species on Non-Federal parcels, please see Appendix A of the BA&E (EnviroSystems 2011a).

Table 12. Summary of Forest Service Sensitive Species with Potential Habitat on the Federal Parcels by Acres per Potential Natural Vegetation Type (PNVT)

Common Name	Scientific Name	Preferred Habitat Description	PNVT	Acres on Federal Parcels Proposed for Exchange	Parcel[1]
Amphibians					
Arizona toad	*Bufo microscaphus*	Rocky streams in canyons and floodplains in pine-oak belt and also in lower deserts.	Cottonwood-Willow Riparian Forest, Wetland/Cienega Riparian Areas	3.02	1/4
Lowland leopard frog	*Rana yavapaiensis*	Inhabits aquatic systems in desert grasslands to piñon-juniper. They are habitat generalists and breed in a variety of natural and man-made aquatic systems. Natural systems include rivers, permanent streams, and permanent pools in intermittent streams, beaver ponds, cienegas, and springs.	Cottonwood-Willow Riparian Forest, Wetland/Cienega Riparian Areas	2.47	1
Northern leopard frog	*Rana pipiens*	Permanent waters with rooted aquatic vegetation, also frequents ponds, canals, marshes, springs, and streams.	Cottonwood-Willow Riparian Forest, Wetland/Cienega Riparian Areas	2.47	1
Birds					
Abert's towhee	*Pipilo aberti*	Inhabits riparian corridors in the Sonoran Deserts of Arizona. Often found in Cottonwood and willow woodlands, with dense shrubs, along desert streams and rivers.	Desert Communities, Semi-Desert Grassland	7.02	4
American peregrine falcon	*Falco peregrinus anatum*	Nests in sheer, steep cliffs; preys on birds in woodlands, riparian areas, and other habitats with abundant prey near nest site.	Ponderosa Pine Forest, Pinyon-Juniper Woodland, Montane/Subalpine Grasslands, Wetland/Cienega Riparian Areas, Semi-Desert Grassland	69.41	1

Common Name	Scientific Name	Preferred Habitat Description	PNVT	Acres on Federal Parcels Proposed for Exchange	Parcel[1]
Bald eagle	*Haliaeetus leucocephalus*	Nests in large trees or cliffs near water with abundant prey. Mainly feeds on fish but will also feed on waterfowl, small mammals, and carrion.	Cottonwood-Willow Riparian, Pinyon-Juniper Woodland, Ponderosa Pine Forest, Montane/Subalpine Grasslands, Wetland/Cienega Riparian Areas	1014.89	1/2/3
Gray catbird	*Dumetella carolinensis*	They are associated with the ponderosa pine forest found in the deserts of the southwest; piñon-juniper forests distributed throughout the semiarid Western U.S., usually on dry, shallow, rocky soils of mesas, benches, and canyon walls; and non-forest habitats found in river, riparian woodlands, and subalpine marshes.	Ponderosa Pine Forest, Pinyon-Juniper Woodland, Cottonwood-Willow Riparian Forest, Wetland/Cienega Riparian Areas	69.41	1
Gray vireo	*Vireo vicinior*	Found in desert scrub, mixed juniper or piñon pine and oak scrub associations, and chaparral, in hot, arid mountains and high plains scrubland.	Pinyon-Juniper Woodland	63.00	1/2
Northern goshawk	*Accipiter gentilis*	Ponderosa pine and mixed conifer forests; some riparian habitats.	Ponderosa Pine Forest, Cottonwood-Willow Riparian Forest	947.46	1/2/3
Invertebrates					
California floater	*Anodonta californiensis*	Shallow areas, less than 2 m. deep in unpolluted lakes, reservoirs, and perennial streams in mud or sand with juveniles found in loose sand.	Cottonwood-Willow Riparian Forest	2.47	1
Ferris' copper	*Lycaena ferrisi*	Meadows and cienegas near the food plant *Rumex hymeospalus*.	Cottonwood-Willow Riparian Forest, Wetland/Cienega Riparian Areas	3.02	1/3

Common Name	Scientific Name	Preferred Habitat Description	PNVT	Acres on Federal Parcels Proposed for Exchange	Parcel[1]
Four spotted skipperling	*Piruna polingii*	Moist meadows and stream sides in mountains of Arizona, New Mexico.	Cottonwood-Willow Riparian Forest, Wetland/Cienega Riparian Areas	3.02	1/3/4
Fish					
Bluehead sucker	*Catostomus discobolus discobolus*	When water is clear they stay in deep pools and eddies during the day then move into shallow riffles, tributary mouths, shorelines, or other hard-bottomed sites to feed at night. When water is turbid they occupy shallow areas throughout the day.	Cottonwood-Willow Riparian Forest	2.47	1
Little Colorado sucker	*Catostomus* spp. 3	Small to medium creeks in pools with abundant cover. Occasionally in riffles. Endemic in the Little Colorado River and north flowing tributaries.	Cottonwood-Willow Riparian Forest	2.47	1
Roundtail chub	*Gila robusta*	Occupy mid-elevation streams and rivers where typical adult habitat consists of pools up to 6.6' deep adjacent to riffles and runs.	Cottonwood-Willow Riparian Forest	2.47	1
Mammals					
Allen's lappet-browed bat	*Idionycteris phyllotis*	Found in ponderosa pine, piñon-juniper, Mexican woodland, white fir, and mohave desert scrub vegetative communities.	Ponderosa Pine Forest, Desert Communities	949.62	1/2/3/4
Arizona montane vole	*Microtus montanus arizonensis*	In Arizona they seem to prefer dense damp to wet grassy areas at high (alpine like) elevations. They make runways through the tall grass. Often found in marshy areas or near streams.	Ponderosa Pine Forest, Cottonwood-Willow Riparian Forest, Wetland/Cienega Riparian Areas	950.48	1/2/3
Long-tailed vole	*Microtus longicaudus*	Inhabits meadows, grassy valleys, grassy clearings in forests, sagebrush flats and rocky slopes in or near coniferous forests.	Ponderosa Pine Forest, Montane/Subalpine Grasslands, Wetland/Cienega Riparian Areas	949.42	1/2/3

Common Name	Scientific Name	Preferred Habitat Description	PNVT	Acres on Federal Parcels Proposed for Exchange	Parcel[1]
Merriam's shrew	*Sorex merriami leucogenys*	Inhabits cool, grassy places, often in association with the Mexican vole, and near coniferous forests.	Ponderosa Pine Forest, Pinyon-Juniper Woodland, Montane/Subalpine Grasslands	1011.87	1/2/3
Navajo Mogollon vole	*Microtus mogollonensis navaho*	Occupies dense thickets of shrubs and dry, grassy areas adjacent to ponderosa pine forests.	Ponderosa Pine Forest, Pinyon-Juniper Woodland, Montane/Subalpine Grasslands	1011.87	1/2/3
Pale Townsend's big-eared bat	*Corynorhinus townsendii pallescens*	Found over desert scrub and in shelters in desert-mountains, oak-woodland, piñon-juniper, or coniferous forests.	Ponderosa Pine Forest, Pinyon-Juniper Woodland	1010.46	1/2/3/4
Plains harvest mouse	*Reithrodontomys montanus*	This species occurs in open grassy areas, including cultivated fields, prairie, and grazed grasslands with their diet consisting of insects, seeds and herbs.	Semi-Desert Grassland	4.86	4
Southern red-backed vole	*Clethrionomys gapperi*	Found in ponderosa pine or spruce-fir forests, where rocks or rocky slopes are present.	Ponderosa Pine Forest	949.72	1/2/3
Springerville silky pocket mouse	*Perognathus flavus goodpasteri*	Found in the plains-like short grassland which is interspersed with volcanic rock or in areas of shortgrass, boulders, and tumbleweeds. Also found in prairies of sandy, gravelly, or rocky areas with sparse vegetation of various grasses and forbs.	Montane/Subalpine Grasslands	1.41	3
Spotted bat	*Euderma maculatum*	Found in desert to sub-alpine meadows, including desert scrub, piñon-juniper, ponderosa pine, mixed conifer forest, canyon bottoms, rims of cliffs, riparian areas, fields, and open pasture.	Ponderosa Pine Forest, Pinyon-Juniper Woodland, Cottonwood-Willow Riparian Forest, Montane/Subalpine Grasslands	1014.34	1/2/3
Plants					
Arizona alum root	*Heuchera glomerulata*	Found on shaded rocky slopes, in humus soil, near seeps, streams and riparian areas.	Cottonwood-Willow Riparian Forest	2.47	1

Common Name	Scientific Name	Preferred Habitat Description	PNVT	Acres on Federal Parcels Proposed for Exchange	Parcel[1]
Arizona sneezeweed	*Helenium arizonicum*	Seasonally wet meadows in ponderosa pine forests at elevations ranging from 6,000'-8,000' amsl.	Ponderosa Pine Forest	947.46	1/2/3
Arizona willow	*Salix arizonica*	High elevation wet meadows, stream sides, and cienegas.	Cottonwood-Willow Riparian Forest	2.47	1
Bebb's willow	*Salix bebbiana*	Coniferous forests along streams, springs, and lakes.	Cottonwood-Willow Riparian Forest	2.47	1
Blumer's dock	*Rumex orthoneurus*	Mid- to high-elevation wetlands with moist, organic soil adjacent to perennial springs or streams in canyons or meadow situations.	Wetland/Cienega	0.55	3
Davidson's cliff carrot	*Pteryxia davidsonii*	Occurs on sheer cliffs (north facing) and in rocky, damp, drainages and mountainsides, in piñon-juniper woodland and lower montane coniferous forest.	Ponderosa Pine Forest, Pinyon-Juniper Woodland	1010.46	1/2/3
Heathleaf wild buckwheat	*Eriogonum ericifolium* var. *ericifolium*	Dry, gravelly to rocky slopes of lacustrine, in mixed grasslands, chaparral and oak-woodlands.	Ponderosa Pine Forest, Semi-Desert Grassland	952.32	1/2/3/4
Hualapai milkwort	*Polygala rusbyi*	Desert grassland and juniper woodland on sandy flats and limestone bedrock, rock, gravel, and silt.	Semi-Desert Grassland, Desert Communities	7.02	4
Ripley wild buckwheat	*Erigonum ripleyi*	Found in lakebeds on well-drained powdery soils derived from limestone, sandstone, or volcanic tuffs and ashes.	Semi-Desert Grassland, Desert Communities	7.02	4
Tonto basin agave	*Agave delamateri*	Usually found atop benches, at edges of slopes, and on open hilly slopes in desert scrub, overlooking major drainages and perennial streams. Occasionally found in chaparral or juniper-grassland.	Semi-Desert Grassland, Desert Communities	7.02	4
Reptiles					
Mexican gartersnake	*Thamnophis eques megalops*	Most abundant in densely vegetated habitat surrounding cienegas, cienega-streams, and stock tanks and in or near water along streams in valley floors and generally open areas, but not in steep mountain canyon stream habitat.	Cottonwood-Willow Riparian Forest, Wetland/Cienega Riparian Areas	3.02	1/3

Common Name	Scientific Name	Preferred Habitat Description	PNVT	Acres on Federal Parcels Proposed for Exchange	Parcel[1]
Narrow-headed gartersnake	*Thamnophis rufipunctatus*	Found in piñyon-juniper and pine-oak woodland into ponderosa pine forest; in permanently flowing streams, sometimes sheltered by broadleaf deciduous trees.	Ponderosa Pine Forest, Pinyon-Juniper Woodland, Cottonwood-Willow Riparian Forest, Wetland/Cienega Riparian Areas	1013.48	1/2/3
Reticulate Gila monster	*Heloderma suspectum suspectum*	In habitats shrubby, grassy, and succulent desert, in canyon bottoms or arroyos with permanent or intermittent streams where it digs burrows or uses those of other animals.	Semi-Desert Grassland, Desert Communities	7.02	4

[1] Parcels: 1 = City of Show Low; 2 = Show Low South; 3 = Sierra Blanca Ranch Adjustment; 4 = Soda Springs Ranch Adjustment.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Under the Proposed Action Alternative, the four Federal parcels would be conveyed to private ownership and nine Non-Federal parcels conveyed to Forest Service ownership. No negative effects would occur to Forest Service Sensitive species located on the Sierra Blanca Ranch Adjustment Parcel because after conveyance, this parcel would be protected from further development by a conservation easement administered by The Nature Conservancy.

There will be no change to suitable or potential habitat for Forest Service Sensitive species as a direct result of the land exchange. Habitat for Forest Service Sensitive species on the City of Show Low Parcel, Show Low South Parcel, and Soda Springs Ranch Adjustment Parcel would likely see a reduction in habitat quality or loss of available habitat as an indirect effect of the land exchange and as a result of development activities, based on the reasonable and foreseeable use of these parcels.

Potential indirect effects from development after the land exchange, to Forest Service Sensitive species that occur on the City of Show Low Parcel would be minimal. Proposed expansion of the City of Show Low wastewater treatment facility will only occur on the upland area of parcel, away from the potential habitat of Forest Service Sensitive species. Show Low Creek would be maintained as open space as designated by the deed restriction imposed on the property by the City of Show Low to conserve and protect the area along Show Low Creek. This easement would thereby maintain any and all habitat for Forest Service sensitive species even under Non-Federal ownership.

The City of Show Low and Show Low South parcels were surveyed for northern goshawks at the request of the district biologist, using the Forest Service recommended survey protocol (Joy et al. 1994). A goshawk nest was found in the Show Low South Parcel during the surveys, less than ½-mile from the previously known nest location. This nesting pair of goshawks may be impacted by the land exchange indirectly through any subsequent development of the parcel. Abandonment of this nest may result if development proceeds as anticipated. Goshawks are known to nest near residential areas, so the pair may return to the area following the completion of construction.

Overall, the land exchange would result in a net gain of 530 acres for the Forest Service of suitable habitat for Forest Service sensitive species. Based on habitat characteristics surrounding Non-Federal parcels and species identified to potentially occur within the vicinity by the AGFD on-line review tool, the nine Non-Federal parcels also contain habitat for Forest Service Sensitive species. Generally, the Non-Federal parcels contain more valuable habitat for special-status species, primarily due to the presence of perennial waters and riparian habitat on many of the parcels. The Proposed Action Alternative would not cause a trend toward listing or loss of viability for any Forest Service Sensitive species (EnviroSystems 2011a). For a more detailed species by species analysis please see the BA&E (EnviroSystems 2011a).

Cumulative Effects

The Timber Mesa-Vernon restoration project will likely improve habitat for Forest Service Sensitive species. This project will also provide alternative nesting and foraging habitat for the

goshawk pair that may be indirectly displaced by the land exchange. Given the close proximity of these areas, no cumulative effects to any Forest Service Sensitive species will occur.

Alternative 2 – No Action

Direct and Indirect Effects

Under the No Action Alternative, the Federal parcels would remain under federal ownership. No development would occur, and Forest Service Sensitive species would continue to receive protection. Plants and wildlife located on the Non-Federal parcels that are considered Sensitive by the Forest Service would not receive further protection as the parcels would continue to be owned privately. Development would likely occur on the majority of Non-Federal parcels, and potential habitat for Forest Service Sensitive species outside Federal ownership would likely be degraded or removed.

Cumulative Effects

With no direct or indirect effects of the land exchange to Forest Service Sensitive species on Federal lands no cumulative effects would occur.

Management Indicator Species Affected Environment

Under the National Forest Management Act (§ 36 CFR 219.19), the Forest Service is required to manage wildlife habitat to maintain viable populations of native and desired non-native species. To do this, the Forest Service must identify MIS for each MA within each national forest. These species are selected because they are representative of a vegetation community, and their long-term population changes serve as a gauge for the overall health of the ecosystem. MIS for the ASNFs and CNF were identified in their respective Forest Plans (USDA 1987a; USDA 1987b).

MIS for this project were evaluated based on the MAs located within the Federal parcels. On the ASNFs, the Federal parcels lay within the Forested MA1 and the Woodland MA2 areas. On the CNF, the Soda Springs Ranch Adjustment Parcel is within the Verde Valley MA (MA 11). Table 13 lists the MIS with suitable habitat in the Federal parcels for each MA in the project area; their indicator habitat; and their forest-wide habitat and population trends. The MIS listed for the Verde Valley MA did not have suitable habitat in the Soda Springs Ranch Adjustment Parcel, therefore was excluded from further analysis. Forest-wide population trends were updated to reflect current status based on the final MIS report released in June 2012. While some forest-wide population trends had changed from the finalize BA&E (EnviroSystems 2011a) for several species, it did not affect the determination of how the proposed action would affect MIS population or habitat trends. An Addendum to the BA&E dated October 23, 2012 was prepared which presents the most recent MIS forest-wide trend data for the ASNFs and the CNF.

Table 13. MIS Species within Forest Land Management Areas, MIS Habitat Components, Forest Trends, and Acres Analyzed in the Show Low South Land Exchange Analysis Area

MIS Species by Forest Management Area	Habitat Component Indicated		Forest-wide Habitat Trend*	Forest-wide Population Trend*	Acres of Habitat Forest-wide		Acres to be analyzed in Project Area	Parcel
	ASNFs	Coconino NF			ASNFs	Coconino NF		
Hairy Woodpecker	Snags (all types)	Snag component of ponderosa pine, mixed conifer, and spruce-fir	Upward	Stable	712,366	900,426	947.46	1/2/3
Red-naped sapsucker	Snags (Aspen)	Late seral and snag component of aspen	Stable	Stable	800,000	4,487	0	Not applicable
Northern Goshawk	Late Succession (PP)	Late seral ponderosa pine	Stable to Declining	Declining	1,682,492	807,424	947.46	1/2/3
Merriam's Turkey	Late Succession	Late seral ponderosa pine	Stable	Stable	936,663	807,424	951.89	1/2/3
Pygmy Nuthatch	Late Succession (PP)	Late seral ponderosa pine	Declining	Stable	569,890	807,424	947.46	1/2/3
Mexican Spotted Owl	Late Succession	Late seral mixed conifer and spruce-fir	Declining	Declining	649,069	93,002	0	Not applicable
Rocky Mountain Elk	Early Succession	Early seral ponderosa pine, mixed conifer, and spruce-fir	Increasing	Stable to Declining	1,690,439	900,426	951.89	1/2/3
Mule Deer	Early Succession	Early seral aspen and pinyon-juniper	Increasing	Stable to Increasing	1,769,299	606,316	1010.46	1/3

Abert's Squirrel	Early Succession (ponderosa pine)	Early Seral ponderosa pine	Stable to Declining	Stable	746,902	807,424	947.46	1/2/3
Red Squirrel	Late Succession (spruce/mixed conifer)	Late seral mixed conifer and spruce-fir	Declining	Stable to Declining	203,347	93,002	0	Not applicable
Juniper (Plain) Titmouse	Snags	Late seral and snag component of pinyon-juniper	Stable to Increasing	Stable	784,532	601829	63.00	1
Pronghorn Antelope	Early Succession	Early and late seral grasslands	Increasing	Stable	479,867	266,049	6.27	4
Lincoln Sparrow	High Elevation Riparian	Late seral, high elevation riparian (>7,000 feet)	Stable	Stable	10,101	557	0	Not applicable
Yellow-breasted Chat	Low Elevation Riparian	Late seral, low elevation riparian (<7,000 feet)	Stable	Stable	10,101	4,579	0	Not applicable
Lucy's Warbler	Low Elevation Riparian	Late seral, low elevation riparian (<7,000 feet)	Stable	Stable	10,101	4,579	0	Not applicable
Cinnamon Teal	Wetlands	Wetlands/aquatics	Stable to Declining	Stable to Declining	29,430	1,140	0.55	3
Aquatic Macroinvertebrates	Riparian	Not designated as MIS on Coconino NF	Declining	Declining	48,730-wetland cienega 3,279-open water	Not designated as MIS on Coconino NF	3.02	1/3

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Under the Proposed Action Alternative, the four Federal parcels would be conveyed to private ownership and nine Non-Federal parcels conveyed to Forest Service ownership. Each MIS was evaluated to determine the absolute value of potential habitat in acres the land exchange would remove, for parcels that would be conveyed by the Forest Service, and the value of potential habitat in acres the land exchange would contribute, for parcels being acquired by the Forest Service (EnviroSystems 2011a). This evaluation also included the net change in acreage and the percentage of the area to the total area of habitat available on the Forests (*Table 14*).

Table 14. Summary of ASNFs MIS Forest-wide Habitat Acreages and Net Change in Acreage Resulting from the Proposed Action Alternative

MIS Common Name	Current Forest-wide Habitat (total acres)	Area Conveyed by Forest Service under Proposed Action in acres (% of total)	Area Acquired by Forest Service under Proposed Action in acres (% of total)	Net Change in acres (% of total)	Parcel
Abert's squirrel	746,902	947 (0.13 %)	866 (0.12 %)	- 81 (0.01 %)	1/2/3
Elk (Rocky Mountain)	1,690,439	952 (0.06 %)	1246 (0.07 %)	+ 294 (0.02 %)	1/2/3
Hairy woodpecker	712,366	947 (0.13 %)	866 (0.45 %)	- 81 (0.01 %)	1/2/3
Juniper titmouse	784,532	63(<0.1 %)	380 (0.05 %)	- 317 (0.04 %)	1
Mule deer	1,769,299	1010 (0.06 %)	1246 (0.07 %)	+ 236 (0.01 %)	1/3
Northern goshawk	1,682,492	947 (0.06 %)	1246 (0.07 %)	+ 299 (0.02 %)	1/2/3
Pygmy nuthatch	569,890	947 (0.17 %)	866 (0.16 %)	- 81 (0.01 %)	1/2/3
Wild turkey (Merriam's turkey)	936,663	952 (0.10 %)	866 (0.09 %)	- 86 (<0.01 %)	1/2/3
Cinnamon teal	29,430	0.55 (<0.01%)	3.11 (0.01%)	+ 2.56 (<0.01%)	3
Aquatic Macro-invertebrates	52,009	3 (<0.01 %)	621 (0.01 %)	+ 618 (0.12 %)	1/3

As depicted in Table 14, the Proposed Action Alternative would result in a minor change in net habitat acreages for all MIS with habitat in the project area. The Proposed Action Alternative would lead to no change to forest wide habitat or population trends for any MIS species.

As for wildlife designated as MIS on the City of Show Low Parcel, some habitat would be lost as part of the waste water treatment plant expansion. However, the remainder of the parcel would remain open space, available to wildlife use and migration. Show Low Creek would be maintained as open space as designated by the deed restriction imposed on the property by the City of Show Low to conserve and protect the area along Show Low Creek. This easement would thereby maintain any and all habitat for MIS even under Non-Federal ownership. On the Show Low South Parcel, the land would be developed as low residential and mixed-use, leaving a proposed 400-foot buffer between existing, nearby neighborhoods. Treed areas and open space would remain for wildlife use and migration.

Parcels acquired through the land exchange would likely be assigned to neighboring management area, and therefore MIS requirements pending additional review by the appropriate forests.

Cumulative Effects
With no negative direct or indirect effects to MIS as a result of the land exchange, no cumulative effects would occur.

Alternative 2 – No Action

Direct and Indirect Effects
Under the No Action Alternative, no changes in land ownership would occur; therefore, no direct or indirect effects to MIS would occur. Consistency with the forest plan would be the same as described above. Upon review of information provided in the updated MIS report (AGFD 2012) and the consistency statements in the BA&E, it was found that consistency with the forest plan goals and objectives for all MIS and their habitat would be maintained, and that forest-wide population and habitat trends would not change with the No Action Alternative.

Cumulative Effects
With no direct or indirect effects to MIS, no cumulative effects would occur.

Migratory Birds Affected Environment

On January 10, 2001, President Clinton signed Executive Order 13186, placing emphasis on the conservation of migratory birds. No Forest Service Regional or forest-level policies have been developed to provide guidance on how to incorporate migratory birds into a NEPA analysis. The Southwestern Region of the Forest Service currently analyzes impacts to migratory birds by addressing the effects to Important Bird Areas (IBAs); important overwintering areas; and migratory birds listed by Arizona Partners in Flight (PIF) and Birds of Conservation Concern (BCC).

IBAs are listed on the Audubon Society's website (NAS 2012). There are no IBAs located adjacent to the Federal parcels' boundaries. The Upper Little Colorado River Watershed IBA is more than 15 miles from the Sierra Blanca Ranch Adjustment Parcel and more than 25 miles from the City of Show Low Parcel and Show Low South Parcel. The Blue River Complex IBA is more than 30 miles from the Sierra Blanca Ranch Adjustment Parcel. Lastly, the Lower Oak Creek IBA is approximately 10 miles from the Soda Springs Ranch Adjustment Parcel.

A total of 23 migratory bird species have been identified as potentially occurring within the Federal lands by PIF and BCC (*Table 15*). The following table includes all priority bird species with potential habitat listed by PIF for the mixed-conifer, ponderosa pine, piñon-juniper, Sonoran desert scrub, and low elevation riparian habitats (Latta et al. 1999) and species listed by BCC for the Colorado Plateau and the Sierra Madre Occidental biological conservation regions (USDOI 2008).

Table 15. Migratory Bird Species Listed by PIF and BCC with Potential Habitat in the Federal Lands

Species	Habitat	Vegetation Structure
American bittern	Marshlands and very wet meadows	Rarely seen away from dense reeds, rushes, cordgrass, cattails and other emergent vegetation.
Bendire's thrasher	Desert habitats with cholla cactus, creosote bush and yucca, and in juniper woodland	Commonly found in areas of tall vegetation.
Black-chinned sparrow	Chaparral in rocky, rugged landscapes	Habitats characterized by sagebrush, greasewood, chamise, mesquite, cactus, and other arid scrub plants.
Black-throated gray warbler	Mostly piñon, also commonly occurs in Madrean oak/ pine-oak in southeastern Arizona w/ shrub component	In taller and denser piñon-juniper woodland, usually nest 2-15 fee high', low to mid-story nester, prefers relatively heavy conifer cover, forage most often in piñon.
Cactus ferruginous pygmy-owl	Sonoran riparian deciduous woodland	Occurs in streamside cottonwoods and willows and adjacent mesquite bosques, usually with saguaros on nearby slopes.
Cassin's finch	Ponderosa pine and mixed conifer	Breeds in open coniferous forest at high elevations and winters in similar habitat at lower elevations.
Common black-hawk	Sycamore, cottonwood (mature), gallery riparian trees	Large, tall trees, prefers groves of trees rather than single trees.
Cordilleran Flycatcher	Ponderosa pine, Douglas-fir, maple, oak, aspen	Dense canopy closure, mid-late successional.
Flammulated owl	Dry coniferous forests, composed of pine, mixed conifer species, oak or aspen	Found primarily in mixed conifer, pine, and pine-oak habitats, but they also occur locally in woodlands of piñon-juniper, oak, and cypress.
Golden eagle	Piñon-juniper woodlands	Usually found in open country, in prairies, arctic and alpine tundra, open wooded country and barren areas, especially in hilly or mountainous regions.
Grace's warbler	Ponderosa pine and mixed conifer	Found high in the tree-tops of mature pines from Nevada to Nicaragua.
Gray flycatcher	Piñon pine and/or juniper, with an open overstory of ponderosa	Larger stands of piñon-juniper with open understory, some areas with sagebrush, nest height 2-9 feet, may need some ground cover to support insect populations for foraging, larger taller stands of sagebrush and greasewood.

Species	Habitat	Vegetation Structure
Gray vireo	Piñon-juniper with broad-leafed shrubs, Utah serviceberry, singleleaf ash	Open, avoiding stands greater than 112 trees/acre, usually nest and forage at 2-8 feet.
Juniper titmouse	Piñon-juniper woodlands, may use riparian habitat if adjacent to piñon-juniper	Taller piñon and juniper trees.
Lewis's woodpecker	Ponderosa pine, mixed conifer, and riparian	Favors open forest, ranging in from low-elevation riparian areas to high-elevation pine forests and burned areas.
Lucy's warbler	Mesquite, willow, cottonwood, secondary cavity nester	Dense midstory in elevations up to 6,500 feet amsl.
Olive warbler	Mixed pine-oak woodlands	Breeds in open montane pine forests at high elevations.
Olive-sided flycatcher	Ponderosa pine, Douglas-fir	Multi-level, mature forest, fairly open canopy, “clumpiness”, dead branches for foraging, live mature pines for nesting, snags important.
Phainopepla	Desert, riparian woodlands, and chaparral	Nests in shallow, woven cups of twigs placed on a tree limb or fork, or in a clump of mistletoe.
Pinyon jay	Breeds in piñon and ponderosa pine usually in piñon-juniper where piñon is dominant	Over 85% of nests found in bottom half of canopy, commonly in extensive stands of piñon-juniper with open physiognomy, may increase as mid and understory decrease.
Purple martin	Ponderosa pine	Open canopy, open midstory cover, open understory cover, high snag density.
Red-faced warbler	Maple, oak, sycamore, willow (and associated conifers)	Midstory important, dense preferred, but not necessarily tied to dense understory.
Southwestern willow flycatcher	Nesting substrate variable: box elder, tamarisk, willow, Russian olive, alder	Dense midstory and understory.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Under the Proposed Action Alternative, the four Federal parcels would be conveyed to private ownership and nine Non-Federal parcels conveyed to Forest Service ownership. There are no identified or potential IBAs within the project boundaries that would be affected by the land exchange. There are also no important overwintering areas within the project boundaries, so none would be affected.

Each of the four Federal parcels provide habitat for a subset of the listed migratory birds in Table 13. The City of Show Low Parcel provides several acres of riparian habitat, a rare habitat type in the arid forests and woodlands of Arizona. While this parcel is slated for development with the expansion of the City’s waste water treatment facility, development is planned for the upland area of the parcel, away from the riparian zone. The riparian area of the City of Show

Low parcel is expected to remain undeveloped as open space and, therefore, maintain currently available habitat for these species. The Show Low South Parcel is expected to be developed as low-density rural-residential with some mixed-use areas. Development of this parcel would likely reduce the available habitat for migratory birds, but with 5-acre lots planned for this parcel, a minimum level of habitat would likely remain. The Sierra Blanca Ranch Adjustment Parcel currently has a small cabin and several outbuildings that would be covered under a conservation easement administered by The Nature Conservancy as part of a larger private land tract and would preclude future development of this parcel. Any habitat currently available for migratory birds would remain available after the land exchange. The Soda Springs Ranch Adjustment Parcel is expected to be developed as 2-acre lots in a low-density rural residential area. Development of this parcel would likely reduce the available habitat for migratory birds, but with 2-acre lots planned for this area, a minimum level of habitat would likely remain. No significant effects will occur to range-wide populations of migratory bird species because the proposed action will not affect the suitability of migratory bird habitat and will not result in intentional take. Unintentional take may occur in the project area to some migratory bird species but will not be detrimental to the range-wide population of the species.

Cumulative Effects

If the exchange occurs, development on the Federal parcels would result in a small loss of upland ponderosa pine and piñon-juniper woodland habitat for migratory birds. Since these are the most common habitat types on the ASNFs, most of the projects listed in Appendix B have the potential to cumulatively impact migratory bird habitat. Wildfires (past and future), timber harvest, and vegetation clearing for developments (i.e., Second Knoll Shooting Range, a new Lakeside District Office, and Pueblo Park Mineral Materials Pit) would potentially remove trees and understory vegetation. Residential zoning on approximately 5,500 acres of land in Show Low as designated in the City of Show Low General Plan would all involve tree removal. Wildland Urban Interface projects, as wells as other vegetation thinning and management activities, would alter vegetation density and composition within general habitat for migratory birds. However, while all of these projects could cumulatively impact migratory birds, there are vast quantities of upland ponderosa pine and piñon-juniper woodland habitats within the ASNFs.

Alternative 2 – No Action

Direct and Indirect Effects

Under the No Action Alternative, habitat for migratory birds located on the Non-Federal parcels could be damaged or removed by development activities. Suitable habitat within the Federal parcels would remain protected.

Cumulative Effects

The ASNFs has many projects proposed on the Forest (listed in Appendix B), which have the potential to cumulatively impact migratory bird habitat. Wildfires (past and future), timber harvest, and vegetation clearing for developments (i.e., Second Knoll Shooting Range, a new Lakeside District Office, and Pueblo Park Mineral Materials Pit) would potentially remove trees and understory vegetation. Residential zoning on approximately 5,500 acres of land in Show Low as designated in the City of Show Low General Plan would all involve tree removal. Wildland Urban Interface projects, as wells as other vegetation thinning and management activities, would alter vegetation density and composition within general habitat for migratory birds. However, while all of these projects could cumulatively impact migratory birds, there are vast quantities of upland ponderosa pine and piñon-juniper woodland habitats within the ASNFs. With no additional direct or indirect effects to migratory birds on Federal lands under the No Action Alternative, no cumulative effects would occur.

GRAZING

Affected Environment

Federal Parcels: Livestock grazing occurs within each of the four Federal parcels. The City of Show Low Parcel (Lakeside Ranger District, ASNFs) lies within the Show Low Allotment. The Show Low South Parcel (Lakeside Ranger District, ASNFs) lies within the McNeil Allotment. The Sierra Blanca Ranch Adjustment Parcel (Alpine Ranger District, ASNFs) lies within the Boneyard Allotment. The Soda Springs Ranch Adjustment Parcel (Red Rock Ranger District, CNF) lies within the Beaver Creek Allotment.

Non-Federal Parcels: There are grazing leases on two of the Non-Federal parcels: the Leonard Canyon Parcel and Soda Springs Ranch Parcel. The grazing lessee on the Leonard Canyon Parcel is Bar T Bar Ranch, Inc., and the grazing lessee on the Soda Springs Ranch Parcel is Bar D Cattle Company, LLC. Grazing does not currently occur on any of the other Non-Federal parcels.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Federal Parcels: Under the Proposed Action Alternative, the four Federal parcels would be conveyed to private ownership and the Forest Service would no longer assign livestock capacity to that property. The current grazing permittees would no longer be able to graze livestock within the parcels, though grazing would still be authorized in the remainder of the allotments. The land exchange would not affect the number of livestock authorized with any of the allotments. The City of Show Low Parcel lies within the Show Low Allotment; however, the loss of 70 acres will be a minor loss of grazing capacity and would not have an effect on the grazing capacity of the allotment. The Show Low South Parcel lies within the Railroad Allotment. This will be the allotment with the largest loss of acreage, 948.48 acres, however, the pasture within this allotment that would be lost is currently not grazed, and therefore, no adverse effects to the grazing management or rangeland resource are expected from this exchange. The Sierra Blanca Ranch Adjustment parcel would reduce the Boneyard Allotment, an active allotment, by 2 acres. This reduction would not have an effect on the grazing capacity. The Soda Springs Ranch Adjustment Parcel will reduce the Beaver Creek Allotment by only 7.5 acres, therefore, no adverse effects to grazing management are expected.

Sec. 402 (g) of the Federal Land Policy and Management Act (FLPMA) requires that a two-year notification be provided to permit holders in which significant changes to grazing permits may take place. Permit holders were notified of the Proposed Action in November 2001. The Proposed Action Alternative would not conflict with the requirements of Sec. 402 (g) of FLPMA.

Non-Federal Parcels: Under the Proposed Action Alternative, the exchange would occur and the existing grazing leases on the Leonard Canyon Parcel and Soda Springs Ranch Parcel would terminate. The grazing lessee on the Leonard Canyon Parcel is the same permittee on the adjacent Federal land and would be able to continue to graze livestock on the exchanged parcel. The grazing lessee on the Soda Springs Ranch Parcel would not be affected because they did not have access to the non-federal parcel being conveyed to federal ownership. The Non-Federal parcels would be evaluated by the Forest Service for potential inclusion in any

surrounding grazing allotments. However, the evaluation and resultant decision on inclusion in a grazing allotment would not be accomplished as part of this land exchange decision. A decision regarding future grazing use would be made as part of the allotment management planning process which considers impacts on vegetation, soil and watershed productivity, and wildlife habitat. Management options to be considered would include fencing all or part of the parcels to protect watershed and soil productivity.

Cumulative Effects

There are no known actions that, in conjunction with the Proposed Action Alternative, would result in substantial impacts to grazing. Past, present, and reasonably foreseeable future actions that could cumulatively affect grazing include the Woodland Lake Park Tract Town Site Act Purchase project, and the Camp Tatiyee Land Exchange.

Alternative 2 – No Action

Direct and Indirect Effects

Federal Parcels: Under the No Action Alternative, the exchange would not occur, and the Federal parcels would continue to be grazed under the existing term grazing permits. No direct or indirect effects to grazing would occur.

Non-Federal Parcels: Since the Non-Federal parcels would not be transferred to federal ownership, they would not be considered for inclusion in a Forest Service grazing allotment. Existing grazing leases would not be terminated on the Leonard Canyon Parcel and Soda Springs Ranch Parcel. No direct or indirect effects to grazing would occur.

Cumulative Effects

With no direct or indirect effects to grazing, no cumulative effects would occur.

Prime and Unique Farmlands

Affected Environment

Under the Farmland Protection Policy Act (FPPA), federal agencies are directed to identify and take into account the adverse effects of federal programs on the preservation of farmland, to consider appropriate alternative actions which could lessen adverse effects, and to assure that such federal programs are, to the extent practicable, compatible with state or local government programs and policies to protect farmland. FPPA guidelines developed by the Department of Agriculture apply to farmland classified as prime or unique, or of state or local importance. Farmland subject to FPPA does not have to be currently used for cropland.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Federal Parcels: Under the Proposed Action Alternative, the four Federal parcels would be conveyed to private ownership. There are no areas within the four Federal parcels that are designated as prime and unique farmlands (NRCS Web Soil Survey 2010). There would be no direct or indirect effects to prime and unique farmlands.

Non-Federal Parcels: There are no areas within the nine Non-Federal parcels that are designated as prime and unique farmlands. There would be no direct or indirect effects to prime and unique farmlands.

Cumulative Effects
With no direct or indirect effects to prime and unique farmlands, no cumulative effects would occur.

Alternative 2 – No Action

Direct and Indirect Effects
Federal Parcels: Under the No Action Alternative, the exchange would not occur, and the Federal parcels would continue to be managed under the current Forest Plans. No direct or indirect effects to prime and unique farmlands would occur.

Non-Federal Parcels: Since the Non-Federal parcels would not be transferred to Federal ownership, they would not be considered for inclusion in the NFS. No direct or indirect effects to prime and unique farmlands would occur.

Cumulative Effects
With no direct or indirect effects to prime and unique farmlands, no cumulative effects would occur.

Wetlands and Floodplains

Affected Environment

A Water Resources Report was conducted for the proposed exchange (Exhibit C of Feasibility Analysis). This information is summarized below.

Federal Parcels: Under the Proposed Action Alternative, the four Federal parcels would be conveyed to private ownership and nine Non-Federal parcels would be conveyed to the Forest Service. The City of Show Low Parcel contains 1.5 acres of potential wetlands and 3.1 acres of floodplains with an additional 0.9 acres adjacent to the ephemeral channel. These wetlands and floodplains are associated with the areas surrounding Show Low Creek.

The Show Low South Parcel contains zero acres of wetlands or floodplains. This parcel does have eight separate channels from ephemeral streams crossing the parcel that may be subject to seasonal flooding and/or isolated precipitation events.

The Sierra Blanca Ranch Adjustment Parcel contains 0.3 acres of potential wetlands and 0.4 acres delineated as floodplain. At the time of the field survey, there was no standing water present in the meadow.

The Soda Springs Ranch Adjustment Parcel contains zero acres of wetlands and approximately 0.2 acres of floodplain. This acreage is currently in a cultivated meadow (turf field) and does not contain a stream course.

Non-Federal Parcels: The Alder Peak Parcel contains zero acres of delineated wetlands and floodplains. There are 1.5 acres adjacent to Burns Tank and a narrow channel below the tank that may be subject to seasonal flooding and/or isolated precipitation events.

The Cherry Parcels contain zero acres of wetlands and floodplains. The Water Resources Report states that the Cherry Parcels "are on decomposed granite parent material, dominated by chaparral vegetation. All are on side slopes with no indication of channels, a high water table or springs." These factors were confirmed by a field visit.

The Juan Miller Parcel contains less than 2.5 acres of wetlands with zero acres delineated as floodplains. However, there are approximately five acres adjacent to Juan Miller Creek that may be subject to seasonal flooding and/or isolated precipitation events.

The Leonard Canyon Parcel contains zero acres of natural wetlands and approximately three to four acres of floodplains. The floodplain acres are associated with the perennial pool stream reach within Leonard Canyon.

The Railroad Parcels contain zero acres of wetlands and 6.0 to 7.7 acres of delineated floodplains. The floodplain areas are associated with Mortesen Wash.

The Sierra Blanca Ranch Parcel contains 82.8 acres of wetlands and 82 acres of delineated floodplains. These acres are associated with the wet meadow surround the confluence of several small creeks on the parcel.

The Soda Springs Ranch Parcel contains zero acres of natural wetlands and approximately 19 acres of floodplains. A total of 16 of the floodplain acres are associated with Wet Beaver Creek, while the remaining three acres are associated with the floodplain of Red Tank Draw.

The Sponseller Ranch Parcel contains zero acres of wetlands and delineated floodplains. An additional 0 to 56 acres are adjacent to Brookbank Canyon and may be subject to flooding.

The Sprucedale Parcel contains 27 acres of wetlands and 57 acres of delineated floodplains. These wetlands and floodplains are associated with Beaver and Horton creeks.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Under the Proposed Action Alternative, the Forest Service would receive a net gain of approximately 110.5 acres of wetlands and between 163 and 166 acres of floodplains. There would also be an additional 5.6 to 61 acres of land conveyed that may be subject to flooding. This net gain would also add to the acreage of available riparian habitat within Forest Service management and protection.

Federal Parcels: Under the Proposed Action Alternative, the exchange would occur and the four Federal parcels would be conveyed to private ownership. Approximately 1.8 acres of wetlands and 3.7 acres of delineated floodplains would be conveyed to private ownership. An additional 0.9 acres of land that may be subject to flooding would also be conveyed. These wetlands and floodplains and any associated riparian habitat would no longer be managed by

the Forest Service or be provided the protection of federal ownership. The area surrounding Show Low Creek would remain open space by the City of Show Low, and therefore would retain its natural flow and riparian habitat availability to wildlife and other species of interest.

Non-Federal Parcels: Under the Proposed Action Alternative, the exchange would occur and the nine Non-Federal parcels would be conveyed to federal ownership. Approximately 112.3 acres of wetlands and 167 to 170 acres of delineated floodplains would be conveyed to the USFS. An additional approximately 6.5 to 62 acres of land that may be subject to flooding would also be conveyed. These wetlands and floodplains and any associated riparian habitat would then be managed by the Forest Service and be provided the additional protection of federal ownership.

Cumulative Effects

Cumulative effects with regards to wetlands and floodplains are discussed in a general qualitative manner due to the large scale of the analysis area.

A number of past, present, and reasonably foreseeable future actions have the potential to impact wetlands and floodplains:

- The proposed Second Knoll Shooting Range and associated access roads in the Lakeside Ranger District of ASNFs;
- The Woodland Lake Park Tract Town Site Act Purchase project, which would result in a net loss of 583 acres of land administered by ASNFs;
- Timber Mesa – Vernon Wildland Urban Interface Project;
- The Pueblo Park Mineral Materials Pit in the Alpine Ranger District of ASNFs;
- The Camp Tatiyee Land Exchange on the Apache-Sitgreaves, Coronado, Prescott, and Tonto National Forests;
- Wildfires;
- Timber Harvesting; and
- Residential development as addressed in the City of Show Low General Plan.

While these projects could potentially affect wetlands, projects on NFS lands are managed to mitigate impacts to wetlands. Also, the Proposed Action Alternative would have a net gain of 110.5 acres of wetlands and between 163 and 166 acres of floodplains. The Proposed Action Alternative when combined with present and foreseeable future actions would not result in measurable changes to wetlands or floodplains.

Alternative 2 – No Action

Direct and Indirect Effects

Federal Parcels: Under the No Action Alternative, the exchange would not occur, and the Federal parcels would continue to be managed under the current respective Forest Plans. No direct or indirect effects to wetlands or floodplains would occur.

Non-Federal Parcels: Under the No Action Alternative, the Non-Federal parcels would not be transferred to Federal ownership, and they would not be considered for inclusion in the NFS. These lands would likely be developed, which could negatively affect wetlands and floodplains and potentially remove any associated riparian habitat.

Cumulative Effects

There are no known actions that, in conjunction with the No Action Alternative, would result in substantial impacts to wetlands or floodplains.

Water Quality, Rights, and Claims

Affected Environment

A Water Resources Report was conducted for the proposed exchange (Exhibit C of Feasibility Analysis). This information is summarized below.

Federal Parcels: Under the Proposed Action Alternative, the Federal lands would be conveyed together with any and all associated and appurtenant water rights. The City of Show Low Parcel does not have any water rights identified for conveyance. Waters that flow in the natural channel of Show Low Creek have been appropriated by downstream users for various beneficial uses. A report prepared by the Arizona Department of Water Resources (dated April 15, 1999) concluded that the City of Show Low has sufficient water supplies which are continuously and legally available for one hundred years after the report's approval in the year 1999.

Water quality in the Show Low Creek Watershed, which includes areas of both the City of Show Low Parcel and the Show Low South Parcel, is monitored by the Arizona Department of Water Quality and the City of Show Low and managed through the Show Low Creek Watershed Enhancement Partnership (2007). Water in the watershed is primarily used for municipal, recreational, and some agricultural and industrial purposes and is supplied mostly by snow melt and Pinetop, Thompson, and Scott springs.

The Show Low South Parcel has a claim of right for a stockpond (Registry No. 38-010656) by the ASNFs. The annual volume claimed is 0.09 acre feet, which is claimed for stockwaters and wildlife uses.

The Sierra Blanca Adjustment Parcel has no water rights identified for conveyance.

The Soda Springs Ranch Adjustment Parcel has no water rights identified for conveyance. An unauthorized sprinkler-irrigated field occurs on a fraction of the parcel (0.75 recorded acres); however it is not associated with any water rights.

Non-Federal Parcels: The Non-Federal parcels would be conveyed together with any and all associated appurtenant water rights, except for the Sierra Blanca Ranch Parcel, where the Non-Federal water rights would be allocated between the conveyed and retained lands. Such water rights/claims of record have yet to be adjudicated under Arizona Water Law. The Sierra Blanca Ranch Parcel has a claim of right of use for an annual volume of 400 acre feet (Registry No. 36-31850). Water is claimed for irrigation, domestic, stockwater, and other uses. In addition, a Statement of Claimant, Adjudication File (No. 39-004950) for surface waters includes an annual volume of 250 acre feet for irrigation, 14 acre feet for domestic, 250 acre feet for stockwater, 200 acre feet for wildlife, and 200 acre feet for other uses. The current claim holder and the proponent have agreed that the portion of the water rights conveyed with the Sierra Blanca Ranch Parcel would be 80% of the claimed irrigation right, 80% of the claimed stockwater right, 80% of the claimed wildlife right, 80% of the claimed other uses right, and 0% of the claimed domestic right. All claimed domestic uses (14 acre feet per year) and 20% of all other claimed water uses (i.e., irrigation, stockwater, wildlife, and other) shall remain with the retained Sierra Blanca Ranch Parcel.

The Alder Peak Parcel has a claim of right to use for an annual volume of 84,000 gallons for stockwater use (Registry No. 36-102032).
The Cherry Parcels, Juan Miller Parcel, Leonard Canyon Parcel, Railroad Parcels, Soda Springs Ranch Parcel, Sponseller Ranch Parcel, and Sprucedale Parcel have no water rights identified for conveyance.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects
The Proposed Action Alternative would result in a net gain of water rights of approximately 1,030 acre feet in annual volume.

Federal Parcels: Drought conditions from 1996-2005, coupled with increasing residential growth, spurred shortages in water supplies in the Show Low area and drew concern for water quality issues. In 1988, Arizona Department of Environmental Quality (ADEQ) placed Rainbow Lake on Arizona's 303 (d) list of impaired waters due to excessive weeds, pH, and nutrient overloading. This is due primarily from agricultural and residential pollutants that infiltrate tributaries such as Show Low Creek and causes some concern for any proposed uses that could occur if the Federal parcels are turned over to city zoning, which would split the land into two distinct zones; A-general and Industrial (Navajo County Public Works 2011). The concern is that the increase in demand for land and water use in the Show Low area could further accent the issues facing the watershed by introducing more residential and industrial uses to areas once protected by the USFS.

Under the Proposed Action Alternative, the four Federal parcels and associated water rights (a total of 0.09 acre feet in annual volume) would be conveyed to private ownership. While the City of Show Low would expand their waste water treatment facility on the City of Show Low Parcel, no adverse direct or indirect effects to the water quality of Show Low Creek are anticipated because no effluent from the treatment facility would be released into the creek. The rest of the City of Show Low Parcel would remain undeveloped.

On the Show Low South Parcel, the land would be developed as low-density residential and mixed-use residential. While the parcel is located within the Show Low Creek watershed, there are no intermediate or perennial waters located on the parcel, and the only water rights proposed for conveyance are 0.09 acre feet from a stockpond. With no water rights or claims conveyed on the Sierra Blanca Ranch Adjustment Parcel or Soda Springs Ranch Adjustment Parcel, no direct or indirect effects to water quality, rights, or claims would occur.

Non-Federal Parcels: Under the Proposed Action Alternative, the nine Non-Federal parcels and associated and/or agreed upon water rights (a total of 1,040.26 acre feet in annual volume) would be conveyed to federal ownership. Since 80% of these water rights are currently allocated to irrigation and livestock use, the land exchange would likely result in a decrease of water usage. Under the protection of the NFS, the parcels would not be developed and no adverse effects to water quality would occur.

Cumulative Effects

There are no known actions that, in conjunction with the Proposed Action Alternative, would result in measurable cumulative impacts to water quality, rights, or claims. Any future land exchanges, including the planned Camp Tatiyee Land Exchange (*see Appendix B*), would involve a similar trade of lands and any associated water rights and claims. However, as with the Proposed Action Alternative (which has a net water rights gain of 1,030 acre feet in annual volume), land exchanges often involve a net gain of water rights and claims. The National Wild Turkey Federation riparian restoration projects would benefit water quality for streams in the project area. In general, projects on national forests are designed to minimize effects to water quality. No cumulative impacts are anticipated.

Alternative 2 – No Action

Direct and Indirect Effects

Federal Parcels: Under the No Action Alternative, the exchange would not occur, and the Federal parcels would continue to be managed by the Forest Service. No direct or indirect effects to water quality, rights, or claims would occur.

Non-Federal Parcels: Under the No Action Alternative, the Non-Federal parcels would not be transferred to Federal ownership and would likely be developed. While development could affect water quality, plans would likely include mitigation measures to avoid major impacts to water quality. No adverse direct or indirect impacts to water quality, rights, or claims would likely occur.

Cumulative Effects

There are no known actions that, in conjunction with the No Action Alternative, would result in cumulative impacts to water quality, rights, or claims.

Heritage Resources

Affected Environment

Federal Parcels: Cultural resources investigations were conducted on each of the four Federal parcels between April and September of 2009 (EnviroSystems 2011b and 2011c) in accordance with the National Historic Preservation Act of 1966, as amended. Results of these investigations, which were conducted at a Class III level of intensity, are summarized below.

On April 27-28, 2009, investigation of the City of Show Low Parcel, which had not been previously surveyed for heritage resources, resulted in the identification of one previously unrecorded archaeological site (a historic trash scatter) and nine isolated occurrences of cultural material.

The Show Low South Parcel was completely surveyed for cultural resources during two previous projects, and 17 sites had been recorded within (n=6) or near (n=11) the parcel. Field investigations were conducted on April 28-29 and September 10, 2009, to verify the locations of the 17 sites and to assess their current condition. A total of six archaeological sites were located within the Show Low South Parcel:

- three separate artifact scatters;
- agricultural features with associated artifacts;
- a habitation structure, rock alignment, petroglyph panel, and associated artifact scatter; and

- a flaked stone scatter.

The Sierra Blanca Ranch Adjustment Parcel had not been previously surveyed for heritage resources. During the investigation on April 27, 2009, one archaeological site (a historic habitation composed of two cabins, a water tank, and several rock and concrete pads) was identified.

No heritage resources were identified within the Soda Springs Ranch Adjustment Parcel during a field investigation on April 21, 2009.

Non-Federal Parcels: A Class I cultural resources investigation was conducted for the nine Non-Federal parcels (EnviroSystems 2011d). The investigation included record searches for any previous archaeological surveys and previously recorded archaeological sites within or adjacent to the nine parcels, as well as an assessment of potential historic properties through examination of historic Government Land Office (GLO) plat maps. No field surveys were conducted.

No known or potential heritage sites were identified within the Alder Peak, Leonard Canyon, or Sprucedale parcels.

Within the three Cherry Parcels, historic heritage resources may be present and associated with eight named mineral claims that make up these parcels. No previous archaeological surveys have been conducted, however.

For the Juan Miller Parcel, no previous archaeological surveys have occurred, though GLO maps indicate that a portion of the historic Laney Ranch potentially lies within the parcel.

The three Railroad Parcels are located along an old railroad grade, and GLO maps indicate that a road (called the Danish Settlement to Snowflake Road) closely followed the route of the old railroad grade in places. No previous archaeological surveys are known to have been conducted along the relevant sections of the grade.

Though no archaeological surveys have been previously conducted within the Sierra Blanca Ranch Parcel, GLO maps indicate that a cabin may have been located on the parcel.

During an archaeological survey of a portion of the Soda Springs Ranch Parcel in 1988, no heritage resources were identified.

The entire Sponseller Ranch Parcel was surveyed for archaeological resources in 2002. The inventory resulted in the identification of seven archaeological sites within or partially within the parcel. Three of the sites are prehistoric artifact scatters, one is a prehistoric habitation, and the remaining three are historic sites.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Federal Parcels: The cultural resources investigations were approved by CNF on April 25, 2011 for the Soda Springs Ranch Adjustment Parcel inventory report (EnviroSystems 2011b)

and by the ASNFs with State Historic Preservation Office (SHPO) concurrence in October 4, 2010 for the three exchange parcels on the ASNFs (EnviroSystems 2011c). In addition, a Historic Properties Treatment Plan and Memorandum of Agreement (MOA) between the ASNFs and SHPO, in consultation with interested American Indian tribes and SLL, is in preparation as of the writing of this DEIS. The Proposed Action meets the requirements of Section 106 of the National Historic Preservation Act and Executive Order 11593. The following eight Native American tribes and one chapter were notified of the project: Hopi Tribe, Navajo Nation, Ramah Chapter of the Navajo Nation, Pueblo of Zuni, San Carlos Apache Tribe, Tonto Apache Tribe, White Mountain Apache Tribe, Yavapai-Apache Tribe, and Yavapai-Prescott Tribe.

For the City of Show Low Parcel, the archaeological site (trash scatter) and IOs are not considered under the National Register of Historic Places (NRHP) as their data potential has been exhausted by the survey-level recording. No further archaeological work on the City of Show Low Parcel is required, and no direct or indirect adverse effects to heritage resources would occur as a result of the proposed exchange.

Two of the six sites within the Show Low South Parcel were determined eligible to the NRHP. The remaining four sites in the parcel have been determined ineligible for the NRHP. One of the National Register-eligible sites consists of a habitation structure, rock alignment, petroglyph panel, and associated artifact scatter. The other eligible site is defined as an artifact scatter with ceramics, flaked stone, and ground stone artifacts. To mitigate direct and indirect adverse effects to these two sites, measures were outlined in a Historic Properties Treatment Plan and agreed upon in the Memorandum of Agreement. Mitigation measures include mapping the sites, conducting surface artifact collections, and completing area and feature excavations.

The archaeological site (a historic habitation) identified within the Sierra Blanca Ranch Adjustment Parcel has been determined eligible for the NRHP. Adherence to measures developed in the Historic Properties Treatment Plan and agreed upon in the MOA. Primary mitigation measures include archival and oral data recovery, which would mitigate direct and indirect adverse effects to this site.

Since no heritage resources were identified on the Soda Springs Ranch Adjustment Parcel, no direct or indirect effects to heritage resources would occur, and no further archaeological work was required within the Soda Springs Ranch Adjustment Parcel.

Non-Federal Parcels: Transfer of the Non-Federal lands to federal ownership would have a beneficial effect on any heritage resources present. Any heritage resource sites found on the Non-Federal lands would come under federal management and would receive the full protection of federal laws. No negative direct or indirect effects to heritage resources are anticipated as a result of these parcels being exchanged.

Cumulative Effects

Though natural events such as wildfires have the potential to affect heritage resources, Forest Service projects are designed to avoid and mitigate adverse effects to heritage resources in accordance with the National Historic Preservation Act. As a result, the future projects listed in Appendix B as cumulative events likely include proper mitigation and avoidance practices. No adverse cumulative effects to heritage resources are anticipated.

Alternative 2 – No Action

Direct and Indirect Effects

Federal Parcels: Under the No Action Alternative, the four Federal parcels would not be conveyed to private ownership and would remain within the NFS. As such, the Federal lands would continue to be managed as directed under Forest Plans for the respective forests (ASNFs Forest Plan; CNF Forest Plan). However, site 01-413 on the Sierra Blanca Ranch Adjustment Parcel would continue to be used and affected even though the site is mostly on federal land. This site is managed under a conservation easement held by The Nature Conservancy, and is rarely used.

Non-Federal Parcels: Heritage resources that are located on the Non-Federal lands would not receive further protection, with the exception of human burials which are protected under Arizona Burial Statute ARS §41-865. If present, direct or indirect adverse effects to heritage resources could occur as a result of development activities.

Cumulative Effects

There are no known past, present, or reasonably foreseeable future events that would cumulatively affect heritage resources.

Mineral Resources

Affected Environment

A Mineral Report (dated 5/23/2008) was prepared for the four Federal and nine Non-Federal parcels. Conclusions of this report, which was prepared by a Certified Mineral Examiner for Region 3 of the USFS, are presented below.

Federal Parcels: There is little to no potential for mineral commodities on the four Federal parcels. None of the parcels are considered prospectively valuable.

Non-Federal Parcels: Seven of the nine Non-Federal parcels (Alder Peak, Juan Miller, Leonard Canyon, Sierra Blanca Ranch, Soda Springs Ranch, Sponseller Ranch, and Sprucedale) have little to no potential for mineral commodities. None of the parcels are considered prospectively valuable.

The Alder Peak Parcel has low to moderate potential for geothermal resources. The parcel is not prospectively valuable for other mineral commodities and has little to no potential for these resources.

The Cherry Parcel has little to no potential and is not prospectively valuable for leasable minerals. The parcel has a moderate potential for locatable minerals, and low potential for salable minerals.

The report was forwarded to the Bureau of Land Management and concurrence was received from Albuquerque, NM on February 23, 2011.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Should the land exchange be executed, neither the United States nor the private landowner would reserve any mineral, right, royalty, or other mineral interest.

Federal Parcels: The exchange would occur, and most of the Federal parcels would be developed (no further development is proposed on the Sierra Blanca Ranch Adjustment Parcel). There would be no direct or indirect effects of development activities on mineral resources. Respective mineral resources would be conveyed along with the surface.

Non-Federal Parcels: The Non-Federal parcels would be integrated into the NFS and be managed as directed under respective Forest Plans. There are no plans to further explore the moderate potential for geothermal resources on the Alder Peak Parcel or the moderate potential for locatable minerals on the Cherry Parcels. No effects regarding mineral resources would occur. Respective mineral resources would be conveyed along with the surface.

Cumulative Effects
With no direct or indirect effects to mineral resources, no cumulative effects would occur.

Alternative 2 – No Action

Direct and Indirect Effects
Federal Parcels: No change would occur to current use and management of the Federal parcels. No effects regarding mineral resources would occur. Mineral estates would remain the same.

Non-Federal Parcels: The exchange would not take place and development would likely occur on the existing Non-Federal parcels. There would be no direct or indirect effects of development activities on mineral resources. Mineral estates would remain the same.

Cumulative Effects
With no direct or indirect effects to mineral resources, no cumulative effects would occur.

Roads

Affected Environment

Federal Parcels: The City of Show Low Parcel can be accessed via NFSR 11-9701K5, which connects to State Highway 77 just north of the City of Show Low.

The Show Low South Parcel is located just south of the City of Show Low and can be accessed by several roads stemming off State Highway 260 to the east, State Highway 77 (a.k.a. Interstate 60 and West Deuce of Clubs) to the north and west, and Mogollon Rim Road to the south. Several forest roads are located within the Show Low South Parcel, including NFSRs 11-9039, 11-9703T, 11-9703X, 11-9704B, 11-9704Y, 11-9600U, and 11-9727F.

The Sierra Blanca Ranch Adjustment Parcel, located southwest of the community of Nutrioso, Arizona, is accessed by NFSR 01-249A. NFSR 249A connects with NFSR 249 outside of the parcel, which continues east to its intersection with Interstate 180.

The Soda Springs Ranch Adjustment Parcel, located northeast of Camp Verde, Arizona, is accessed by NFSR 121 (a.k.a. Soda Springs Road). NFSR 121 connects with NFSR 618 (a.k.a. East Beaver Creek Road), which continues west and intersects with Interstate 17.

Non-Federal Parcels: Any roads or road segments located on Non-Federal parcels conveyed to federal ownership would be evaluated to determine their inclusion in the Forest Service transportation system.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Federal Parcels: Under the Proposed Action Alternative, the Federal parcels would be conveyed to private ownership and undergo various degrees of development. No non-NFS roads would be affected by the land exchange.

Within the City of Show Low Parcel and Show Low South Parcel, the segments of any NFS roads would be removed from the Forest Service transportation system upon issuance of patent. Additional private roads would likely be needed as a result of development within the Show Low South Parcel (low-density residential and mixed-use) and Soda Springs Ranch Adjustment Parcel (rural residential area). Additionally, private road construction may be needed within the City of Show Low Parcel, where Show Low intends to expand their waste water treatment facility.

On the Show Low South Parcel, new residents moving to the proposed residential development (zoned as low-density and mixed-use residential) would cause an increase in the immediate area's traffic. Residents living within the Show Low South Parcel would access their residences through a minimum of two proposed entrances. Some traffic may access the Show Low South property through the Sierra Pines subdivision, though having at least two other entrances to the property would help minimize increase to neighborhood access traffic.

On the Soda Springs Ranch Adjustment Parcel, a segment of NFSR 121 would be conveyed with the parcel with no reservation.

Though no development would occur within the Sierra Blanca Ranch Adjustment Parcel, the proponent would be granted a FLPMA private road easement (50-feet wide ROW) for NFSR 01-249A, extending from its junction with NFSR 01-249 to the boundary of the Sierra Blanca Ranch Adjustment Parcel. Concurrently with the establishment of that easement, a previously recorded road easement that was established for the property across undisturbed NFS lands would be terminated.

Non-Federal Parcels: Under the Proposed Action Alternative, the Non-Federal parcels would be transferred to federal ownership. Therefore, the lands would be managed under objectives set forth in the respective Forest Plans, and roads would be analyzed for potential inclusion in the NFS transportation system.

Cumulative Effects

Several reasonably foreseeable future actions could cumulatively impact the NFS road system. The Camp Tatiyee Land Exchange, which proposes to exchange federal land on the ASNFs for

private land on the ASNFs, Coronado, Prescott, and Tonto National Forests, would potentially involve a similar trade of roads between the NFS and private proponent. A goal of the Pueblo Park Mineral Materials Pit Project is to develop a new mineral pit to provide materials for road improvements in Greenlee County. Also, the Second Knoll Shooting Range proposal involves construction of an access road to reach the planned 80-acre shooting range. Considering the thousands of miles of Forest Roads already existing within the NFS in Arizona, no measurable cumulative effects to roads are anticipated.

Alternative 2 – No Action

Direct and Indirect Effects

Federal Parcels: Under the No Action Alternative, no change would occur to the current use and management of the Federal parcels.

Non-Federal Parcels: Under the No Action Alternative, the Non-Federal parcels would undergo various degrees of development. As a result, a number of private roads would likely need to be constructed in order to provide access to prospective homeowners. Also, the Non-Federal parcels are in-holdings, privately owned parcels partially or completely surrounded by NFS lands. Residential development on these in-holdings would increase the local population, resulting in an increased use of the nearby Forest Service roads.

Cumulative Effects

The reasonably foreseeable future events that could cumulatively affect roads include the potential trade and development of roads as part of the Camp Tatiyee Land Exchange; road improvement in Greenlee County as a result of the Pueblo Park Mineral Materials Pit Project; and access road construction during the Second Knoll Shooting Range Project. No adverse cumulative effects to roads are anticipated.

Fire and Fuels

Affected Environment

Federal Parcels: Existing levels of live and dead fuels on the Federal parcels are generally consistent with surrounding forest lands. There is no evidence of recent wildfires on many of the Federal parcels. The exception is the Sierra Blanca Ranch Adjustment Parcel that was recently burned in the Wallow Fire. In May and June of 2011, the Wallow Fire burned more than 550,000 acres in Arizona and New Mexico (f*or more information, see the Wallow Fire section in Chapter 1*). Preliminary analysis of fire effects from this human caused fire indicate a mixed severity over the area burned. Salvage logging and removal of hazard trees (standing dead trees that may pose a threat to motorists on surrounding roads and highways) are being removed to ensure the safety of the public that utilize these areas. The Wallow Fire blackened the boles of trees at the Sierra Blanca Ranch Adjustment Parcel, but no buildings associated with this parcel were damaged by the fire. Overall, the fire removed some of the live and dead surface fuels on site, but did not burn the forest canopy on this parcel. Because of the low to moderate intensity of the fire at this parcel, the effects will likely recycle nutrients, making them available for regrowth of native grasses in the understory. The fire also helped expose soil, allowing regeneration of the overstory in future growing seasons.

Non-Federal Parcels: Similarly, fuels on the Non-Federal parcels are generally consistent with surrounding forest lands. As stated, the Wallow Fire burned more than 550,000 acres in

Arizona and New Mexico (*see the Wallow Fire section in Chapter 1*). Salvage logging and removal of hazard trees are being removed to ensure the safety of the public that utilize these areas. Two parcels, Sprucedale and Sierra Blanca Ranch, were in the path of the wildfire and were partially burned as the fire passed through. After the fire was extinguished, both parcels were visited to assess any potential impact the fire may have had on the habitat and property value. It was evident that a recent fire had passed through the parcels, as both had visible scorching on the ground. However, there was no major damage to the property. Because of the low intensity of the fire at these sites, the effects will likely recycle nutrients, making them available for regrowth of the native grasses in the understory in future growing seasons.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Federal Parcels: The land exchange would occur, and the private owners/developers would be responsible for implementation of fire and fuel treatments on the acquired parcels. Firefighting capabilities would be provided to meet requirements of the respective counties. The Forest Service would be responsible for ensuring that proper vegetation management occurs within the urban interface to mitigate or lessen the potential of wildfires from spreading from forest land to the newly acquired private parcels.

Non-Federal Parcels: The management of the Non-Federal parcels would become the responsibility of the USFS, and fire and fuels management would be consistent with the respective Forest Plans.

Cumulative Effects

As discussed above, the Wallow Fire burned within Sierra Blanca Ranch Adjustment Parcel, Sierra Blanca Ranch Parcel, and Sprucedale Parcel, removing accumulated live and dead fuels. While some areas burned by the Wallow Fire resulted in high severity effects such as complete tree mortality, the three parcels affected by the Wallow Fire were mostly grasslands or wet meadow, and, therefore, experienced low to moderate intensity surface fires that burned quickly. Additional wildfires are likely to occur in the reasonable foreseeable future and affect the ASNFs, CNF, and PNF. Future wildfires could be low intensity and ultimately prove beneficial to the overall ecological condition, or they could be of high severity and result in catastrophic, long-term effects.

Future fuels reduction and management projects (e.g., Timber Mesa – Vernon Wildland Urban Interface Project) would continue to ensure that the risk of fire damage to residential properties, including those resulting from development within the Federal parcels proposed for exchange, is minimized or eliminated.

Alternative 2 – No Action

Direct and Indirect Effects

Federal Parcels: Fire and fuels on and in the vicinity of the Federal parcels would not be affected by the No Action Alternative. The Federal parcels would continue to be managed in accordance with the respective Forest Plans. No direct or indirect effects would occur as a result.

Non-Federal Parcels: Under the No Action Alternative, the private owners of the Non-Federal parcels would be responsible for implementation of any fire and fuel treatments during and following development. Firefighting capabilities would be provided to meet requirements of the respective counties. Fire and fuels management in the surrounding forest lands would be the responsibility of the Forest Service. No direct or indirect effects with regards to fire and fuels would occur.

Cumulative Effects

There are no direct or indirect effects to fire and fuels; therefore, no cumulative effects would occur.

Hazardous Materials

Affected Environment

The Federal and Non-Federal lands proposed for exchange have been examined in accordance with Section 120 (h) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Phase I Environmental Site Assessments were completed for the Federal and Non-Federal parcels. These evaluations were conducted via records searches, interviews, and site visits consistent with good commercial or customary practice as set forth in the American Society for Testing Materials (ASTM) Designation E 1527-05. The objective of the Environmental Site Assessments was to evaluate each parcel for Recognized Environmental Conditions (RECs) that indicate an existing release, a past release, or a material threat of a release of any hazardous substance or petroleum product into structures on the properties or into the ground, ground water, or surface water of the properties. No RECs were found to be associated with any of the parcels. Additional database searches will be conducted prior to the release of the Final EIS and any relevant data will be included. No testing of soil, air, water, or any other matter was conducted during the Environmental Site Assessments.

Environmental Consequences

Alternative 1 – Proposed Action

Direct and Indirect Effects

Federal Parcels: Under the Proposed Action Alternative, the Federal parcels would be conveyed to private ownership and likely undergo development. Expansion of waste water treatment facilities at the City of Show Low Parcel should adhere to Navajo County and State of Arizona requirements and provisions for solid waste disposal in an approved landfill in order to minimize the risk of impacts regarding hazardous materials. All other development should abide by federal, State of Arizona, and local rules and regulations to minimize risk associated with hazardous materials. Since there are no RECs on the Federal lands, no direct or indirect effects regarding hazardous materials are anticipated.

Non-Federal Parcels: Since there are no RECs on the Non-Federal lands, no direct or indirect effects regarding hazardous materials are anticipated. Once transferred to federal ownership, these parcels would be managed for public purposes under objectives of the respective Forest Plans.

Cumulative Effects

Since the Proposed Action Alternative would not have direct or indirect effects with regards to hazardous materials, no cumulative effects would occur.

Alternative 2 – No Action

Direct and Indirect Effects

Federal Parcels: Under the No Action Alternative, no change would occur to the current use and management of the Federal parcels. Since no RECs occur on the Federal lands, no direct or indirect effects to hazardous materials would occur.

Non-Federal Parcels: Under the No Action Alternative, the Non-Federal lands would not be transferred to federal ownership. Development would likely occur on each of the nine Non-Federal parcels, mainly in the form of residential development. Adherence to local, county, and State of Arizona requirements and provisions for development activities would minimize any risk of substantial impacts regarding hazardous materials.

Cumulative Effects

With no direct or indirect effects to hazardous materials as a result of the No Action Alternative, no cumulative effects would occur.

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CHAPTER 6: REFERENCES

ADOC (Arizona Department of Commerce). 2009a. Show Low Community Profile. Website http://www.azcommerce.com/doclib/commune/show%20low.pdf. Accessed March 16, 2011.

ADOC. 2009b. Camp Verde Community Profile. Website http://www.azcommerce.com/doclib/commune/camp%20verde.pdf. Accessed March 16, 2011.

ADOC. 2009c. Alpine Community Profile. Website http://www.azcommerce.com/doclib/commune/alpine.pdf. Accessed April 1, 2011.

AGFD (Arizona Game and Fish Department). 2010. Online Environmental Review Tool. Website http://www.azgfd.gov/hgis/. Accessed November 12, 2010.

Arizona Game and Fish Department. 2012. Assessment of Management Indicator Species, Apache-Sitgreaves National Forest from 2005 to 2011 (dated June 2012). Arizona Game and Fish Department, Phoenix, AZ. 118 pp.

EnviroSystems (EnviroSystems Management, Inc.). 2011a. Show Low Land Exchange Biological Resources Specialist Report.

EnviroSystems. 2011b. Show Low Land Exchange Class III Cultural Report for the Soda Springs Ranch Parcel within the Show Low Land Exchange.

EnviroSystems. 2011c. Show Low Land Exchange Class III Cultural Report for the Apache-Sitgreaves National Forests: Federal Lands within the Show Low Land Exchange.

EnviroSystems. 2011d. Show Low Land Exchange Class I Cultural Report for Non-Federal Lands included in the Show Low Land Exchange.

Joy, S.M.; Reynolds, R.T.; Leslie, D.G. 1994. Northern goshawk broadcast surveys: hawk response variables and survey cost. Studies in Avian Biology. 16: 24-30.

Latta, M.J., C.J. Beardmore, and T.E. Corman. 1999. Arizona Partners in Flight Bird Conservation Plan. Version 1.0. Nongame and Endangered Wildlife Technical Report 142. Arizona Game and Fish Department, Phoenix, Arizona. 331 pp.

NAS (National Audubon Society). 2012. Important Bird Areas Program. Website http://web4.audubon.org/bird/iba/. Accessed April 1, 2012.

NRCS. 2010. Web Soil Survey. Website http://websoilsurvey.nrcs.usda.gov/ Accessed May 9, 2011.

U.S. Census Bureau. 2009. 2005-2009 American Community Survey 5-Year Estimates. Website http://factfinder.census.gov/home/saff/main.html?_lang=en. Accessed March 9, 2011.

USDA (U.S. Department of Agriculture). 1986. Prescott National Forest Plan. USDA Forest Service, Southwestern Region, Prescott National Forest.

USDA. 1987a. Apache-Sitgreaves National Forests Plan. USDA Forest Service, Southwestern Region, Apache-Sitgreaves National Forests.

USDA. 1987b. Coconino National Forest Plan. USDA Forest Service, Southwestern Region, Coconino National Forest.

USDA. 2003. Land Ownership Manual. Forest Service Manual 5403.3, Private Property Rights. Forest Service Manual National Headquarters, Washington, D.C.

USDA. 2011. Wallow Fire Rapid Assessment Team Recovery Plan. USDA Forest Service, Southwestern Region, Apache-Sitgreaves National Forest.

USDOI (U.S. Department of Interior). 2004. Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the Mexican Spotted Owl; Final Rule. Federal Register 69(168) August 31, 2004: 53182-53230.

USDOI. 2008. Birds of Conservation Concern. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management. Arlington, Virginia. 85 pp. Website http://www.fws.gov/migratorybirds/. Accessed April 1, 2012.

USFWS (U.S. Fish & Wildlife Service). 2008. Five Year Review Summary and Evaluation-Little Colorado spinedace (*Lepidomeda vittata).* U.S. Fish and Wildlife Service, Arizona Ecological Services Office, Phoenix, AZ. 29pp.