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Lands
Specialist Report

Forest Plan Revision
FEIS

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Specialist Report

Introduction

This report evaluates and discloses the potential environmental consequences on the lands resource that may result with the adoption of a revised land management plan. It examines, in detail, four different alternatives for revising the 1987 Apache-Sitgreaves National Forests (Apache-Sitgreaves NFs) land management plan (1987 forest plan).

Relevant Laws, Regulations, and Policy that Apply

Act of 1866 General Mining Law authorizes rights-of-way across public lands for ditches and roads.

Alaska National Interest Lands Conservation Act, 1980 provides direction for providing access to non-federally owned land within the boundaries of the Forest.

An Act to Repeal Timber-Culture Laws, 1891 authorizes ditch easements across public lands and Forest Reserves.

Archaeological Resources Protection Act of 1979 provides the authority for archeological investigations and research permits.

Bankhead-Jones Farm Tenant Act of 1937, Section 31-33 authorizes most rights-of-way, except those on National Grasslands.

Colorado Ditch Act of 1986 (FLPMA amendment) resolves title claims for certain water uses and provides authority for easements for water conveyances.

Energy Policy Act of 2005 directed the Secretaries of Agriculture, Commerce, Defense, Energy, and the Interior to designate energy transport corridors for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities on Federal lands in portions of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming.

Federal Land Policy and Management Act of 1976 updated authority for management of National Forest lands, provided general authority for use and occupancy of Forest lands, required fair market value for uses on the Forest, and repealed sections of many previous acts.

General Exchange Act of 1922 authorizes land adjustments within Forest boundaries.

Granger-Thye Act of 1950, section 7 authorizes use of government-owned improvements.

Mineral Leasing Act of 1920, as amended on November 16, 1973, (30 U.S.C. 185(1)) authorizes the issuance of permits and easements for oil and gas pipelines. It requires annual payments in advance which represent fair market rental value and provides for reimbursement to the Government for administrative and other costs incurred in monitoring, construction (including costs for preparing required environmental analysis and documentation), operation, maintenance, and termination of oil and gas pipelines.

National Forest Roads & Trails Act 1964 authorizes construction and/or use of roads and trails by public road agencies and also landowners who join the Forest Service in operating mutually beneficial road systems.

Oil and Gas Pipeline amendment to the Mineral Leasing Act, Section 28 authorizes oil and gas pipelines.

Organic Act of 1897 provides for rules to regulate occupancy and use of the Forest Reserves.

Occupancy Permits Act (March 4, 1915) authorizes use and occupancy of National Forest land for recreation purposes including resorts and recreation residences.

Preservation of American Antiquities Act of June 8, 1906 provides authority for cultural resource survey permits, including site disturbance, excavation and collection.

Telecommunications Act of 1996 (Public Law 104-104) provides rules for competition and reduced regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications. The goal of this new law is to let anyone enter any communications business -- to let any communications business compete in any market against any other.

Term Permit Act of March 4, 1915, amended July 28, 1956 authorizes recreation residences, hotels, resorts and other industrial and commercial public service facilities.

Water Conveyance Act of 1986 amended FLMPA to authorize permanent easements for agricultural water systems.

Forest Service Manual (FSM) 2300 Recreation, Wilderness and Related Resource Management

Forest Service Handbook (FSH) 2330, Publicly Managed Recreation Opportunities.

FSM 2700 Special Uses Management

Methodology and Analysis Process

This section describes the methodology and analysis processes used to determine the environmental consequences on lands and special uses from implementing the alternatives. Environmental consequences are not site-specific at the broad forest planning level and are described with qualitative descriptions supported by past trends, records, special use authorizations, and changes in land ownership.

The report compares how each alternative varies in its emphasis of meeting the urban-interface demand for natural resources and addressing community expansion needs and preservation of open space by providing opportunities for land adjustments and special use authorizations for public services and benefit.

The report provides a qualitative comparison describing how alternatives address community expansion and natural resource management needs through land adjustments. It also compares how the alternatives address management of property boundaries and the issue of encroachment. It further describes how the alternatives allow for special use authorizations and quantifies the lands that are suitable for certain uses, including energy corridors/energy development, communications sites, and shooting target ranges.

Methodology and analysis process for this report included query of the Infra special uses database (SUDS), use of GIS for inventory and identification of landownership patterns, Forest Service records and case files, and census data to review population trends.

The Apache-Sitgreaves NFs GIS database has been used to query the status of land ownership and changes. The GIS database is a result of case records, the Land Status Atlas, Master Title Plat (BLM), U.S. Survey (BLM), and the Automated Lands Project (ALP). Property boundary locations and encroachments are documented in case files, Apache-Sitgreaves NFs database, and the Lands Status Atlas.

The Infra – Special Uses Database (SUDS) was used to determine the type, number, and status of special use authorizations. Some use codes were combined into general categories as listed in the Forest Service Handbook 27091.11, Chapter 50 – Terms and conditions use chart.

Assumptions

In the analysis for this resource, the following assumptions have been made:

- The agency has the capacity to screen, process, and manage special uses.
- The population of Arizona will continue to grow and be dependent on electricity.
- The economy will fluctuate over time and influence energy corridor development.
- Community and public needs for services, including energy corridors, will continue.
- Consumers will continue to demand reliable electricity.
- Land Exchanges

Revision Topics Addressed in this Analysis

Urban Interface Demands - Community-Forest Interactions – Revision Topic #3

Many communities are completely surrounded by the Apache-Sitgreaves NFs and are limited in the ability to expand. There has been a major increase in development on land adjoining and/or surrounded by the forests. Demands related to this growth include access to the forests, utility corridors, roads, special use permits, and recreational opportunities. More and more people are living close to the forests. Managers are challenged to provide goods, services, and access that populations demand, while meeting a variety of user expectations and desires. Since many communities are completely surrounded by the forests and limited in the ability to expand, managers may receive pressure to exchange land to provide for community growth.

- Provide for addressing urban interface demands including access and special use permits (qualitative discussion).
- Address community expansion needs and preservation of open space during land ownership adjustments.
- Address the criteria for establishing new energy corridors.
- The indicator for energy resources is the amount (acres) of land suitable for new energy corridors and developments as measured by acres for each alternative

Description of Affected Environment (Existing Condition)

In 1908, Theodore Roosevelt established the Sitgreaves National Forest from parts of the Black Mesa North Reserve and the Tonto National Forest. The Sitgreaves NF was headquartered in Show Low, Arizona. The Apache National Forest was established the same year from portions of the Black Mesa South Reserve and other neighboring Forest reserves. In 1974, the Apache National Forest was combined with the Sitgreaves National Forest and became the Apache-Sitgreaves NFs.

Today, the Apache-Sitgreaves NFs are literally the backyard for many residents of the White Mountains region of Arizona. Many communities adjoin the Apache-Sitgreaves NFs, while others are completely surrounded by the forests. Because of this close proximity, many communities and private landowners are directly affected by forest management decisions. These entities, in turn, affect forest management.

Many communities are completely surrounded by the Apache-Sitgreaves NFs and, therefore, are limited in the ability to expand. Forest managers face many challenges associated with growing communities with and adjacent to the forests. As these communities and areas grow, the forests will be approached with contnuied requests to use federal lands for many uses or land exchanges.

Land Ownership

The acquisition and disposal of National Forest-managed lands are designed to consolidate interest and management of the federal estate to enhance public benefit, and to consolidate the management and ownership of Federal, State and private lands within the proclaimed forest boundary. The establishment of right-of-ways throughout the Forest is needed to create easy accessibility to both public and private lands within the proclaimed boundary of the National Forest.

There are currently 2,111,167 acres (table 1) within the proclaimed boundary of the Apache-Sitgreaves NFs or 2,018,148 of NFS land (U.S. Forest Service 2010).[1] NFS land acreage in the Apache-Sitgreaves NFs has increased by 17,757 acres through land exchanges, purchases, and donation since 1987 (table 2). Land exchanges have been the principal means of ownership adjustment for the Apache-Sitgreaves NFs, with approximately 17,540 acres acquired and 4,462 acres conveyed to non-NFS ownership since 1987. Many of these land exchanges have involved the transfer of NFS lands outside the Apache-Sitgreaves NFs to other ownership, while the Apache-Sitgreaves NFs acquired non-NFS lands.

Purchase and donation have played very minor roles in the Apache-Sitgreaves NFs' land acquisition program with 215 acres acquired through purchase and the donation for the Alpine Ranger Station (1.59 acres). The primary objective of any acquisition continues to be protection of the environment and improved management of natural resources. Lands acquired are included in the NFS and generally enhance ecological health and public recreational opportunities on the Apache-Sitgreaves NFs.

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[1] The source is the National Forest System Land Area Report, 2010 table 4. These acres differ from acres availble in the forests' GIS database due to differences in mapping techniques.

Conveyance of land from the Forest Service to local governments occasionally occurs in the vicinity of urban areas for school or Townsite Act purposes. Since 1987, 81 acres have been conveyed to local governments.

Table 1. Land ownership on the Apache-Sitgreaves NFs

Land Ownership	Acres
National Forest System (NFS)	2,018,148
Other (non-NFS)	93,019
Total	2,111,167

Table 2. Land ownership adjustments on the Apache-Sitgreaves NFs since 1987

Type of Adjustment	Acres
Land exchanges (acquired)	17,540
Land exchanges (conveyed to private)	4,462
Land exchanges (conveyed to local government)	81
Purchase/donation Land exchanges (conveyed from private)	215

Over the last several years owners of private land surrounded by or adjacent to NFS lands have subdivided and sold property as recreation land or home sites by individuals. There are areas within the Apache-Sitgreaves NFs that may be better suited for private uses because administration is costly to the Forest Service due to the complexity of the adjoining and surrounding landownership pattern or the permitted use on them. Conversely, some non-federal (state, county, private, and other) lands within the Apache-Sitgreaves NFs are of a national forest character and acquisition would reduce ecosystem fragmentation, improve landscape-level management, and eliminate the need to encumber surrounding NFS lands with special-use authorizations for roads and utilities.

Since appropriations for lands and interests in land purchases have always been limited and competitive, the donation of non-federal lands is infrequent, and the authority to sell NFS lands is rare and limited, land exchange continues to be the primary method used for land adjustments on the Apache-Sitgreaves NFs.

The time required to complete land exchanges has increased in response to legal and administrative requirements, thereby increasing costs. With reduced funding, fewer land exchanges can be pursued. Proponents of discretionary land exchanges are required to pay for most, if not all, costs associated with a proposal.

Some residents in local communities have voiced opposition to future conveyance of adjacent federal lands.

Property Boundary Location and Encroachments

Most land surveys on the Apache-Sitgreaves NFs were originally done in the late 1800s and early 1900s. Some of these original surveys were proven to be of poor quality. Approximately 365

miles of Apache-Sitgreaves NFs' boundaries have been located since 1987. The primary purpose is to ensure that Forest Service activities do not intrude upon non-federal lands and that trespass upon the national forests can be prevented and controlled.

Land subdivision and development is increasing the need for accurate and reliable surveys. Numerous conflicts between past surveys have occurred, leading to an unknown number of unauthorized occupancies and use violations on national forest lands. Identification of property boundaries is an increasing expense to resource programs, especially fuels treatments. Increasingly, additional expenditures would be necessary in order to fully utilize national forest resources and to prevent claims against the federal government. Although land acquisition eliminates the need for land line location in some areas, many miles of property boundary still need to be surveyed and posted.

Property boundary location involves all activities necessary to identify the boundaries of NFS lands, including the search for survey corners, surveying and marking of land lines, and maintenance of the same. Marking and posting boundaries identifies or locates NFS lands for public use and enjoyment and prevents and controls trespass upon the forests.

More frequent inspections and maintenance of property boundaries in areas where residential developments share common boundaries with the Apache-Sitgreaves NFs continue to be a major component of forest management. Inspection and maintenance of forest boundaries in areas that abut private lands have not kept up with the increases in private land development.

Addressing encroachments contributes to protecting the natural resources. Considerable effort may be required to resolve these trespasses upon NFS lands. Though most involve simple actions to remove temporary occupancies or activities, some permanent improvements require other solutions. When discovered, a qualifying innocent trespass is resolved using the Small Tracts Act. Since 1987, twelve (12) Small Tracts Act cases, involving 36 acres, have been resolved on the Apache-Sitgreaves NFs. Non-qualifying encroachments and unauthorized trespass are resolved through appropriate means, such as issuance of a required authorization or removal from the Apache-Sitgreaves NFs.

Special Uses

Special use permits authorize services that support the Forest Service mission and meet the needs of the public. Permits are a partnership between the Forest Service and private businesses and individuals to provide services and facilities.

Occupancy is defined as taking possession of property and use of the same (R3 lands and minerals website). Occupancy and use of NFS lands for public and private purposes through the issuance of special use authorizations and easements, continues to be allowed, where the use is consistent with natural resource management goals. Special use authorizations (special use permits) are used to authorize occupancy and use of NFS lands by federal, State, and local agencies; private industry; and individuals. Several different public laws regulate activities under special use authorizations. The Organic Act of 1897 and the Federal Land and Policy Management Act (FLPMA) of 1976 authorize the majority of the uses. The Occupancy Permits Act of March 4, 1915 authorizes use and occupancy of NFS land.

The expansion of many communities is limited because they are surrounded by the forests and other public lands such as state and Bureau of Land Management. State agencies, counties, local cities and towns, public utilities, and other service providers regularly request use and occupancy

of National Forest System (NFS) lands to meet needs on non-NFS land. Typically, proponents are asked to exhaust use of lands other than national forest before occupancy of NFS lands is considered. Authorized occupancy often encumbers NFS lands, which in turn affects management decisions and actions.

In 2011 there are over 450 existing rights-of-way and special use permits for a variety of uses on the Apache-Sitgreaves NFs (U.S. Forest Service 2011c), see table 3. A majority of the permits issued by the forests are Lands special uses. Included are water storage and transmission, water diversions, sanitary systems, electric transmission and distribution lines, telephone lines/wireless communication towers, cable television lines, communication sites, alternative and renewable energy generating facilities, roads and trails, warehouse/storage yards, stockpile sites, research permits, recreation residences, marinas and wildlife management improvements.

As the communities in and around the forests continue to expand, State agencies, counties, local cities and towns, public utilities, and others regularly request new authorizations or amendments to existing authorizations. Increased requests have been received for private access roads across NFS land as residential development has occurred on adjacent private lands.

Authorized uses are only minimally administered due to limited resources available. Existing recreation residences are located on the Clifton and Springerville Districts.

Table 3. Number of special use permits issued[2] on the Apache-Sitgreaves NFs as of April 2011

Special Use	Type	Number of Permits
Recreation uses	Rec	18
Recreation residence	Lands	25
Outfitter/guide	Rec	47
Agricultural uses	Lands	2
Fence	Lands	1
Non-Commercial Group Use	Rec	8
Cemetery	Lands	2
Sign	Lands	1
Sanitary Systems	Lands	12
School	Lands	1
Research	Lands	33
Construction Camps	Lands	4
Storage	Lands	4
Manufacturing	Lands	2

[2] Source: IWEB SUDS database query on 04/21/2011, Report name SPUR050L. The number of permits listed reflects the *issued* status at the time of the query. Permits with the status of *accepted, signature pending* or in a different status were not included in this table. The number of Outfitter/Guides and Non-Commercial Use permits is seasonal and may not accurately reflect the usual summer/fall permitted activities.

Special Use	Type	Number of Permits
Mineral Exploration	Lands	4
Mineral Development	Lands	11
Natural Gasline	Lands	1
Electric Transmission & Distribution	Lands	9
Federal Aid Highway R-O-W	Lands	8
Forest Roads &Trails Act Easements	Lands	63
Federal Land Policy & Management Act Easements	Lands	20
Federal Land Policy & Management Act permit	Lands	30
Communication Leases – Broadcast/non-broadcast	Lands	54
Communication Leases – Facility managers	Lands	3
Irrigation Water Ditch	Lands	10
Water Transmission	Lands	36
Water Conveyance	Lands	15
Reservoir – dam	Lands	16
Weir	Lands	2
Well, spring or windmill	Lands	11
Wildlife Water Supply	Lands	14
Water Storage Tank	Lands	6
Stream Gauging Station	Lands	1
Total		454

Source: SUDS (Special Use Data System)

Note: Current as of 04/2011

Energy Corridors and Developments

Energy corridors would be the major contribution of the Apache-Sitgreaves NFs to meeting national energy demands. Energy corridors are linear strips of land identified for the present or future location of a utility right-of-way (e.g., above or below-ground electric transmission line, gas pipeline). Other energy developments include the infrastructure associated with the provision or transport of energy (e.g., dam, biomass power generation, wind turbines, and solar panels). As population trends increase and electricity consumers demand more reliable power, the demand for energy corridors would increase. Energy corridors extend beyond the boundaries of the Apache-Sitgreaves NFs and are part of the greater western United States power grid. There are no energy developments on the forests.

Currently, there are three high-voltage energy corridors located on the forests. Two corridors traverse the Sitgreaves portion of the forests, one containing 500 kilovolt (kV) transmission lines

(26.0 miles) and one containing 345kV transmission lines (27.8 miles). These are operated by Arizona Public Service and Salt River Project. One 345 kV transmission line, operated by Tucson Electric Power, crosses 12.2 miles of the Clifton Ranger District. Local distribution and low voltage transmission lines (up to 230kV) are not considered to be energy corridors.

Existing energy corridors are managed according to approved management plans. Energy corridors are generally not managed to provide recreation opportunities. They are managed for very low scenic integrity where vegetation and structural changes may attract attention and dominate the landscape when viewed from nearby.

The Energy Policy Act of 2005 directed the Secretaries of Agriculture, Commerce, Defense, Energy, and the Interior to designate energy transport corridors for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities on Federal lands in portions of Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming. One corridor has been designated for future transmission facilities across the Sitgreaves portion of the forests. It was set in place in January 2009 by the Secretary of Agriculture's Record of Decision (ROD) for the *Designation of Section 368 Energy Corridors on National Forest System Land in 10 Western States.* The 27.8 mile-long corridor across the forests has a width of 3,500 feet and is multimodal[3]. The existence of this corridor does not authorize any projects, nor does it mandate that future rights-of-ways locate in the corridors, or preclude the Forest Service from denying a project or requiring design revisions. The Apache-Sitgreaves NFs would expedite, as possible, processing of applications to construct energy-related infrastructure (pipelines, transmission and distribution facilities) within the designated energy corridor.

Communications Sites

There are thirty-four (34) communications sites on the Apache-Sitgreaves NFs. Twenty-six (26) of the sites are low power and for administrative use, supporting internal Forest Service communications. Eight are commercial sites authorized under a Communication Site Lease. Generally, the leases are long-term commitments of 20 years. Seven of the commercial sites are low power. Porter Mountain Communication Site is a high power site broadcasting FM radio.

Leases are issued to facility owners who may rent space to other users. Associated infrastructure includes roads, power transmission lines, and telephone optic fibers. Lease holders typically need year-round access to service the equipment. A list of communication sites is located in Appendix D of the proposed plan.

Environmental Consequences

The land management plan provides a programmatic framework that guides site-specific actions but does not authorize, fund, or carryout any project or activity. Because the land management plan does not authorize or mandate any site-specific projects or activities (including ground-disturbing actions), there can be no direct effects. However, there may be implications, or longer term environmental consequences, of managing the forests under this programmatic framework.

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[3] pipelines and transmission lines in the same corridor

Consequences Common to All Alternatives

Across all alternatives, the issuance and administration of special use authorizations would continue to the level allowed by staffing, directed by policy, law, regulations, and direction. All alternatives provide guidance for: 1) resolution of unauthorized occupancy and trespass, 2) the acquisition of lands that are needed for landownership consolidation and improved management efficiency, 3) acquisition of road and trail rights-of-way needed to administer the forests and produce resource outputs, and 4) the administration of special uses to best meet public needs.

Land Ownership

All Alternatives: The amount of potential and opportunity for land exchanges is not expected to vary by alternative. Across all alternatives, through the cooperation with other landowners, the forests would emphasize contiguous landownership and access patterns that benefit the private landowner, the public, and the natural resources. The opportunities for rights-of-way acquisition do not change by alternative.

Alternative A provides criteria and lists specific areas for acquisition or exchange which narrows opportunities to work with local communities in addressing their expansion needs and public access to federal land.

All action alternatives identify criteria for new land exchanges that would allow the forests to be flexible and base determinations based the current needs of both the forests and the local communities. Land adjustments (e.g. exchanges, purchases) help to consolidate the NFS land base, reduce administrative problems and costs, enhance public access and use, and support resource management objectives. Management emphasis is to work with local communities to understand their community expansion needs, preserve open space and water, and retain access to NFS lands.

All action alternatives encourage cooperation with counties or local communities to identify lands to be excluded from consideration of future land exchanges. Land ownership adjustments that are pursued would improve management efficiency for both NFS lands and intermingled private and State lands.

Property Boundary Location and Encroachment

Many communities are adjacent or completely surrounded by the Apache-Sitgreaves NFs. As the population grows, communities would continue to expand. Undeveloped parcels within the bounds of communities may be developed and the forests could see an increase in trespass, either intentional or casual. Forest management activities would not trespass on private land. The amount of potential and opportunity for land exchanges under **all alternatives** is not expected to vary.

Alternative A provides program direction for maintaining property boundary locations and managing encroachment and trespass on NFS lands.

The action alternatives provide for maintaining the forests' boundary by annual survey and posting of the property boundary and provide specific targets for trespass case resolution. Annual survey and boundary posting objectives would be based on projected staffing and funding. By carrying out the objectives, this would lessen boundary location errors by both the Forest Service employees and community developers. As well as reduce trespass cases on the Forests.

Objectives for boundary survey and posting and resolving trespass cases:

- During the planning period, resolve an average of three trespass cases per year.
- During the planning period, maintain on average 2 to 5 miles of property boundary, annually.

Source: Resource Evaluations, CER, and Apache-Sitgreaves Proposed Land Management Plan

Special Uses

The demand for the use and occupancy of the Apache-Sitgreaves NFs continues to grow, making permit issuance and administration a challenge as staff review and process new authorizations for many uses every year. The NFS land adjacent to private lands is greatly influenced by adjacent landowner or community uses and objectives. In some areas, human activities have altered the natural appearance of these landscapes with the presence of the signs and sounds of people and motorized transportation. Some private lands adjacent to the forests are undergoing residential development.

There has been a major increase in development on land adjoining and/or surrounded by the Apache-Sitgreaves NFs. Demands related to this growth include access to the forests, utility corridors, roads, and recreational services. More and more people are living close to the forests. Managers are challenged to provide goods, services, and access that populations demand, while meeting a variety of user expectations and desires. The type of requests and proposals for use and occupancy of NFS lands would continue to evolve with technology and imagination. Determining needs based on today's knowledge would only be speculative and may be too narrow to guide future decisions.

All Alternatives allow the authorization of occupancy and use of NFS land based on public need when services or uses cannot be met on private or other federal lands. Forest managers would pursue cost share arrangements or implement cost recovery to increase the efficiency and quality of services associated with authorizations for occupancy and use of NFS lands.

Alternative A provides limited direction to respond to or work with the adjacent land owners demands. At the time the 1987 forest plan was written, the population of eastern Arizona (Census Bureau, Arizona, Population of Counties by Decennial Census: 1900 to 1990) was increasing, but not at the current rate. Cities, towns, and communities were not pushing the limits of private or municipal (county) lands and, therefore, not realizing the limitations of available non- federal land.

All Action Alternatives recognize the influence of communities on NFS lands and the demand for authorized uses of NFS land. The alternatives provide standards and guidelines based on meeting desired conditions. The action alternatives limit access to common entry points available to both residents and the general public.

Energy Corridors and Development

Alternative A identifies existing energy (utility) corridors and provides some criteria for authorizing new energy corridors. As new requests to use federal lands for energy corridors and developments, options are very limited with the existing criteria. The **Action Alternatives** identify the existing energy corridors in the Energy Corridor MA and provide suitability criteria for establishing new energy corridors or other energy developments. Suitability is based,

primarily on management area type, and can be found in chapter 4 (Suitability) of the proposed plan. Differences among the action alternatives are based on the acreage of land that could be available for new energy corridors and energy developments (infrastructure) (table 4).

Table 4. Acres and percent of Apache-Sitgreaves NFs that may be suitable for new energy corridors or other energy developments[4]

Action Alternative	Suitable Acres and (Percent)	Not Suitable Acres and (Percent)
Alternative A	N/A	N/A
Alternative B	889,701 (44%)	1,125,651 (56%)
Alternative C	1,007,492 (50%)	1,007,860 (50%)
Alternative D	784,420 (39%)	1,230,932 (61%)

Alternative C would have the most acres suitable for new energy corridors or other energy developments, while Alternative B would have slightly less. Alternative D would have the least, which reflects the greater acreage in the Recommended Wilderness MA. Resources found on lands suitable for new energy corridors or developments could be affected if proposal are received and authorized. For example, wildlife could be displaced and their habitats altered. Cultural resources could also be affected by construction, maintenance, and operation of energy corridors and developments through disturbance of sites and increased human use of areas. However, energy corridors or developments on the Apache-Sitgreaves NFs could contribute to national energy needs. Conversely, lands not suitable for new energy corridors or developments would limit potential effects to wildlife, cultural resources, and other resources from these activities.

Target Shooting Ranges

The **Action Alternatives** identify what lands may be suitable for authorizing target shooting ranges. The target ranges are suitable in the General Forest or Community Forest Intermix Management Areas. **Alternative C** has the greatest opportunity for target ranges with 79 percent of the land base in General Forest Management Area followed by B (61 percent) then D (53 percent). **Alternative A** does not identify which lands are suitable for target ranges.

Communications Sites

Communications sites provide a variety of services to the general public. Facilities at these sites provide communication for State, county and city municipalities, and forest administration, including radio antenna, microwave backbone and wireless service.

All Alternatives: Communications site administration and authorization would continue under all of the alternatives. Consideration of new sites is limited to existing locations in **Alternative A**,

[4] Suitablity was not identifed in the 1987 forest plan and therefore Alternative A is not listed

which does not allow for further expansion or development of new sites in areas that are now being considered by communication providers as new technology is being developed. The **Action Alternatives** also provide suitability guidance when consideration of non-NFS lands is exhausted. The acres of land suitable for new communications sites vary by alternative (table 7). There are no plans to add additional communications sites. New sites would be considered only after analysis.

Table 5. Acres and percent of Apache-Sitgreaves NFs that may be suitable for new communication sites[5]

Alternative	Suitable Acres and (Percent)	Not SuitableAcres and (Percent)
Alternative A	N/A	N/A
Alternative B	894,301 (44%)	1,121,051 (56%)
Alternative C	1,120,092 (56%)	895,260 (44%)
Alternative D	789,019 (39%)	1,226,333 (61%)

Relationship of Short-Term Uses and Long-Term Productivity

Authorization of non-Forest Service use on NFS lands may have adverse environmental consequences on some resources (e.g., construction of authorized facilities such as a communications site tower) in the short-term and long-term. Short-term environmental consequences include increased human activity, such as motorized traffic, noise from construction equipment, temporary roads and ground disturbance during exploration activities and construction of the authorized facilities.

Long-term environmental consequences include operation and maintenance of the authorized facilities over the life of the facility. Operation and maintenance activities may include increased human activity and noise, motorized vehicle traffic, or additional ground disturbance. Determination and implementation of mitigation measures and design may lessen environmental consequences.

Over the long-term, the greater public and communities should benefit from services that are not provided on non-federal lands. Authorizations that are a long-term commitment (more than 5 years) and permit some type of construction or ground disturbance or alter the landscape would encumber NFS lands for the term of the authorizations and most likely for the foreseeable future. Few authorized constructed features are fully removed or rehabilitated.

Cumulative Environmental Consequences

Populations from Phoenix, Tucson, El Paso, and Albuquerque are most likely to have a second home, recreation residence lease, or retire to communities surrounded or adjacent to Apache-Sitgreaves NFs and request access/utilities to support their property. Populations from the large

[5] Suitablity was not identifed in the 1987 forest plan and therefore Alternative A is not listed, only site locations.

urban areas are the primary clients for recreation special use permit holders, such as hunting outfitter and guides.

The cumulative environmental consequences are spatially bounded by an area larger than the Apache-Sitgreaves NFs proclaimed boundary, generally the area immediately adjacent to the forests. Influences on occupancy and use of NFS lands come from outside of the immediate area. Energy corridors are typically linked in to the western electrical grid. Land parcels included in adjustment packages are usually outside of the forests boundary. Communications sites and transportation systems service areas may include northern and eastern Arizona or the entire State. Energy corridors are typically linked into the western United States grid.

The cumulative environmental consequences are temporally bounded by the next 10 to 15 years.

Past and present actions are discussed in the *Affected Environment* section of this report.

Several foreseeable future actions have been identified that may influence the Apache-Sitgreaves NFs. Individual community development and expansion plans are listed in summary in the *Other Planning Efforts* section of this report.

Transmission lines: Although not mapped as a separate management area, there is one corridor that has been designated for future transmission facilities; it is located across the Sitgreaves portion of the forests. It was set in place in January 2009 by the Secretary of Agriculture's Record of Decision for the Designation of Section 368 Energy Corridors on NFS land in 10 Western States. The corridor has a width of 3,500 feet and is multimodal. The existence of this corridor does not authorize any projects, nor does it mandate that future rights-of-ways be located in the corridors, or preclude the Forest Service from denying a project or requiring design revisions. Additional transmission lines across the Apache-Sitgreaves NFs would add cumulative environmental consequences by influencing management activities; such as a need for fuels reduction adjacent to the transmission lines, possible wildlife habitat fragmentation, or a change in the scenic integrity objective.

Centennial West Transmission Line Proposal: The Centennial West Clean Line would deliver 3,500 megawatts of renewable energy from northeastern New Mexico to communities in southern California and other areas in the west. The clean energy would be transported via an approximately 900-mile overhead, high-voltage direct current transmission (HVDC) line. The route of the Centennial West Clean Line has not yet been determined. The transmission line route has not yet been determined, but could cross the northern portion of the Apache-Sitgreaves NFs (Clean Line Energy Partners 2011). Cumulative environmental consequences are discussed above.

Transportation Corridors: The Arizona Department of Transportation (ADOT) and the Federal Highway Administration, as lead federal agency, are conducting engineering and environmental studies to develop a long-range plan for improvements to State Route 77 between Show Low and Taylor. The study area is on State Route 77 from the junction of US 60 (MP 342.2) in Show Low to Pinedale Road (MP 357.4) just south of Taylor. The study would evaluate multiple widening alternatives using the current road alignment; selecting a preferred alternative for improvements which would increase the safety and capacity of this segment of SR77; and preparing probable cost estimates for the preferred alternative to be considered for programming. Environmental issues would also be assessed. Potential projects would be identified and priorities established for future inclusion in ADOT's construction program when funding is available.

New ADOT transportation corridors or widening existing corridors may add cumulative environmental consequences by changing management activities in the area, changing public access points to the forests, changing the scenic integrity objective, fragmenting wildlife habitat, and increasing the rights-of-way permit administration.

Lands: Listed below are some of the foreseeable future land actions that have been identified on the Apache-Sitgreaves NFs:

1). Lakeside District Office Conveyance EA – Analyze NF land at the Lakeside Ranger Station for sale under the FS Facility Realignment and Enhancement Act (FSFREA, PL109-54). This also involves analyzing the location of a new ranger station. Two decisions.

2). Second Knoll Shooting Range EA- Analyze and develop an 80 acre shooting range including address road. A Special Use Permit will be issued to Arizona Game and Fish Department. AGFD will partner with White Mountain Shooters Association for the long term operation and maintenance.

4). Woodland Lake Park Tract Townsite Act Purchase EA—A town of Pinetop-Lakeside proposal for the phased purchase of 583 acres of federal lands administered by the ASHFs

5). Camp Tatiyee Land Exchange--- Exchange of private parcels in the ASNFs, Coronado, Prescott and Tonto NF for federal lands in Pinetop-Lakeside. Would provide land for children's camp currently under special use permit and result in consolidation of isolated parcels on the forest.6). Show Low South Land Exchange--- Exchange of private parcels in the ASNFs, Coconino, and Prescott NF for federal lands in Show Low area. Would provide land for future development and result in consolidation of isolated parcels on the forest.

Adaptive Management

Land ownership is monitored by inspecting the Apache-Sitgreaves NFs property boundary for encroachments. Special use authorizations are monitored by periodic inspections, inventories, and annual billings. Authorized energy corridors developments are monitored by periodic inspections, development of Vegetation Corridor Management Plans, and annual billing. Adjustments or permit amendments can be made to adapt the authorized uses to current conditions and technologies, provided changes are not ground-disturbing and are within the context of the original intent as approved by the line officer.

Other Planning Efforts

The Apache-Sitgreaves NFs lie in five counties: Apache, Greenlee, Navajo, and Coconino in Arizona and Catron in New Mexico. The Apache NF portion that lies in New Mexico is administered by the Gila NF. The forests border three other counties: Graham and Gila in Arizona and Grant in New Mexico.

Other land owners and land policies have the potential to impact the Apache-Sitgreaves NFs and vice-versa. In the development of the land management plan, these considerations have been taken into account. Written communication from the majority of these entities documents comprehensive land use plans, vision statements, and goals.

County comprehensive plans can be used as a source of information on the history of land use within the region, the patterns of development, desired conditions, and current county land use policies.

County land use within the planning area ranges from traditional uses such as farming and ranching in rural areas to denser concentrations of residential, industrial, and commercial uses in and around more urban areas (e.g., Show Low, Pinetop-Lakeside, Springerville, Eagar, Heber-Overgaard). One of the common themes is how, and whether, private owners and public land managers can manage the competing priorities of resource conservation and economic development – in particular how to cope with the growing demands for housing and recreation while ensuring preservation of a shrinking natural resource base that contributes to Arizona's highly valued "rural character." (UDSA FS 2011b)

Planning efforts for energy corridors and renewable resources is discussed in Cumulative Environmental Consequences section of this report. Clean Line Energy Partners have a comprehensive plan for supporting energy transmission across the western United States. (Centennial West Clean Line). The 2007 Draft Programmatic Environmental Statement of the Designation of Energy Corridors in the 11 Western States (US DOE 2007) describes and displays corridors that increase reliability of electricity tied to the western United States power grids.

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APPENDIX A - Lands Specialist Report

Standards and Guidelines from the Apache-Sitgreaves National Forests 1987 Forest Plan.

Property Boundary Location

Survey and post National Forest landline in conformance with national standards (approximately 5 miles per year). Priorities are:

Where proposed projects are adjacent to private land.
Areas of known and potential trespass.
Backlog

Request BLM resurveys where section corners have not been brass-capped. Highest priority is in complex land patterns where section corners have not been brass-capped. Highest priority is in complex land patterns where development is taking place.
Keep current of development plans for private property that share boundaries with National Forest land.
Enter into cost/share agreements whenever possible.
Search, locate, and record corners when the opportunity exists as a result or other resource projects.
Maintain 10 miles of property boundary posting and corner monumentation per year per District.
Protect and maintain land survey monuments during all project activities.

Encroachment

Document known unauthorized occupancies as they are discovered.
Use Small Tracts Act where appropriate to resolve encroachments.
Notify parties of known encroachments that use is unauthorized.
In decade 1, decide how to handle new cases as discovered. Prioritize for resolution, forest management activities, or those that can be easily resolved.
In decade 2, begin resolution action on all unauthorized trespass cases as they are discovered.
Resolve all cases documented in period 1 within period 2.

Special Uses

Request for transmission corridors are evaluated based on public need, economics, and environmental impacts of the alternatives. Emphasis is to use existing corridors to their capacity with compatible utilities, including upgrade power lines, before evaluating new routes.
New corridors through avoidance areas in the ponderosa pine and mixed Conifer vegetation types will be minimized and always avoided when feasible.
New corridors are managed to maintain current resource protection and outputs to the degree possible.

Communications Sites

Evaluate locations for high powered broadcast electronic sites.
New electronic sites will be considered only after thorough analysis and if alternative locations on private or State lands are not feasible. Public demand for the proposed service must be demonstrated prior to formal consideration.

Only the existing high power antenna/tower (currently owned by KRFM) can be used for high power uses. High power radio use is desirable on federal lands, alternative locations should be considered for these uses.
Once KRFM's antenna/tower is utilized to capacity with high power equipment, no furtherhigh power uses will be authorized.

Appendix B

Maps

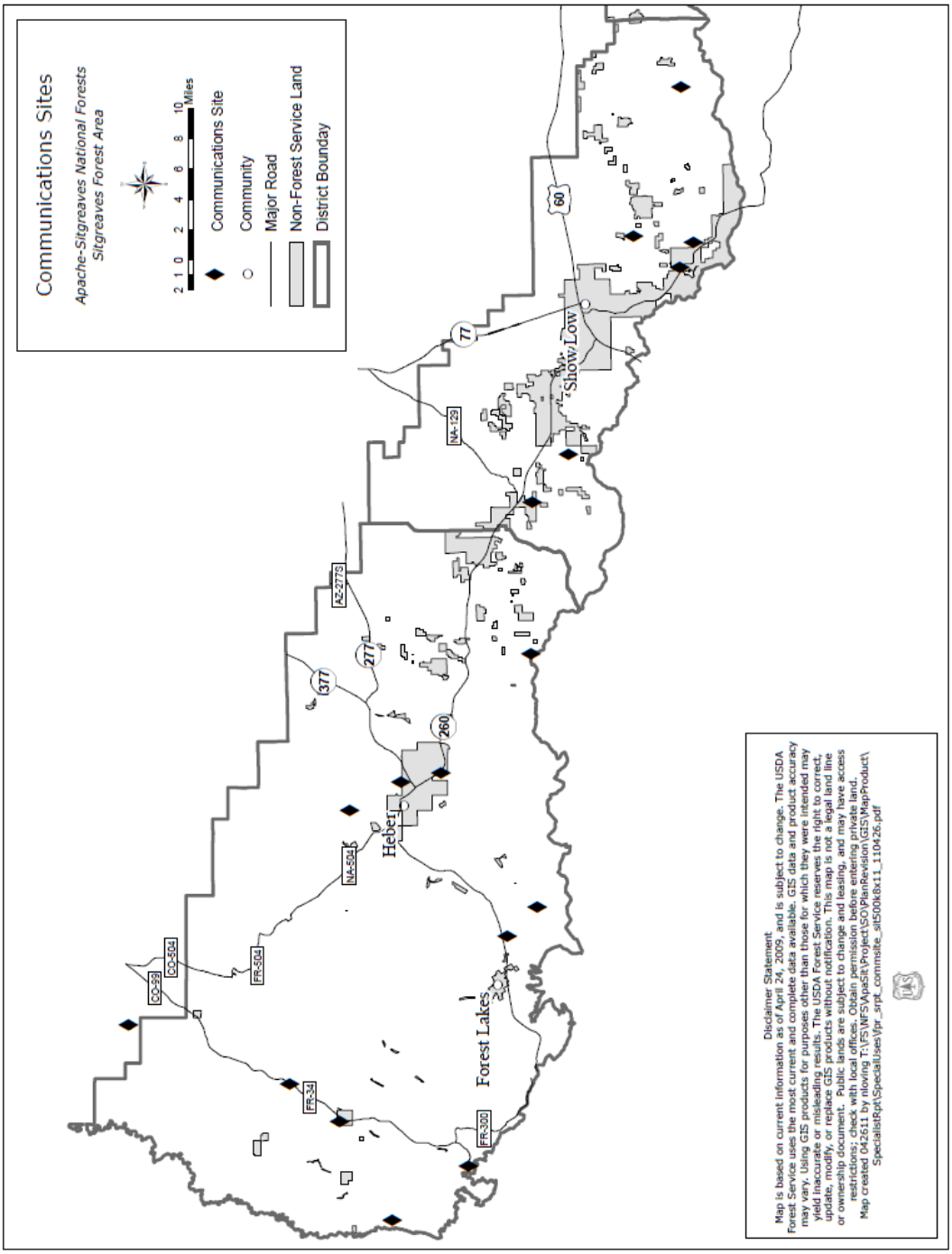

Figure 1. Communication Sites on the Sitgreaves National Forest.

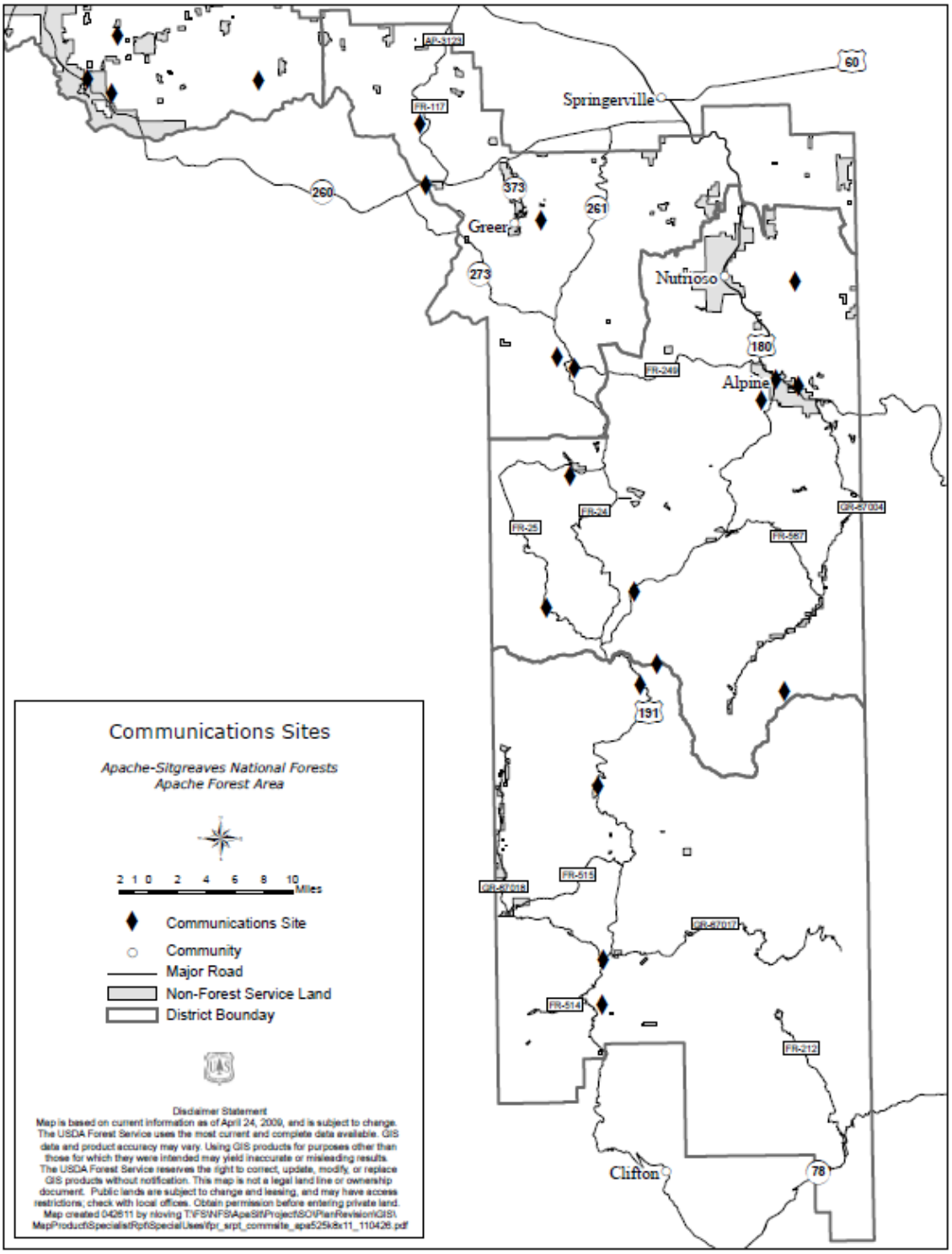

Figure 2. Communication Sites on the Apache National Forest.

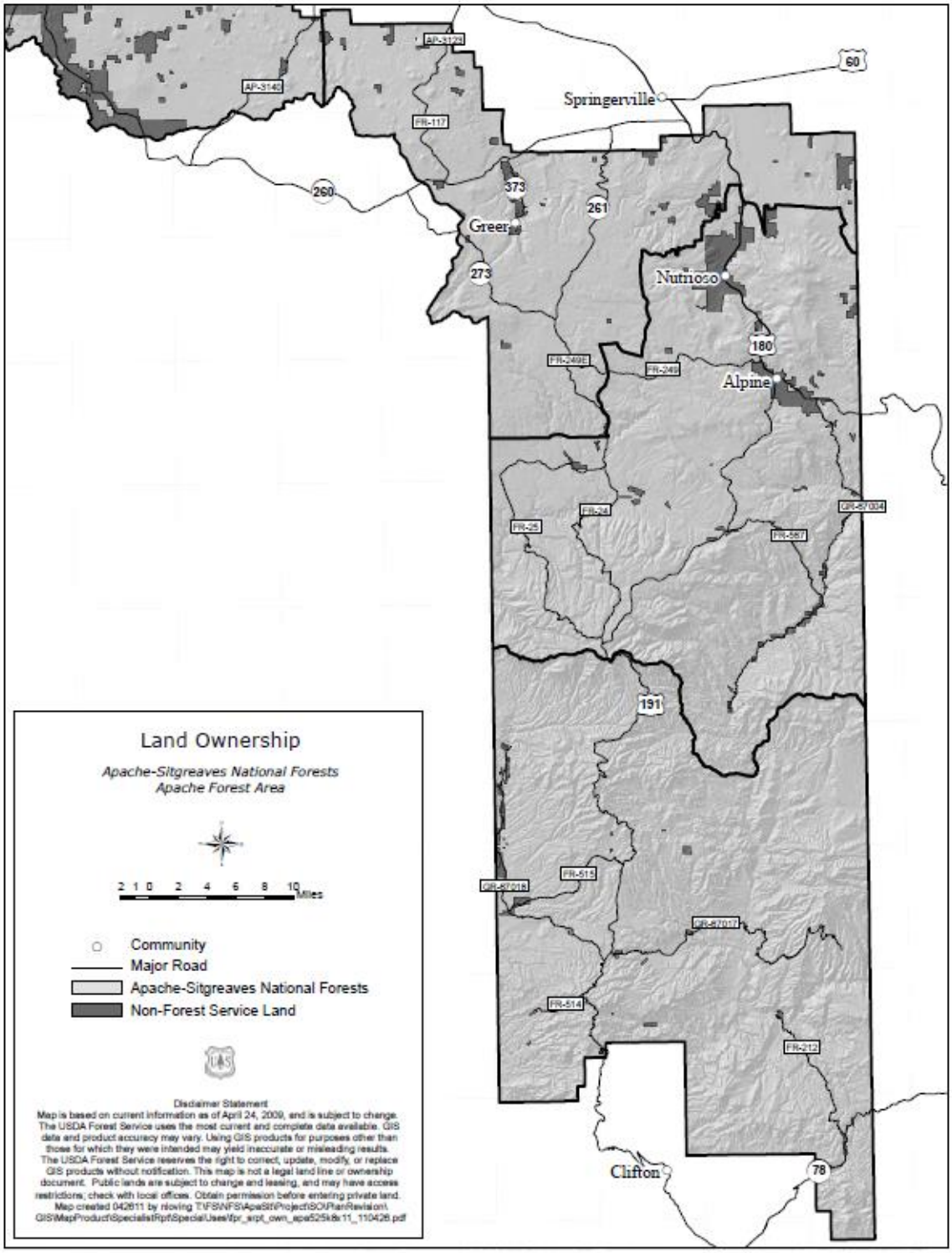

Figure 3. Landownership on the Apache National Forest.

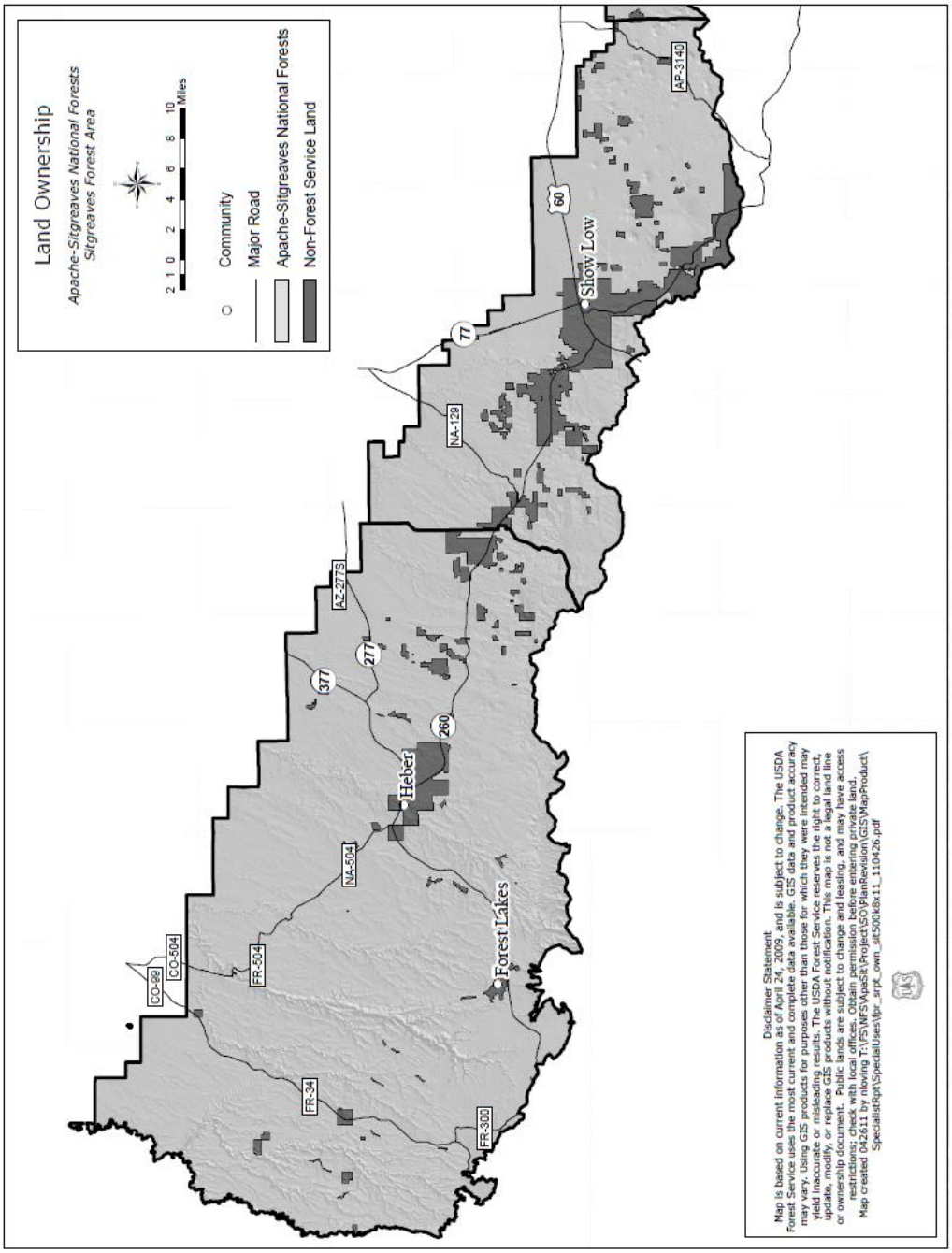

Figure 4. Landownership on the Sitgreaves National Forest.

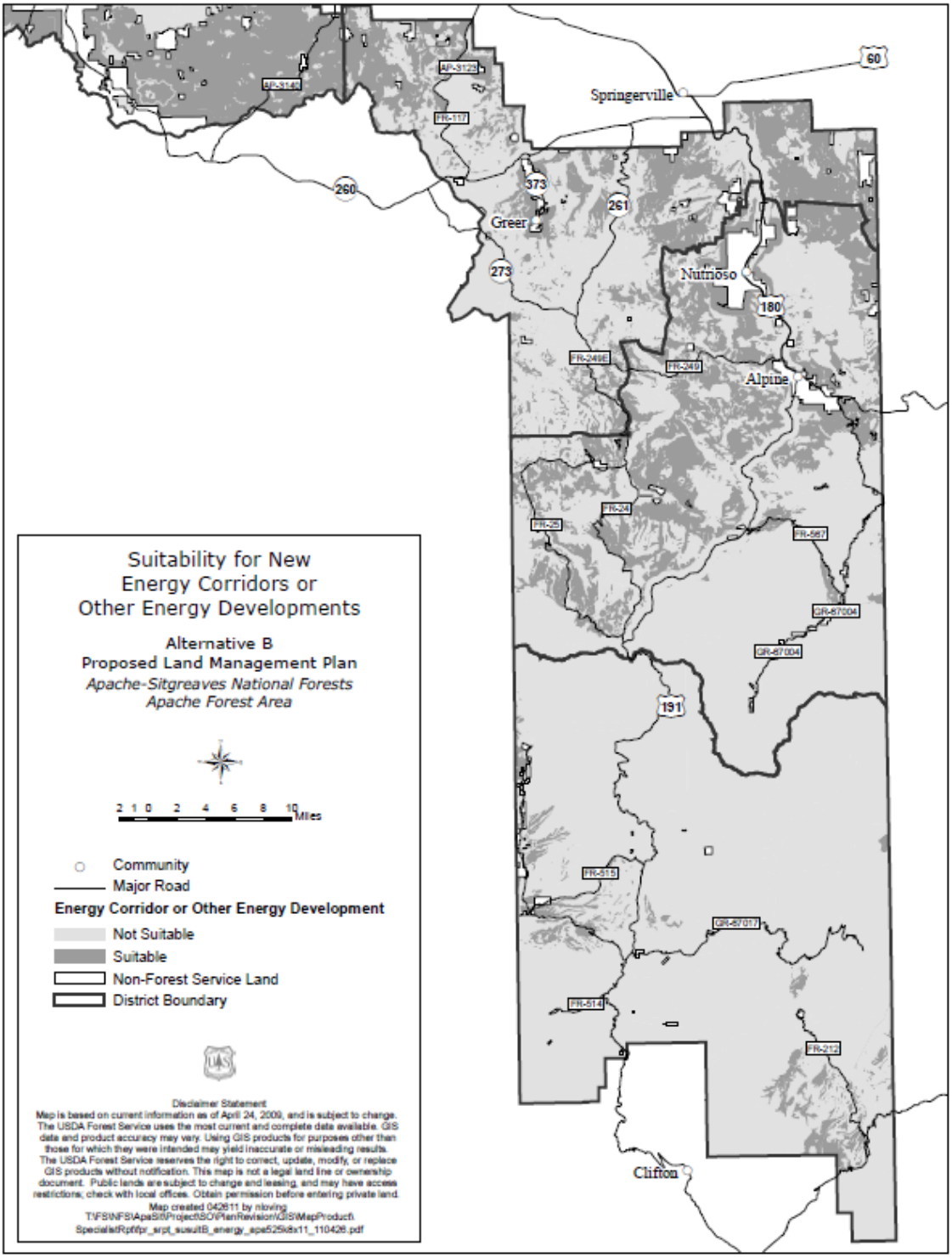

Figure 5. Alternative B, Suitability for New Energy Corridors on the Apache National Forest.

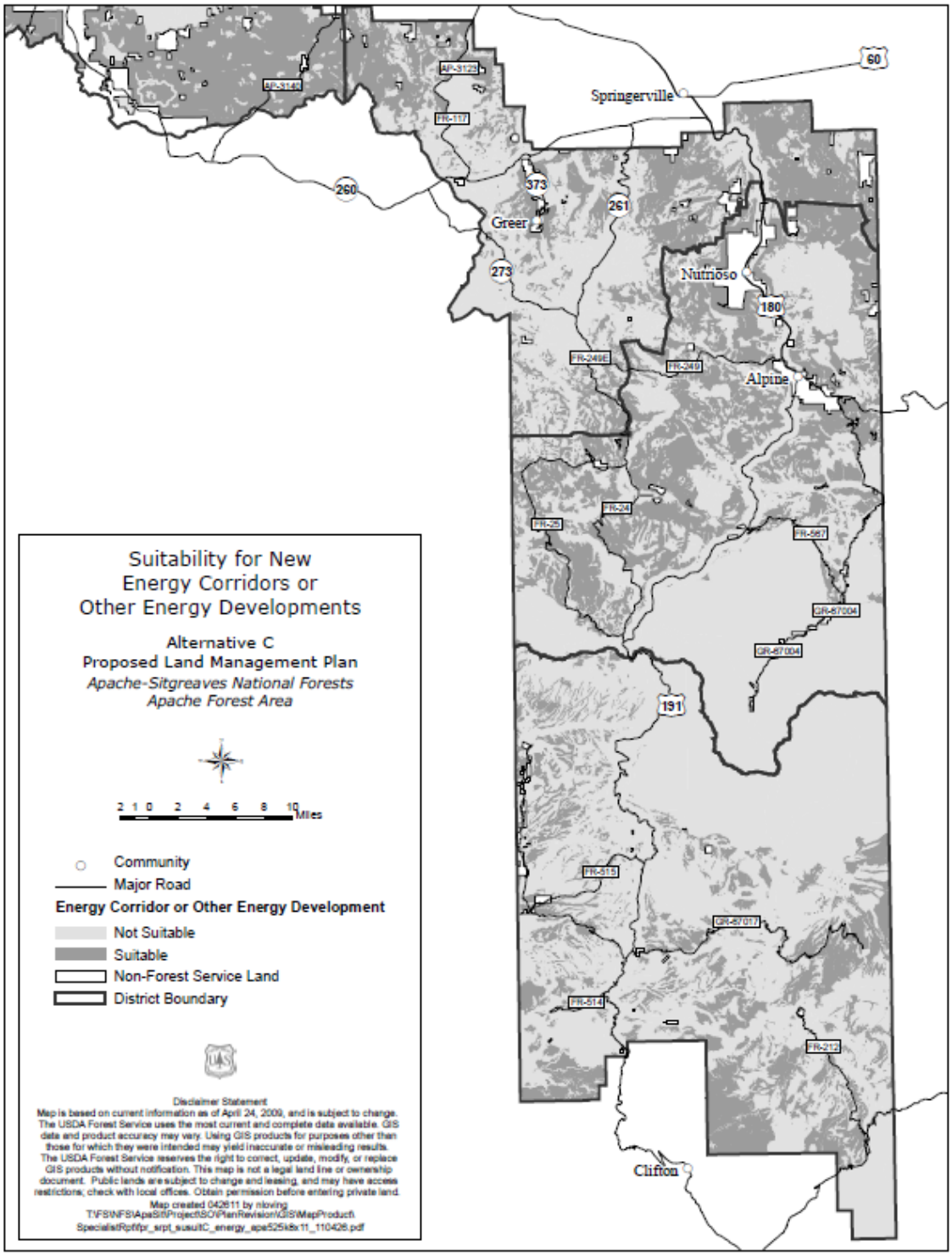

Figure 6. Alternative C, Suitability for New Energy Corridors on the Apache National Forest.

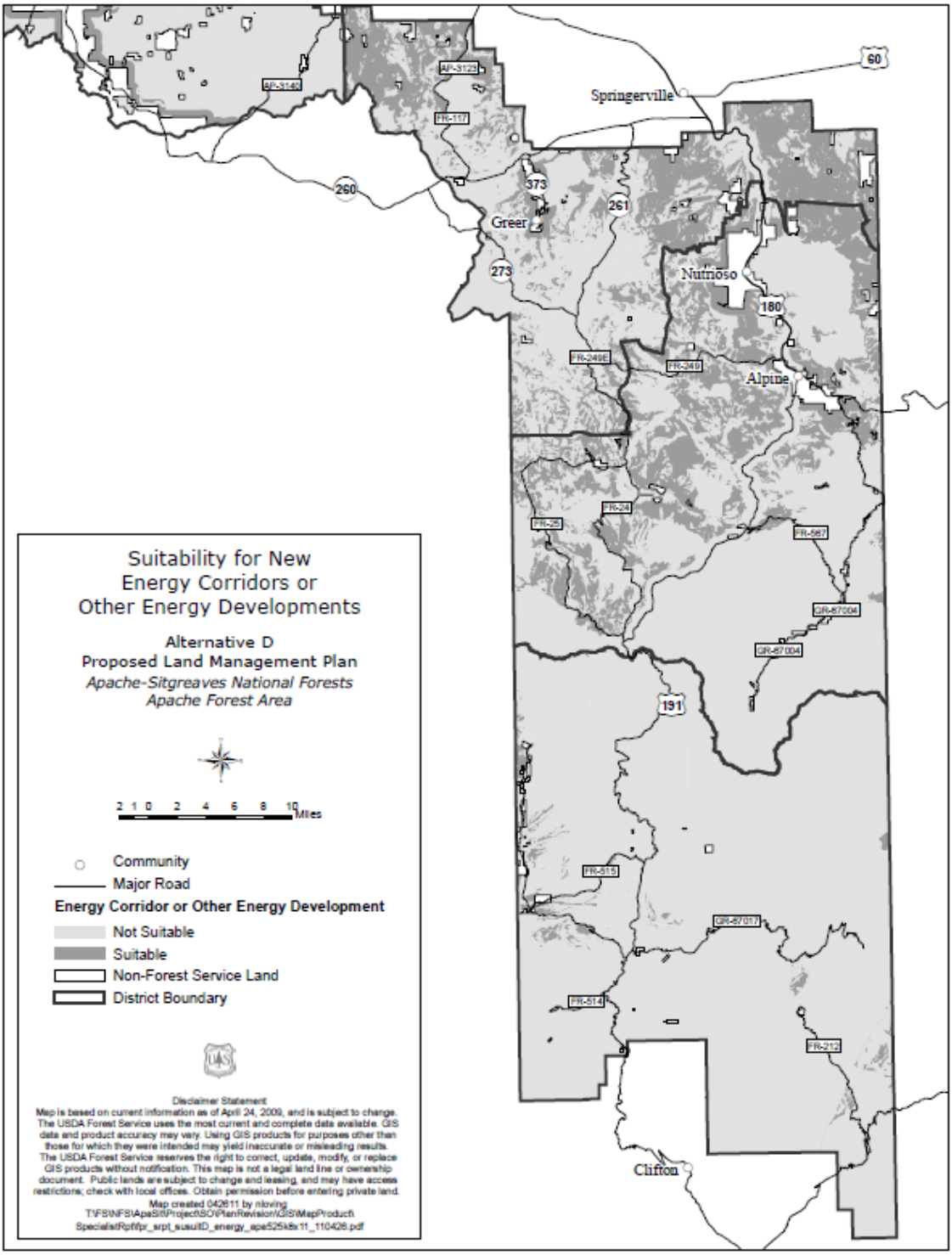

Figure 7. Alternative D, Suitability for New Energy Corridors on the Apache National Forest.

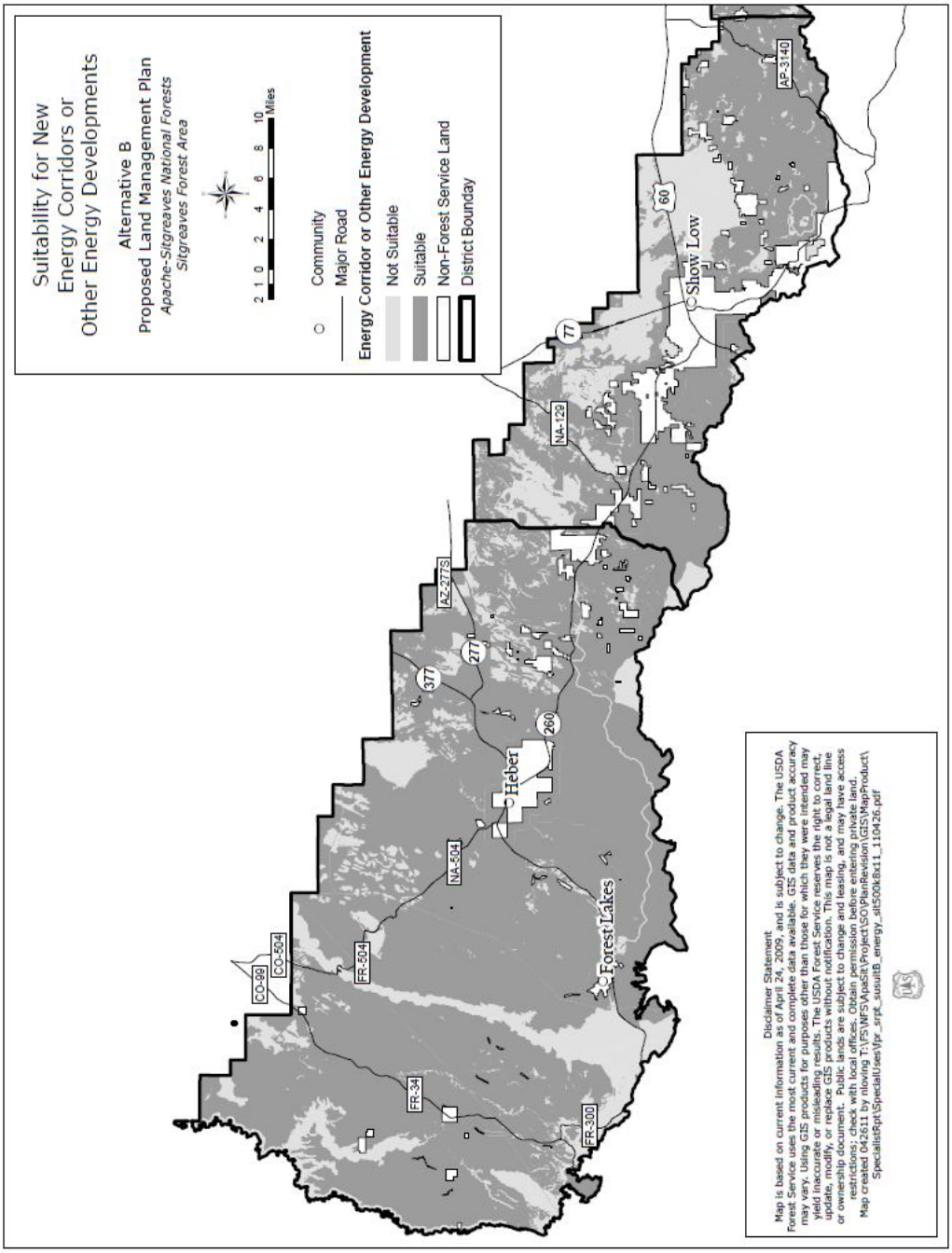

Figure 8. Alternative B, Suitability for new energy corridors on the Sitgreaves National Forest.

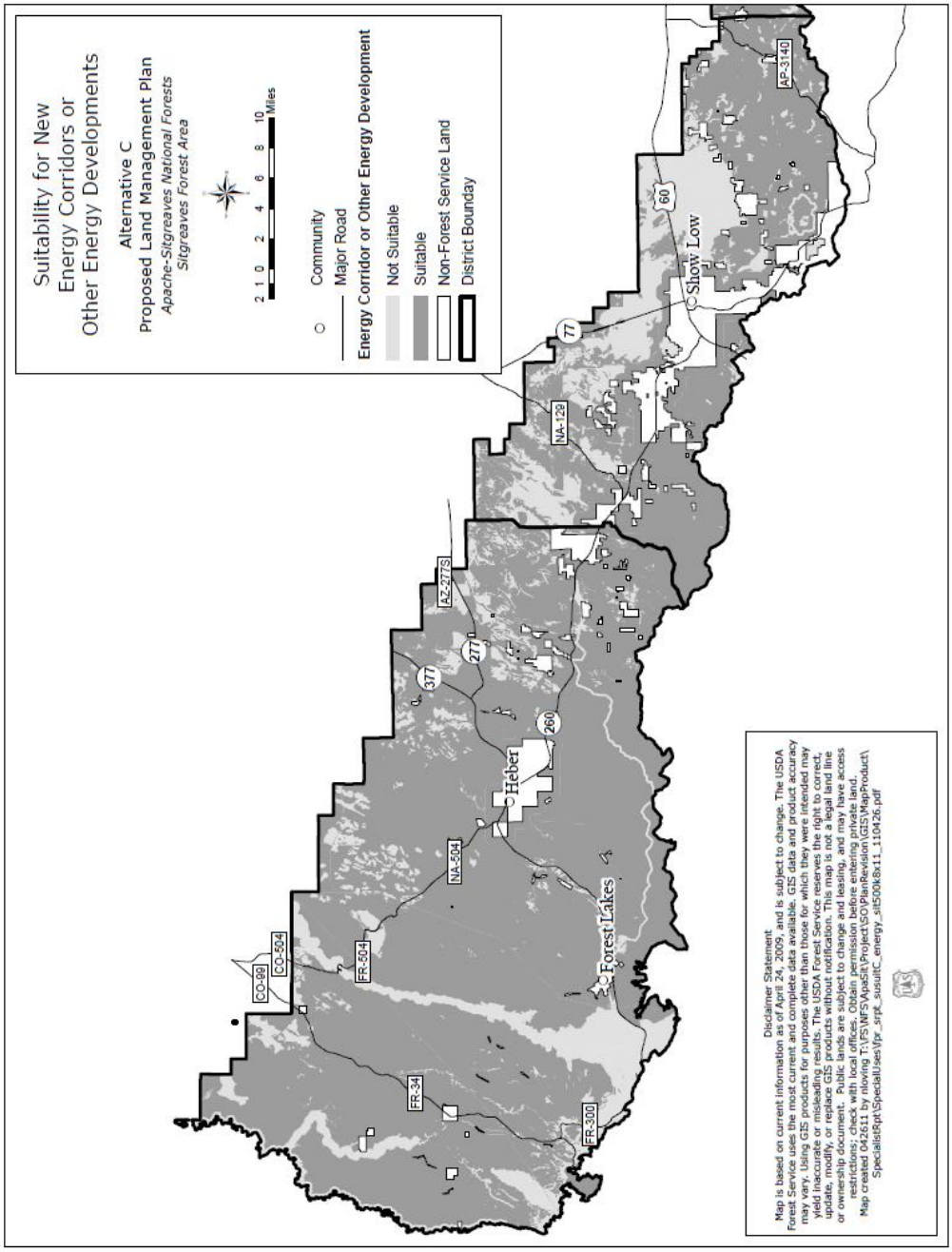

Figure 9. Alternative C, Suitability for new energy corridors on the Sitgreaves National Forest.

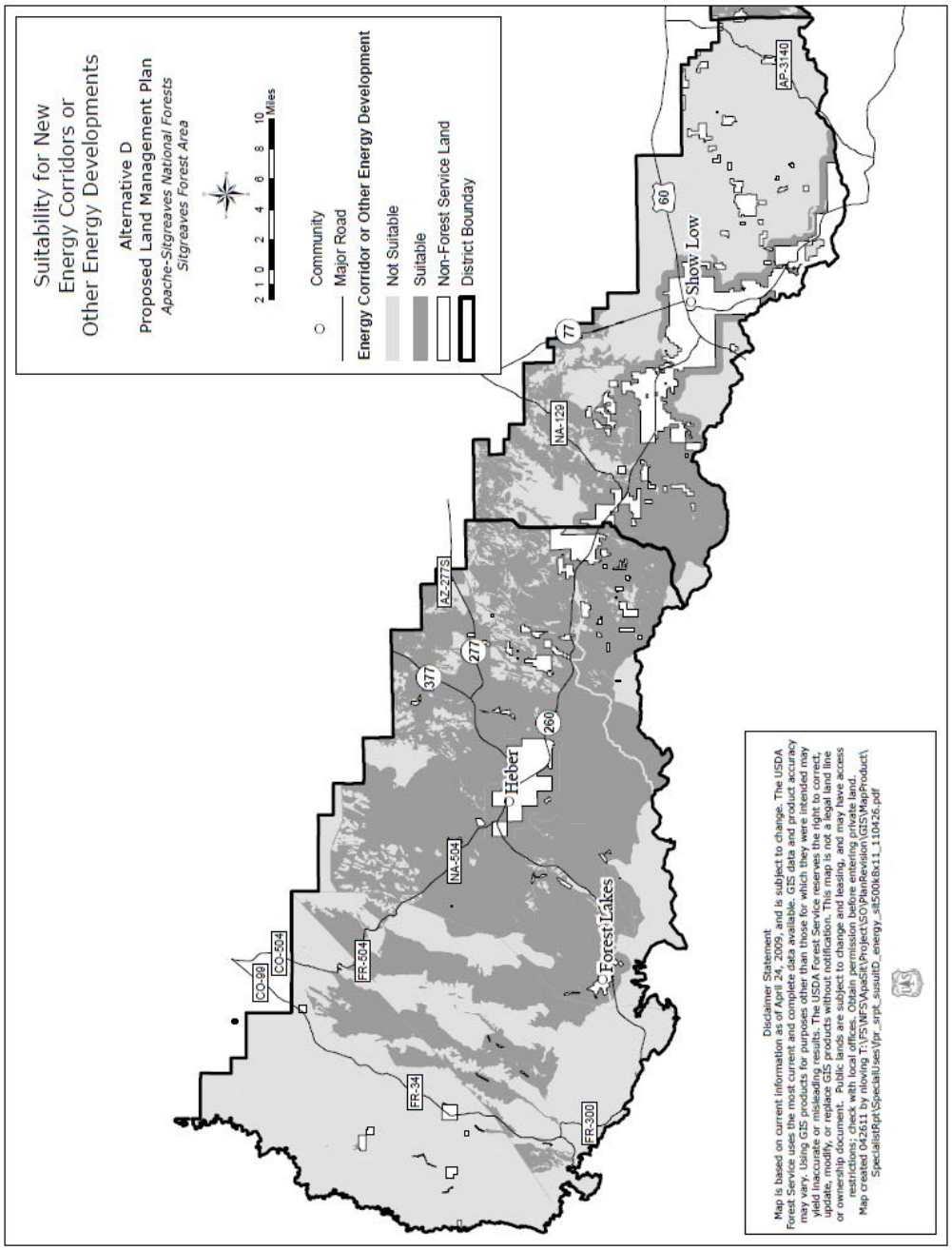

Figure 10. Alternative D, Suitability for new energy corridors on the Sitgreaves National Forest.