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Department of
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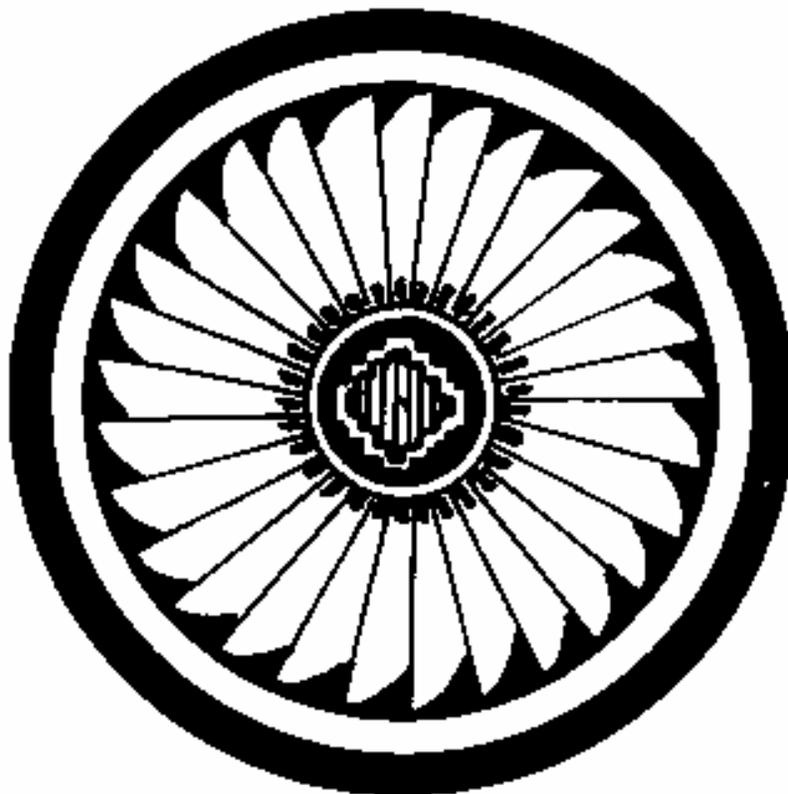
Southwestern
Region

MB-R3-10-6



Final Environmental Impact Statement for the Settlement Act Land Transfers: Pueblo de San Ildefonso, Pueblo of Santa Clara, and Los Alamos County

**Santa Fe National Forest,
Los Alamos, Rio Arriba and
Santa Fe Counties, New Mexico**



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Draft Environmental Impact Statement for the Settlement Land Transfers: Pueblo de San Ildefonso, Pueblo of Santa Clara, and Los Alamos County

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Abstract: This draft environmental impact statement (DEIS) discloses the effects of a project that fulfills a portion of the San Ildefonso Land Claims Act of 2005. The act resolves title claims asserted against the United States by the Pueblo de San Ildefonso under the proceedings of the Indian Claims Act (Docket No. 354). The portion of the act implemented by this project would transfer designated National Forest System lands to the Pueblo de San Ildefonso, the Pueblo of Santa Clara, and Los Alamos County. Before these transfers can occur, access to adjacent national forests must be assured by reconstruction of Forest Road 416v. Because the legislation requires the proposed action, it was the only action alternative considered in detail. A no action alternative would be inconsistent with the legislation and so was only considered in order to compare the effects of the proposed action against a baseline. The proposed action, with mitigation, is the preferred alternative.

Reviewers should provide the Forest Service with their comments during the review period of the draft environmental impact statement. This will enable the Forest Service to analyze and respond to the comments at one time and to use information acquired in the preparation of the final environmental impact statement, thus avoiding undue delay in the decisionmaking process.

Reviewers have an obligation to structure their participation in the National Environmental Policy Act process so that it is meaningful and alerts the Agency to the reviewers' position and contentions. *Vermont Yankee Nuclear Power Corp. v. NRDC*, 435 U.S. 519, 553 (1978). Environmental objections that could have been raised at the draft stage may be waived if not raised until after completion of the final environmental impact statement. *City of Angoon v. Hodel* (9th Circuit, 1986) and *Wisconsin Heritages, Inc. v. Harris*, 490 F. Supp. 1334, 1338 (E.D. Wis. 1980). Comments on the draft environmental impact statement should be specific and should address the adequacy of the statement and the merits of the alternatives discussed (40 CFR 1503.3).

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Date Comments Must Be Received:

Comments must be received within 45 days of publication of the notice of availability (NOA) in the Federal Register. Only the Federal Register publication date should be used to determine the close of the comment period.

Summary

Proposed Action

The project would convey approximately 8,785 acres¹ of National Forest System lands to the Pueblo de San Ildefonso (7,120 acres), the Pueblo of Santa Clara (750 acres), and Los Alamos County (915 acres). The proposed action would also reconstruct Forest Road (FR) 416v to a high-clearance, level 2 standard². The U.S. Department of Agriculture (USDA) would acquire legal access on the Puye, Sawyer Canyon Roads and Tract B of the Townsite Lands. The USDA would grant legal access on the Northern Tier Lands to Department of Energy, private landowners, and the Pueblo de San Ildefonso. In order to avoid predicted effects of the transfer, the proposed action includes an area closure, heritage resource site monitoring, and other measures.

Purpose

The purpose of this project is to implement certain portions of the Pueblo de San Ildefonso Claims Settlement Act of 2005 (Public Law 109-286), which was signed into law on September 27, 2006. The purpose of the act is to resolve title claims asserted against the United States by the Pueblo de San Ildefonso under the proceedings of the Indian Claims Act (Docket No 354). The act requires conveyance of the specific lands and so only one action alternative meets the purpose of the act.

Major Conclusions

The transfer of lands will have no impact to most resources in the project area because management activities will not change from those currently occurring. Two exceptions have been noted: recreation and heritage resources. Recreation use will shift away from the lands to be conveyed to the pueblos because of likely public access restrictions. Heritage resources have the potential to be adversely affected on the lands transferred to the county because Federal procedures for protection will no longer be applicable. Before conveyance, specific strategies will be developed in consultation with appropriate parties to assure protection or data recovery for affected sites. Other measures will reduce impacts to soils and heritage resources located along Forest Road 416v, where reconstruction would occur.

¹ Area estimates (acres) of the parcels used for this analysis start with approximate boundaries established in the Settlement Agreements. Then the boundaries were drawn in a Geographic Information System (GIS). Final area determinations will be made before final transfers can occur.

² According to FSH 7709.58.10.12.3, road maintenance level 2 is “[a]ssigned to roads open for use by high-clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation or other specialized uses.”

Preferred Alternative

As the responsible official, the forest supervisor for the Santa Fe National Forest has limited discretion within the act because conveyance or offering for conveyance of those designated lands is mandated. Reconstruction of Forest Road 416v is also mandated as an action that must be completed before the land conveyance can occur. The proposed action, including mitigation, fulfills the act and so is the preferred alternative.

Contents

Chapter 1. Purpose of and Need for Action	1
Document Structure	1
Introduction and Setting.....	1
Background/Purpose and Need for Action.....	1
Location	3
Proposed Action	3
Decision Framework.....	5
Public Involvement and Tribal Consultation	5
Issues.....	5
Relation to Forest Plan.....	7
Permits Required/Other Agency Approvals.....	9
Chapter 2. Alternatives, Including the Proposed Action.....	11
Introduction.....	11
Alternatives Considered but Not Analyzed in Detail.....	11
Alternatives Considered in Detail.....	12
Mitigation Measures and Monitoring	12
Comparison of Alternatives	19
Chapter 3. Affected Environment and Environmental Consequences	21
Considerations for Cumulative Effects Analysis	22
Land Tenure and Special Use Permits	22
Recreation Resources.....	26
Heritage Resources	30
Water and Soils	36
Wildlife Resources.....	40
Other Resources: Scenic Resources, Air Quality, Noise, Social-Economic, Safety	48
Environmental Justice.....	49
Short-term Uses and Long-term Productivity.....	49
Unavoidable Adverse Effects.....	49
Irreversible and Irretrievable Commitments of Resources	50
Chapter 4. Consultation and Coordination.....	51
List of Preparers.....	51
Consultation with Others	52
List of Agencies, Organizations and Persons to Whom Copies of the DEIS Were Sent.....	56
References Cited	59
Index	61

List of Tables

Table 1. Santa Fe National Forest management areas.....	7
Table 2. Comparison of alternative effects	19
Table 3. Recreational activities in the project area	26
Table 4. Threatened and endangered species.....	40
Table 5. Sensitive Species.....	44
Table 6. Migratory Birds that may occur in or near the project area.	45
Table 7. Management indicator species designative in the Santa Fe NF	47
Table 8. Evaluation summary of MIS	47

List of Figures

Figure 1. Vicinity map of the project area.....	2
Figure 2. Location of specific areas for conveyance.....	6
Figure 3. Settlement lands, Northern Tier lands, and Water System lands	14
Figure 4. Townsite lands, east (Tract A, B).....	15
Figure 5. Townsite lands, west (Tract C, D, E, F).....	16
Figure 6. Area closed to motorized off-road use.....	17
Figure 7. Santa Fe National Forest management areas.....	18
Figure 8. Vegetation/habitat types in the project area.....	42

Chapter 1. Purpose of and Need for Action

Document Structure

The Forest Service has prepared this draft environmental impact statement in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. This draft environmental impact statement discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized into four chapters:

- *Chapter 1. Purpose and Need for Action:* The chapter includes information on the history of the project proposal, the purpose of and need for the project, and the Agency's proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.
- *Chapter 2. Alternatives, Including the Proposed Action:* This chapter provides a more detailed description of the Agency's proposed action. This discussion also includes mitigation measures. Finally, this section provides a summary table of the environmental consequences associated with each alternative.
- *Chapter 3. Affected Environment and Environmental Consequences:* This chapter describes the environmental effects of implementing the proposed action and other alternatives.
- *Chapter 4. Consultation and Coordination:* This chapter provides a list of preparers and agencies consulted during the development of the draft environmental impact statement.
- *Index:* The index provides page numbers by document topic.

Additional documentation, including more detailed description of project area resources, may be found in the project planning record located at the Española Ranger District.

Introduction and Setting

This draft environmental impact statement describes how the Santa Fe National Forest (forest) proposes to fulfill certain portions of the San Ildefonso Land Claims Act. This document was prepared in accordance with the National Environmental Policy Act and its implementing regulations (40 CFR 1500-1508), as well as other environmental laws and regulations, to evaluate and disclose the effects of the proposed action.

The project area is located in north-central New Mexico, in the vicinity of Los Alamos (figure 1). Elevations range from approximately 6,000 feet in the east up to 8,000 feet to the west and in the area around Los Alamos. The climate is mainly arid/semiarid highland. Precipitation ranges from 15 to 25 inches per year with higher amounts received at higher elevations. Precipitation comes primarily in the form of short duration, high intensity storm events during July and August, along with winter snow accumulations at the higher elevations.

Background/Purpose and Need for Action

The purpose and need is to carry out those portions of the San Ildefonso Land Claims Act that require transfer of National Forest System lands to the Pueblo de San Ildefonso, the Pueblo of Santa Clara, and Los Alamos County. On September 27, 2006, the Pueblo de San Ildefonso Claims Settlement Act of 2005 was signed into law. The purpose of the act is to resolve title

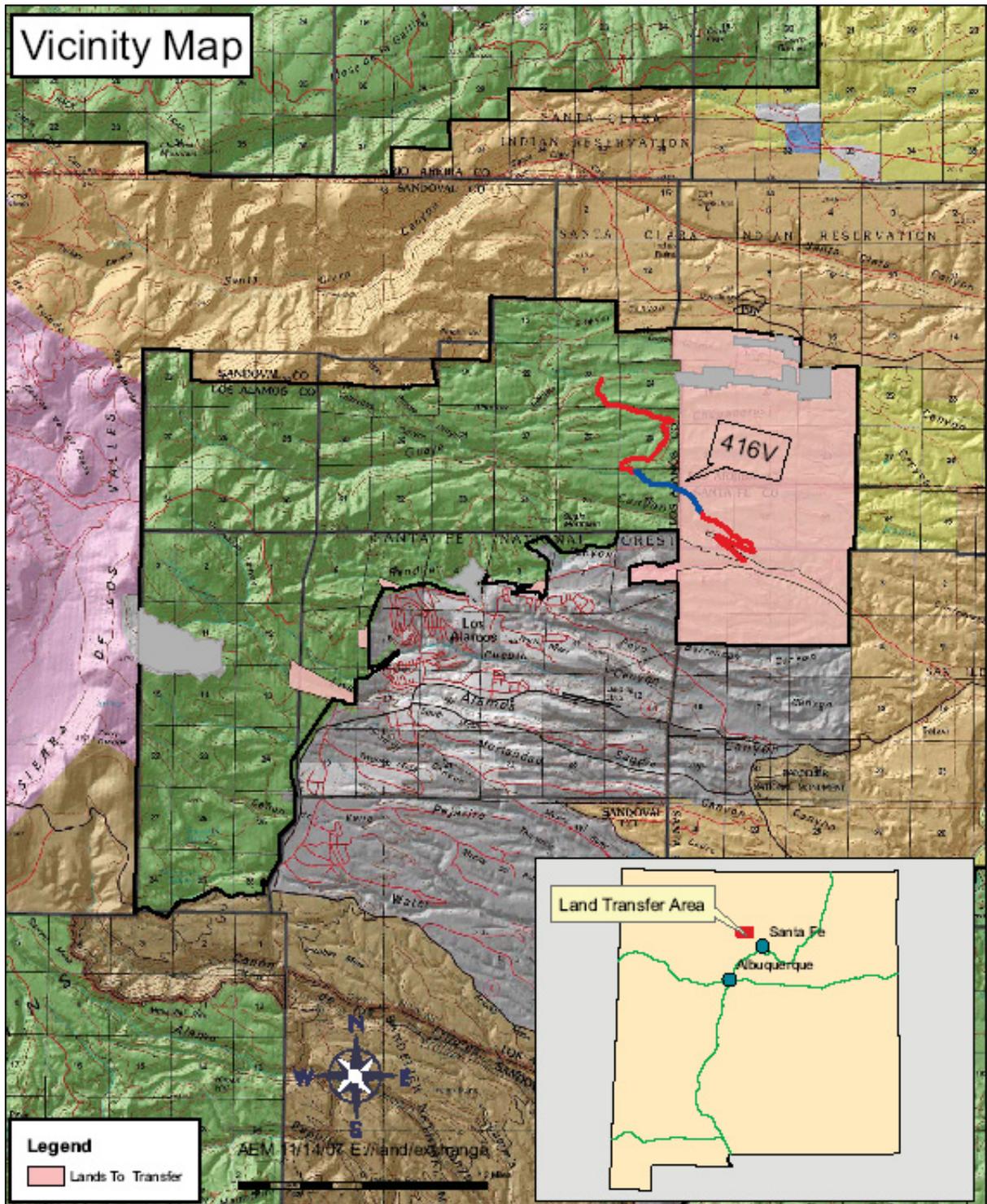


Figure 1. Vicinity map of the project area

claims asserted against the United States by the Pueblo de San Ildefonso under the proceedings of the Indian Claims Act (Docket No. 354).

Among other things, the act: (1) authorizes the Pueblo de San Ildefonso to acquire and requires the Forest Service to convey National Forest System lands as identified in the San Ildefonso Settlement Agreement (Settlement Area Lands); (2) authorizes the Pueblo of Santa Clara to acquire and requires the Forest Service to convey lands out of the National Forest System in order to comply with the San Ildefonso Settlement Agreement (Northern Tier Lands); (3) authorizes the County of Los Alamos to acquire and requires the Forest Service to convey lands out of the National Forest System in order to comply with the Los Alamos Agreement and San Ildefonso Settlement Agreement (Water System Lands and Townsite Lands); (4) ratifies the Los Alamos Agreement and San Ildefonso Settlement Agreement; (5) requires the reservation of access on certain roads; and (6) requires the Forest Service to reconstruct Forest Road (FR) 416v to a high-clearance, level 2 standard.

Location

The analysis area lies in the vicinity of Los Alamos, New Mexico (figures 1 and 2):

- Settlement Area lands are located in: Township 20 north, Range 7 east, sections 19, 20, 21, 28, 29, 30, 31, 32, 33; and Township 19 north, Range 7 east, sections 4, 5, 6, 7, 8, 9; New Mexico Principal Meridian.
- Water System lands are located in Township 20 north, Range 7 east, section 31; Township 19 north, Range 7 east, sections 4, 5, 6, 7, 8, 9; Township 19 north, Range 6 east, section 1; New Mexico Principal Meridian.
- Northern Tier lands are located in Township 20 north, Range 7 east, sections 17, 18, 19, 20, 21; New Mexico Principal Meridian.
- Los Alamos Townsite lands are located in Township 19 north, Range 5 east, section 13; Township 19 north, Range 6 east, sections 3, 4, 5, 8, 17, 18; New Mexico Principal Meridian.

Proposed Action

This project implements the following portions of the Pueblo de San Ildefonso Claims Settlement Act of 2005 (Public Law 109-286)³:

- Convey about 7,120 acres (figures 2 and 3, Settlement lands) of National Forest System lands to the Pueblo de San Ildefonso in consideration for a monetary value set in the Settlement (Section 2 (a)(9), and 2 (b)(3));
- Convey about 748 acres (figures 2 and 3, Northern Tier lands) to the Pueblo of Santa Clara in consideration for monetary value set in Section 12c of the act (Section 2 (a)(5), and Section 12);

³ Area estimates (acres) of the parcels used for this analysis start with approximate boundaries established in the Settlement Agreements. Then the boundaries were drawn in a Geographic Information System (GIS). Final area determinations will be made before final transfers can occur.

- Convey about 549 acres to Los Alamos County (figures 2 and 3, Water System lands) as Water System lands in consideration for monetary value set in the Settlement (Section 2 (a)(12) and 2(b)(3));
- Offer for purchase six parcels of National Forest System lands to Los Alamos County near the community (figures 2, 4 and 5 totaling about 365 acres) in exchange for an appraised monetary value (Section 2 (a)(4), and 2(b)(3)), and convey those lands if the offer is accepted;
- Reconstruct Forest Road 416v (figure 1) to a high-clearance, level 2 standard⁴ (Section 7(e)(2)); and
- The USDA to acquire legal access on the Puye, Sawyer Canyon Roads and Tract B of the Townsite lands. USDA would grant legal access on the Northern Tier lands to DOE, private landowners and Pueblo de San Ildefonso.

The act provides that the Settlement Area land and the Northern Tier lands shall be held by the Secretary of the Interior in trust for the benefit of each pueblo (Section 8(b) and 9). Lands acquired by Los Alamos County as Water System lands become Pueblo de San Ildefonso tribal lands if no longer needed for Los Alamos County's water facilities (Section 9(b) and the Los Alamos Agreement (page 5) defined in Section 2(a)(3) of the act. Most of the Los Alamos Townsite lands are currently used for Los Alamos County water facilities, including Los Alamos Reservoir and dam, as well as water tanks. The use of the Townsite lands will continue to be for these water system facilities (Mortillaro 2007). Similarly for all other parcels, land use is not expected to change in the foreseeable future. The act also requires reservation of a number of road easements to assure public access to lands that would otherwise be inaccessible to motorized vehicles once the conveyance takes place. For most of these reservations, existing roads provide adequate access, and so only an administrative action is expected. However, as part of the Los Alamos Agreement, road reconstruction must be completed to improve public access to the National Forest System lands adjoining the Settlement Area lands prior to conveyance.

The act allows for reconstruction of FR 416v to a high clearance, maintenance level 2 road to provide this access.

Except for the restrictions and reservations identified above, pertaining to the Water System lands and access/road easements, the Secretary of Agriculture does not propose to place any restrictions on future use of the Townsite lands, Settlement Area lands, Water System lands, or Northern Tier lands.

Although these proposed actions have been mandated by the act, the Santa Fe National Forest has conducted a National Environmental Policy Act environmental analysis to disclose the impacts of these actions, and to fully describe any discretionary actions that may also be included as part of the land conveys called for in the act.

Other actions authorized in the law that may or will be undertaken by the Department of the Interior, the Pueblo de San Ildefonso, the Pueblo of Santa Clara, or Los Alamos County are not

⁴ According to FSH 7709.58.10.12.3, road maintenance level 2 is “[a]ssigned to roads open for use by high-clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, usually consisting of one or a combination of administrative, permitted, dispersed recreation or other specialized uses.”

within the scope of this proposal because they will be accomplished separately under the respective government entity's authority and decisionmaking process.

Decision Framework

The forest supervisor for the Santa Fe National Forest is the responsible official for the decision, although the discretion of the decision is limited by the act. Conveyance or offering for sale of those designated lands is mandated. Reconstruction of FR 416v is also mandated as an action that must be completed before the land conveyance can occur. The decision will, therefore, incorporate mitigation measures as appropriate.

Public Involvement and Tribal Consultation

The public involvement for this analysis began with the publication of a Notice of Intent to prepare an environmental impact statement in June 2007. Scoping included contacting interested and potentially affected individuals, groups and agencies by mail and public announcements.

Most comments raised a concern with continued access to the lands that lie to the west of the lands to be conveyed to the Pueblo de San Ildefonso and Pueblo of Santa Clara. Comments noted the importance of keeping these lands open to the public.

Concerns regarding the lands near Los Alamos were expressed by one commenter who asked that the analysis consider these parcels separately, with the expectation that these lands would eventually be developed beyond water system use. This commenter asked that alternatives be developed for these lands. Other comments ranged from support of the idea of conveyance to disagreement with the purpose of the act and the conveyance.

Tribal consultation has been ongoing. The Pueblo de San Ildefonso meets with the Forest Service, Bureau of Indian Affairs, and other agencies monthly. Other tribal governments in the area were contacted as part of the tribal consultation. An offer to meet was made to other tribal governments in the vicinity, but to date, no meetings have been held specific to this project.

Issues

Los Alamos County has indicated that they would continue to use the Water System lands and the Townsite lands for water system facilities, with potential for re-establishing recreational use at the reservoir (Tract F) eventually but not within the immediate future. Tract B adjacent to a cemetery may be used for an expansion of that use.

The tribes have demonstrated their land management intentions on existing tribal lands, which reflects low intensity management with minimal development. Restricted public access is an established practice of both pueblo governments.

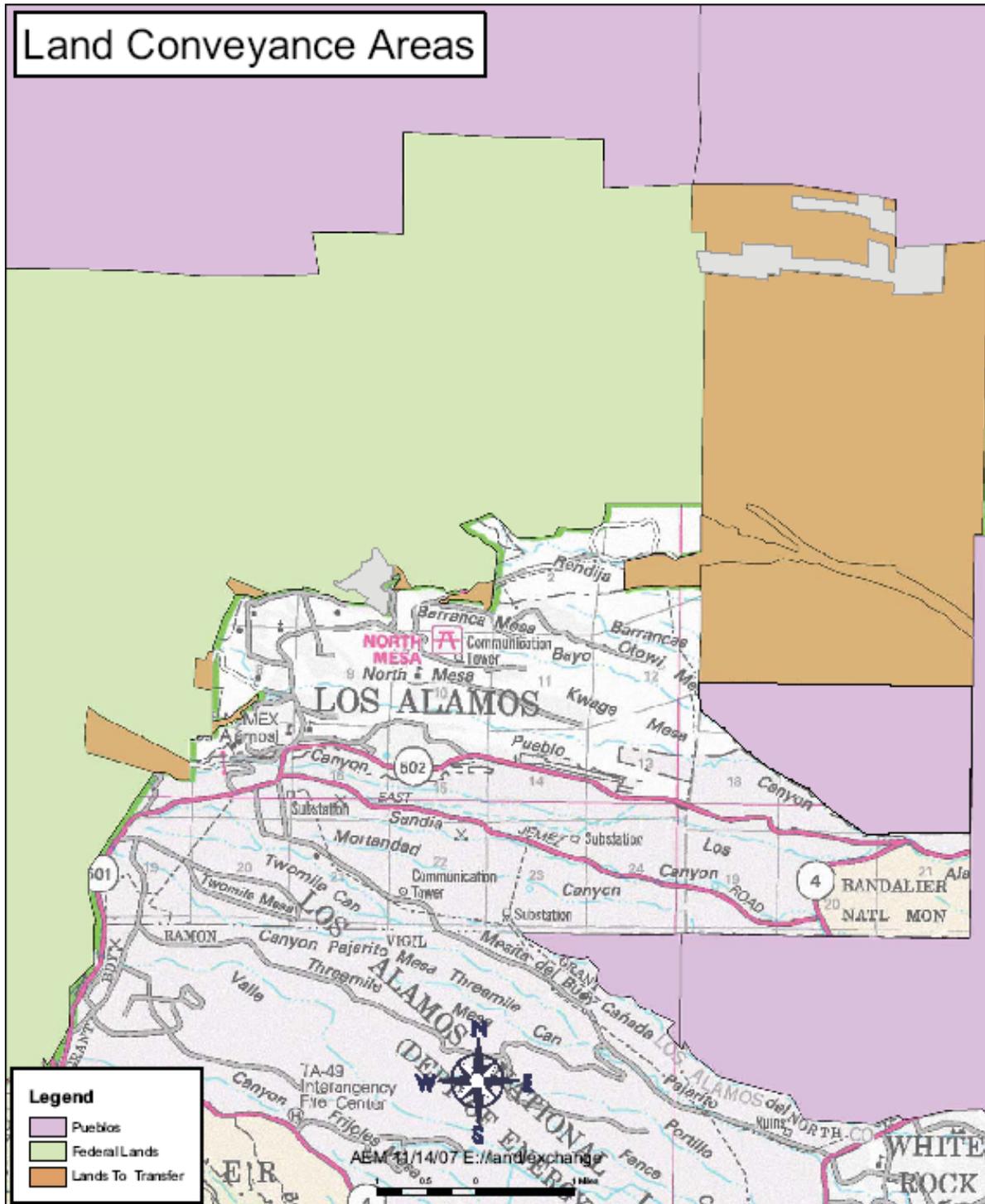


Figure 2. Location of specific areas for conveyance

Therefore, because the conveyance of these lands would not substantially change the expected use of the conveyed lands, no significant issues have been identified. Nevertheless, three areas of concern have been identified, even though they have not driven the need for alternatives:

- Reconstruction of FR 416v has the potential to affect known heritage resource sites located within the existing roadway. Because the sites and road occupy land between a canyon wall and steep ground, options to avoid these sites are limited. An evaluation of these sites has been completed and with mitigation measures in place (page 12), no adverse effect is predicted to occur. However, sites located on the lands mandated to be conveyed to Los Alamos County have potential to be adversely affected (page 32) and so additional protection/data recovery strategies are proposed (page 13).
- Two wildlife species are of concern in the project area. Tract F lies partially in an area set aside for the Mexican spotted owl recovery as a protected activity center (PAC). Analysis shows that change in ownership would not likely affect Mexican spotted owl because the PAC is unoccupied and the habitat after the Cerro Grande Fire is no longer conducive for owls or the prey base (page 43). Through informal consultation, the U.S. Fish and Wildlife Service concurs with this conclusion. For a second species—the Jemez Mountain salamander—habitat exists in this same parcel (Townsite Tract F), but the conveyance is not expected to impact the species (see “Wildlife” section in chapter 3, page 40).
- Because the lands conveyed to the pueblos would be restricted to public access, a change in recreational use patterns is likely (see the “Recreation” section in chapter 3, page 26).

Relation to Forest Plan

The lands fall within the following forest plan management areas (figure 7, page 18):

Table 1. Santa Fe National Forest management areas

Land Conveyance Parcel	MA C	MA N	MA Q	Total*
Settlement lands	0	1,876	5,266	7,142
Water System lands			549	549
Northern Tier lands	0	0	748	748
Los Alamos Townsite lands	307	58		365
Total in project	307	1,934	6,563	8,804
Total MA acres forest-wide	89,847	19,275	18,439	
Percent conveyed	0.34%	10.03%	35.59%	

* Area estimates for the parcels have been adjusted between those shown in the legislation and those in the Geographic Information System (GIS) used for the analysis. For consistency of analysis, the GIS acre figures are used.

Management Area C

This management area provides transportation corridors and areas of essential habitat for threatened and endangered species. These lands also offer outstanding opportunities for developed recreation and viewing scenery. Across the forest, many of the existing developed

recreation sites and much of the fishing recreation use occurs here. In the area affected by this project, however, no perennial water or developed recreation sites exist.

This area may be found throughout the forest in a variety of ecosystems and contains about 6 percent of the forest's suitable timber. Across the forest, this management area contains many of the forest's large rivers and associated riparian ecosystems (Forest Plan, page 105). No large rivers and very little riparian area exists in the portion of this management area affected by this conveyance. Los Alamos Reservoir (Tract F) contains most of the riparian area associated with the conveyed lands in the management area.

Emphasis of this management area is on enhancement of visual quality and developed recreation opportunities while protecting essential wildlife habitat and riparian zones. Grazing and timber activities occur where consistent with the primary emphasis of this area.

The Forest Plan as amended indicates that forest wide, this management area totals 89,847 acres.

Management Area N

This management area contains essential habitat for threatened and endangered species. These lands occur throughout the forest in a variety of habitat types. For the most part, these are small areas of land isolated from high development areas and are predominantly in a natural condition.

The emphasis for this management area is management that protects and enhances essential wildlife habitat. This land area does not include lands in the suitable timber base. However, certain timber management activities as well as grazing, firewood, and fire management may occur when consistent with the protection emphasis of this area.

The Forest Plan as amended indicates that forest wide, this management area totals 19,275 acres.

Management Area Q

This management area consists of those forest lands that provide a broad range of recreation opportunities and visual quality. These lands contain a rich resource of historic and prehistoric habitation sites. Across the forest, these lands provide scenic backdrops from highways or communities and contain important dispersed recreation areas. In the area affected by the conveyance, visibility from highways is minimal, but the area does provide dispersed camping and other day use, both motorized and non-motorized.

Heritage resource site location, inventory, nomination, and protection in these areas are emphasized. Emphasis is also on providing dispersed recreation opportunities, while maintaining visual quality, timber and firewood production. Grazing activities vary in intensity over this area. Emphasis is on maintenance or enhancement of wildlife habitat diversity.

Vegetation is mainly pinyon-juniper, ponderosa pine, and mixed conifer and forest wide it contains about 2 percent of the forest's suitable timber. This management area occurs only in the Jemez Mountain portion of the forest.

The Forest Plan as amended indicates that forest wide, this management area totals 18,439 acres.

Permits Required/Other Agency Approvals

Although the act directs that lands conveyed to the pueblos be conveyed into trust without any further analysis (§9(a)), before the pueblos can place these lands in trust with the Federal government, a Phase 1 hazardous materials environmental assessment must be completed.

Chapter 2. Alternatives, Including the Proposed Action

Introduction

This chapter contains the following sections:

- Description of alternatives considered but not analyzed in detail.
- Alternatives considered in detail.
- Mitigation and monitoring requirements to avoid or minimize adverse effects.
- Permits and authorizations required prior to implementing this project.
- Comparison of alternatives that provides a basis for choice among alternatives.

Alternatives Considered but Not Analyzed in Detail

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).

For this project, one approach was considered that would segment the decision into separate conveyance alternatives, so that the Settlement lands, Northern Tier lands, Water System lands and Townsite lands would be considered in different alternatives. These alternatives were not analyzed in detail because the act ties these land conveyances together by making the occurrence of one dependent on the occurrence of the others. Thus, any alternative that implements one transfer without the others would not meet the purpose of the project or the act. To meet the purpose of the act and the purpose of this project, Settlement lands, Water System lands, and Northern Tier lands must be conveyed, and the Townsite lands must be offered for conveyance.

The second alternative considered but not analyzed in detail was to place restrictions on the use of the lands to be transferred to the county to limit use to water system purposes and ensure there was no future resale or development of the land for other purposes. The Los Alamos Agreement was ratified by the act which states that the lands would be transferred subject to the terms and conditions agreed upon in the agreement. The agreement makes no provision for additional restrictions or reservations on future use of these lands other than those specified in the agreement and act. Imposing such a restriction or reservation would be inconsistent with the act and the agreement and would, therefore, not meet the purpose and need. For example, for the Water System lands, such an alternative is inconsistent with the act and Los Alamos Agreement which specify the Water System lands will be transferred without restriction except for access by the U.S. and a contingent remainder triggered when the water system use is abandoned. A restriction on the Water System lands limiting the use to the water system would also be unnecessarily duplicative because once a water system use is abandoned, the Water System lands would, by operation of the contingent remainder, revert to the Pueblo de San Ildefonso.

Alternatives Considered in Detail

Two alternatives are evaluated in this DEIS: the no action alternative, and the proposed action/preferred alternative.

Alternative 1—No Action

Under the no action alternative, Federal lands administered by the Forest Service would not be conveyed. The lands would remain in Federal ownership and continue to be used for currently authorized purposes, including valid multiple uses consistent with the Forest Plan. This alternative was only considered in detail to provide a baseline from which to measure the impacts of the proposed action, to better inform the public, and decision maker. This alternative is not legally available because the land transfers are required by the act. This alternative also does not meet the purpose and need of the proposed action.

Alternative 2—The Proposed Action

The proposed action would convey ownership of the National Forest System lands to the Pueblo de San Ildefonso, the Pueblo of Santa Clara, and Los Alamos County.

Specifically, the proposed action would:

- Convey the Settlement Area lands to the Pueblo de San Ildefonso.
- Convey the Water System lands to Los Alamos County.
- Convey the Northern Tier lands to the Pueblo of Santa Clara.
- Offer for conveyance and convey the six parcels of the Los Alamos Townsite lands to Los Alamos County.
- Reconstruct FR 416v to a high clearance, maintenance level 2 road, following the existing route as much as practical. Reconstruction will require grading, dips and/or culvert placement (about two culverts), and possibly relocation of short segments (up to about 300 feet). Vegetation would be cut back (“day lighting”) to improve site distance.
- The USDA would acquire legal access on the Puye, Sawyer Canyon Roads and Tract B of the Townsite lands. USDA would also grant legal access on the Northern Tier lands to the Department of Energy, private landowners and San Ildefonso Pueblo.

Mitigation Measures and Monitoring

Analysis of the effects of the proposed action identified the following mitigation measures.

Heritage Resource Mitigation

- In consultation with the tribes and the State Historic Preservation Officer (SHPO), impacts of reconstruction of FR 416v have been evaluated and the following mitigation actions are included to avoid adverse impacts to the five sites in the reconstruction area:
 - An archeological monitor will be present during all road reconstruction work. This monitor will assure restrictions are applied to protect known sites from disturbance.

Depending on the specific heritage resource site, these restrictions include keeping road work in the existing roadbed, and lifting the blade where the certain sites lie in the road itself.

- Any sites discovered during the reconstruction would be subject to evaluation before disturbance could be continued.
- For lands conveyed to Los Alamos County, evaluation of sites will occur (page 35). If sites are found to be eligible and protection cannot be assured, strategies would be developed specific to individual archeological sites after appropriate consultation with various entities (e.g., the Advisory Council on Historic Preservation, the State Historic Preservation Officer, and tribes) in order to comply with NHPA.

Soil/Water Mitigation

- To minimize the potential for off-road vehicle use and impacts from increased use of Forest Road 416v, the area adjacent to Forest Roads 416v and 446h would be closed to motorized travel (figure 6).
- To minimize effects of reconstructing Forest Road 416v:
 - Conduct road maintenance, road realignment and culvert installation during dry periods to reduce sediment.
 - Seed all disturbed areas following these activities to re-establish soil stabilizing ground vegetation to reduce the potential for erosion and sedimentation.
 - Place slash generated from site-distance clearing of Road 416v below drainage features (drainage dips and waterbars) and natural swales to reduce sediment movement.
 - Heavy equipment will be pressure washed prior to being brought to the project area to prevent the introduction of invasive, nonnative invasive species (i.e. noxious weeds).

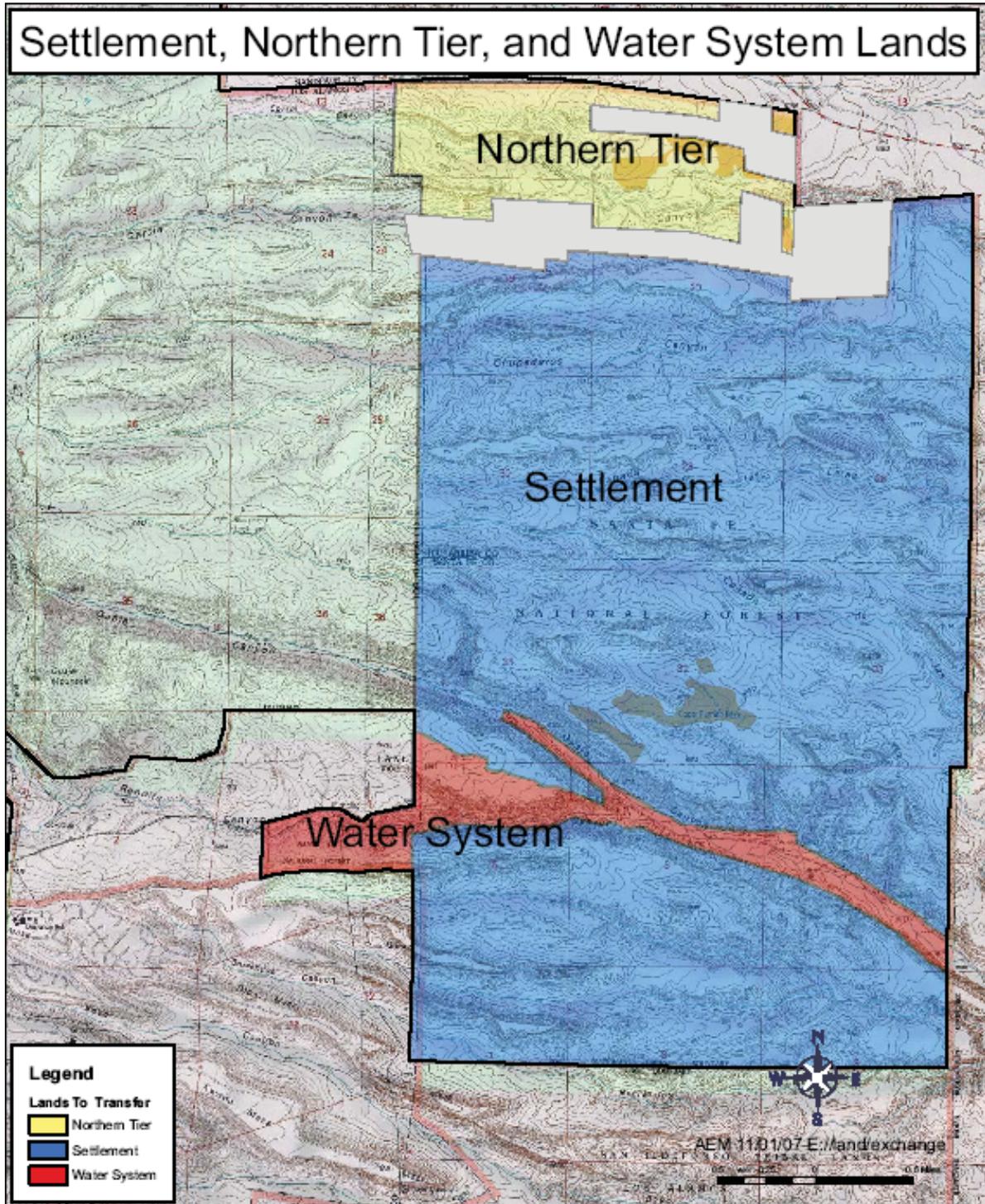


Figure 3. Settlement lands, Northern Tier lands, and Water System lands

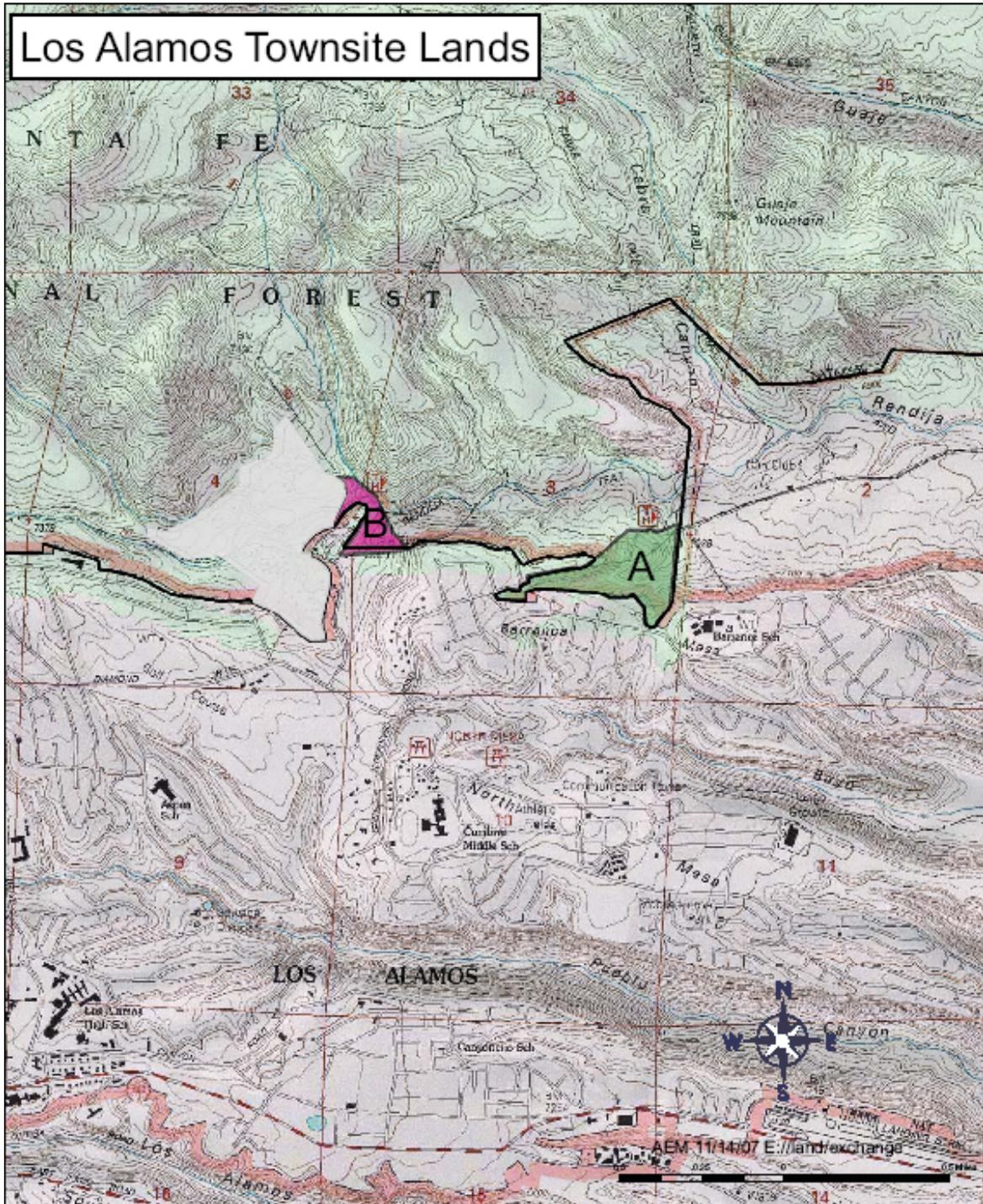


Figure 4. Townsite lands, east (Tract A, B)

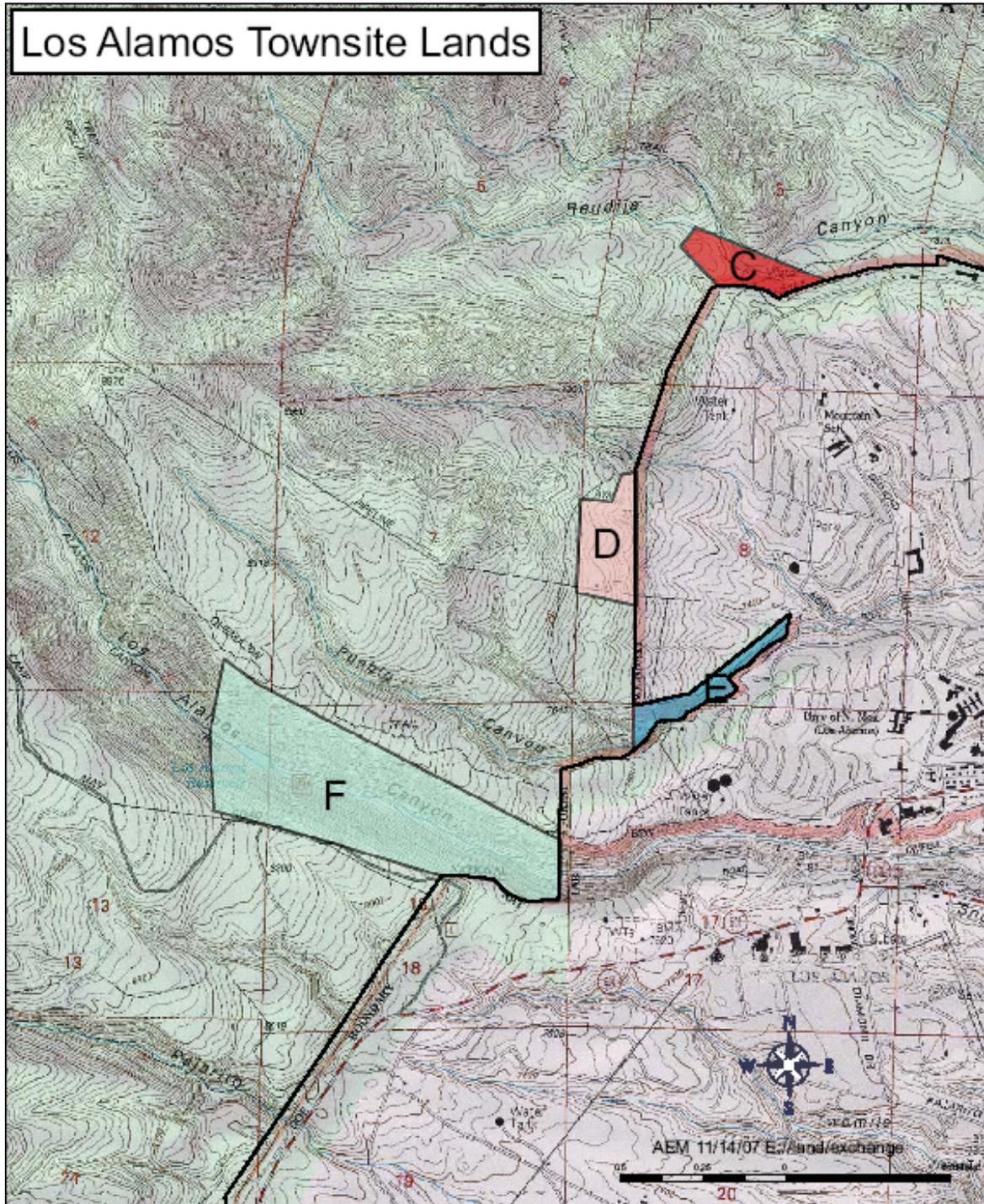


Figure 5. Townsite lands, west (Tract C, D, E, F)

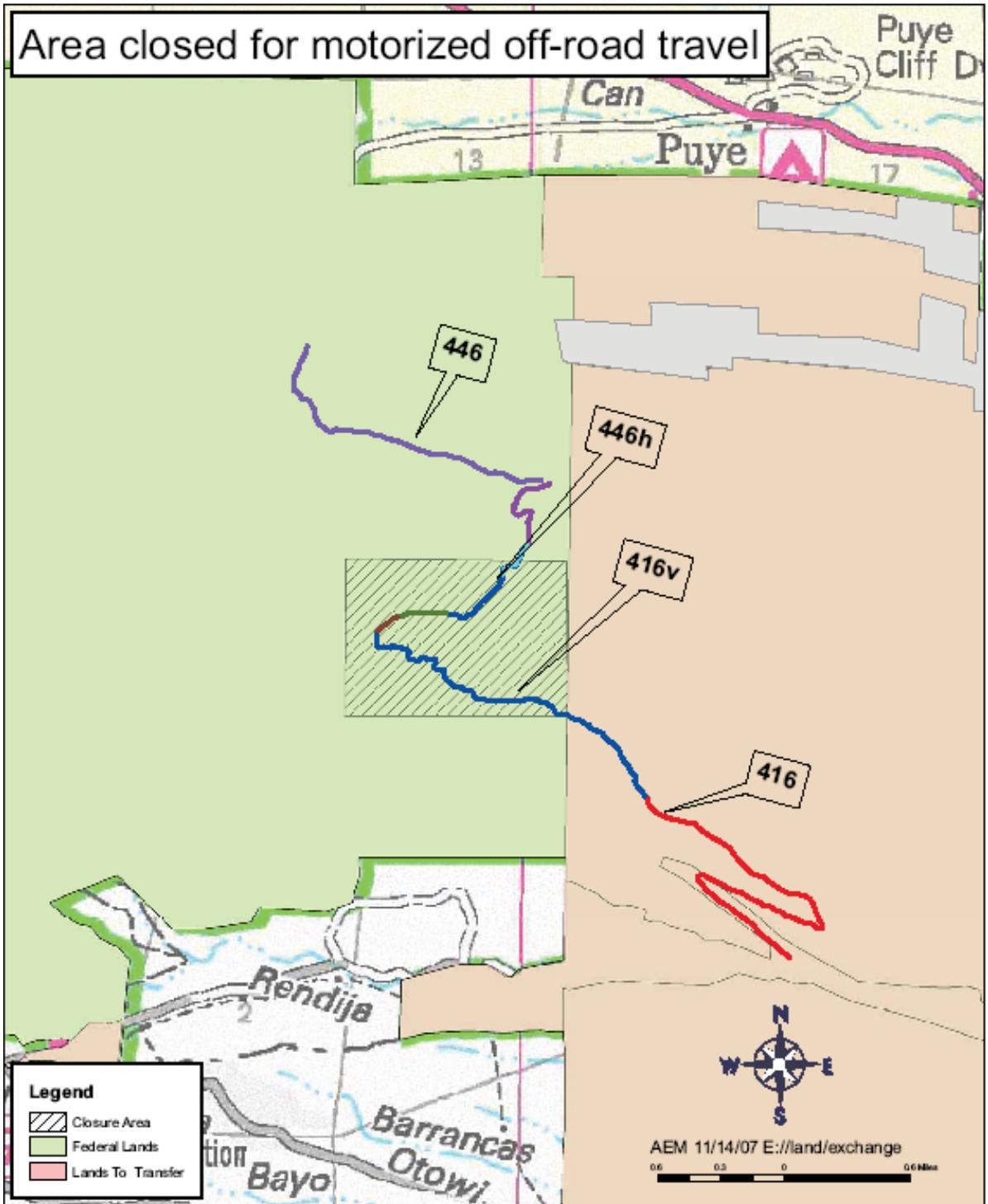


Figure 6. Area closed to motorized off-road use

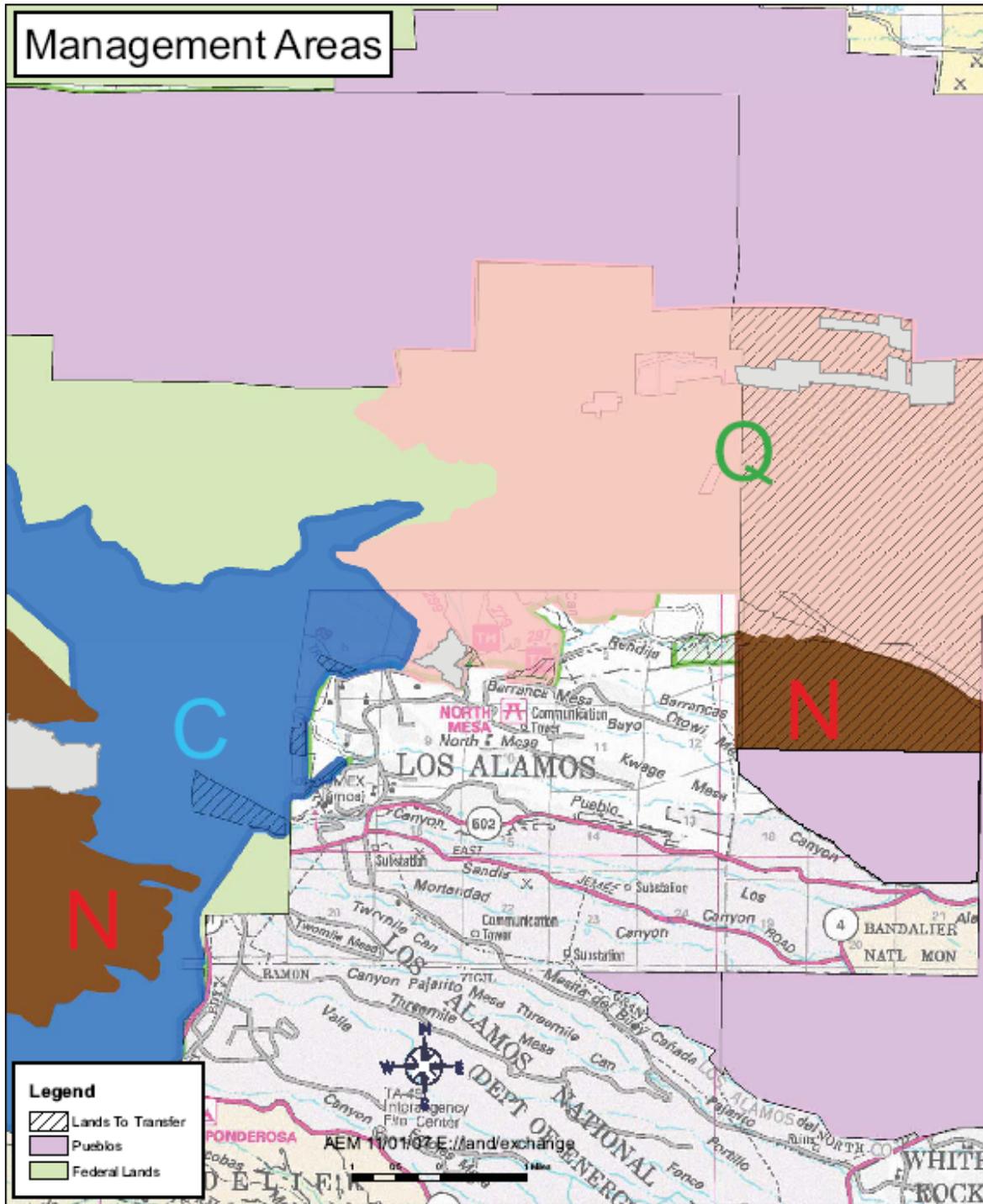


Figure 7. Santa Fe National Forest management areas

Comparison of Alternatives

This section provides a summary of the effects of implementing each alternative. Information in the table is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives.

Table 2. Comparison of alternative effects

Resource/Issue	No Action	Proposed Action
Land Tenure/Use	No change would occur to land management. The current permitted uses (water system) would continue. The act limits new authorizations to those that do not substantially reduce market value (Section 10(1) and (3)).	With land transfer to Los Alamos County, the permits would no longer be needed. Other long-term permitted uses (such as the PNM gas line permit) would continue over easements called for in the act.
Recreation	Recreation would continue in the project area as currently allowed. Travel management planning would designate roads and trails in the area as part of a system by 2010. A separate process is currently underway for this effort.	Recreation use of the lands conveyed to the pueblos is expected to decrease as the tribes restrict public access. Current OHV use of the old pumice mine is expected to shift to other lands nearby, but a closure to motorized off-road use would minimize impacts to heritage resources and soils. The recreation experience would change from cross-country use to a more controlled, on-road use. Except for the closure, access to the area west of the conveyed lands would remain open, so no loss of recreation opportunities would occur. No change would occur in the lands conveyed to Los Alamos County because of trail easements maintaining the current trail system.
Heritage Resources	Heritage resources would remain under Forest Service management and subject to Federal guidance pursuant to the National Historic Preservation Act (NHPA) and other Federal laws.	Lands conveyed into tribal trust would continue to be managed under the requirements of NHPA so no effects to heritage resources are predicted. Heritage resources, including currently undiscovered sites, located on the conveyed lands to Los Alamos County would pass from Federal management and protection, but because the county has indicated no change in use, no effects are predicted in the short term. Nevertheless, because Federal protection will no longer apply to these sites, evaluations and actions such as data recovery if appropriate must occur before conveyance to assure compliance with the NHPA. Reconstruction of FR 416v is not anticipated to result in any unavoidable adverse effect to heritage resources.
Geologic	The existing pumice mine has been closed. In either alternative, reclamation would be completed.	

Resource/Issue	No Action	Proposed Action
Soil and Water	Soils damaged by the Cerro Grande Fire would continue to recover. Streams would likewise continue to recover from the effects of the fire with either alternative. No changes would occur to wetlands/flood plains as a result of this transfer. No prime farmland exists in the area.	
Wildlife	Management would continue under the Santa Fe Forest Plan guidance for managing MIS and other species. Any action in the project area that may affect a plant or animal species listed as threatened or endangered must continue to comply with Section 7(a)(2) of the Endangered Species Act (ESA) and NEPA.	Because the use of these lands would not change after the transfer, no direct effects to any species of wildlife are expected. Indirectly, the 7,800 acres conveyed to the two pueblos would see a reduction in general public use and so would improve habitat effectiveness by reducing the disturbance to species such as elk. Transferring lands out of the National Forest System to tribal trust would change specific guidance (the Forest Plan would no longer control the management); however, tribal interest in this land and accountability for following Federal environmental laws is similar so no change would occur. Lands conveyed to Los Alamos County are subject to ESA, if appropriate. However, consultation with the USFWS was completed with the finding that the title transfer may affect, but is not likely to adversely affect any federally threatened or endangered species.
Social-Economic	Potential for the lands in the transfer to contribute to economic development in a noticeable way is low regardless of ownership. Some grazing has occurred in the past. The land being conveyed to the pueblos is not a specific destination for outfitter/guides, nor does it contribute other commercial activity (no timber or grazing for instance). No outfitter/guide or other commercial activity is currently permitted specifically for the Townsite lands either. Any future use would be allowed as policy provided. Access through conveyed lands would be protected by easements reserved as required by the act.	
Public Health and Safety	Public health and safety would not change in either alternative. Lands conveyed to the tribal trust would no longer be open to the general public, but continued cooperation between the Forest Service, the tribal governments and BIA would provide for emergencies, such as fire fighting capacity. Actions that have potential to affect public health would be subject to the same laws regardless of ownership (e.g. Clean Water Act, Clean Air Act).	
Indian Trust	With the no action alternative, Indian Trust assets are primarily lands adjacent to the proposed transfers. With land transfer, the acres of land in trust would increase for the respective pueblos.	
Environmental Justice	No environmental justice issues have been identified for the no action alternative or proposed action. The effects of the proposed transfer would not be disproportionately focused on minority or low-income populations. A net benefit to tribal members is expected.	

Chapter 3. Affected Environment and Environmental Consequences

This chapter summarizes the physical, biological, social, and economic 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 previously (page 19).

The affected environment sections summarize the relevant information about the physical, biological, social, and economic environments that have potential to be affected by the land transfer and road reconstruction. The affected environment lays the foundation for potential environmental impacts of the proposed action and the no action alternative. The affected environment sections in this chapter provide succinct descriptions of affected resources commensurate with the relevance to and importance of the issues or impacts, in accordance with direction provided in NEPA implementing regulations at 40 CFR §1502.15. The extent of the affected environment may not be the same for all potentially affected environmental components.

This chapter also describes the environmental consequences (direct, indirect, and cumulative) of the transfer, road reconstruction, and mitigation measures. Based on information provided, the lands proposed for transfer to the Pueblo de San Ildefonso and Pueblo of Santa Clara will remain undeveloped, and the lands proposed for transfer to Los Alamos County will continue as water system lands and areas of undeveloped, non-motorized recreation uses (Mortillaro 2007). Since the uses of those lands will remain essentially the same into the foreseeable future, detailed descriptions of some resources, such as air quality and scenic resources will not be presented in detail, nor will these resources be analyzed because there will be no effects from the proposed transfers.

Specialists' reports contained in the project record provide additional and more broad based information. The intent of this DEIS is to provide sufficient detail concerning environmental parameters (such as recreation use) that may be affected by the proposed action to disclose the environmental effects of the land conveyance and road reconstruction.

This DEIS also describes environmentally sensitive resources that may be affected by the proposed action. These include the Mexican spotted owl (page 43), and properties of historic, archeological, or architectural significance (page 32).

This DEIS relies to a large extent on existing information and knowledge of the project area. Given the act's timeframe for transfer and the specificity regarding actions necessary to meet the act's intention, recreation information used in the analysis was primarily subjective, based on knowledge of agency, pueblo and county personnel. Recreation surveys regarding the kinds and patterns of recreation use of those lands were not conducted so detailed understanding is limited but does not hinder analysis of recreation effects.

Heritage resource surveys were also not conducted on the areas to be conveyed to Indian Trust protection. The lands will remain under the umbrella of Federal heritage resource laws, thus afforded the same level of protection as current conditions provide. Although heritage resources information regarding these lands is incomplete, the lack of complete information will not result in significant environmental impacts that are unaccounted for or unknown. This is because the ability to predict the probable effects of the proposed transfers to heritage resources will not be lessened by the lack of complete information. There is ample knowledge of the heritage resources

in the area derived from existing (past) surveys in portions of the areas, the effects of similar Agency actions, and the Agency's analysis of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community.

This missing information has been weighed using criteria set out in 40 CFR 1502.22(b). Although information regarding recreation use and heritage resources is incomplete, the potential is very low that as a result of the land transfer or road reconstruction, reasonably foreseeable significant adverse impacts on the human environment would occur. This evaluation of reasonably foreseeable significant adverse impacts is based on the analysis for other resources that shows low potential for impacts because land use would be much the same whether the transfer occurs or not. Based on the analysis presented in this chapter, there is no plausible scenario that would foresee catastrophic consequences to any resources as a result of the land transfer and road reconstruction. Therefore, the additional information is unnecessary.⁵

Considerations for Cumulative Effects Analysis

To analyze the potential cumulative effects of the proposed action, the ID team considered other similar projects in the vicinity and how they might add or subtract from the effects of the proposed action.

The only similar land transfer in the area is the proposed transfer of Department of Energy lands to Los Alamos County in the Rendija Canyon area. Less recently, in 2000, the United States purchased the Baca Ranch for public use. This land is now managed as the Valles Caldera National Preserve. Both of these actions have potential to increase recreation opportunities in the region.

Forest access for recreation and other uses would be affected by the current travel management effort being conducted by the Santa Fe National Forest.

Land Tenure and Special Use Permits

Summary: *There would be no adverse effects to land tenure and use. Permits that allow use of the county water system on National Forest System lands would be unnecessary after the transfer occurs, leading to some efficiency in management. Other uses such as a closed pumice mine would not be affected. A permit to PNM for a gas line crossing in Townsite Parcel E would be protected under the act by creating an appropriate right-of-way for continued use. Other authorizations for land use in remaining National Forest System lands (outfitter/guides, for example) would continue as appropriate.*

Water System: Los Alamos County

The following water facilities occupy National Forest System lands in the project area (see figures 3, 4 and 5; pages 14, 15 and 16 respectively):

⁵ Because the legislation directs the land conveyance, the effects analysis serves mainly to disclose effects.

Townsite Tracts

- Tract A - Guaje Booster Station No. 3, Guaje Booster Tank No. 1 (60,000 gal.), Guaje Booster Tank No. 2 (1,000,000 gal.), 1,200 ft. of 16-inch transmission pipeline, 1,200 feet of electric line, plus access road.
- Tract B - Future expansion of Guaje Pines Cemetery and secondary access road to Ponderosa Estates wastewater lift station.
- Tract C - Group 12 Tank (500,000 gal.), Arizona Water Tank (7,750,000 gal.), 700 feet of 16-inch water line, plus access road.
- Tract D - Quemazon Water Tank (750,000 gal.), 500 feet of 12-inch water line, 500 feet of 10-inch pump line, plus access road.
- Tract E - Future installation of water line and gas line from Quemazon subdivision to the Western Area.
- Tract F - Los Alamos Canyon Dam (approximately 2-acre reservoir holding 23 acre-feet of water), 7,000 feet of 10-inch pipeline, plus access road.

Water System Lands

- Guaje Well Nos. 1A, 2A, 3A, 4A, and 5A, Guaje Booster Station No. 1.
- Guaje Booster No. 1 Tank (150,000 gal.), Guaje Sand Trap, Guaje Booster Station No. 2, Guaje Booster No. 2 Tank 1 (60,000 gal.), Guaje Booster No. 2 Tank 2 (100,000 gal.), 15,000 feet of 10-, 12-, 14-, and 16-inch pipeline, electric lines, plus access road.

Effects to the Water System

With the no action alternative, these facilities would continue to occupy National Forest System lands. Permits to allow this use would be brought up to current standards. Under the proposed action, once conveyance is complete, the permits would be retired. Direct, indirect and cumulative effects of the land conveyance would be the same as those predicted under the no action alternative. With the county managing the parcels for the water system, some efficiencies would be realized.

Grazing

There is no authorized grazing in the areas to be conveyed or in adjacent lands. The area is currently administered as a closed allotment and, therefore, not obligated. In addition the Settlement lands have limited grazing capacity as a result of terrain and lack of reliable water.

An environmental analysis report completed in 1977 describes the historic livestock grazing use within the Pueblo de San Ildefonso Settlement Land Transfer parcel(s) currently under the administration of the Santa Fe National Forest. The following are excerpts from this report (USDA 1977):

- The Pine Springs and Guaje Allotments were originally made up of 36,000 acres within the counties of Los Alamos, Rio Arriba, and Santa Fe.
- The majority of this area was included in the Manhattan District when the Atomic Energy Commission bought out all the grazing permits and acquired title to the lands in 1942.

- These lands were withdrawn, including the National Forest System lands, for defense purposes and conveyed back to the National Forest System in 1969.
- Grazing in these areas has been limited. The Española Ranger District has used the Guaje Allotment as an administrative pasture for horses. This allotment makes up the majority of the Settlement Area lands.
- The Pine Springs Allotment was grazed sporadically as a temporary pasture primarily by the Sierra Mosca livestock permittees in the mid-1970s.
- Both parcels remain unobligated to livestock use.
- Grazing capacity of the Guaje Allotment is limited due to the rough terrain and lack of reliable water which classifies the majority of the allotment as unsuitable to livestock use.
- Grazing capacity of the Pine Springs Allotment is recommended at 90 AUMs or about 30 head of livestock for 2 months. This allotment would remain under Forest Service administration.

Effects to Grazing

Under both the no action alternative and the proposed action, grazing would remain unauthorized on the allotments remaining in Forest Service administration (e.g. Pine Springs). No plans exist to authorize grazing in either allotment. Under the proposed action, the allotments and portions of allotments that are within the Settlement Area Lands and the Northern Tier lands may be used for grazing following tribal direction, but they would no longer be part of Forest Service grazing management. No grazing would occur in the Water System parcel or the Townsite parcels.

Mining/Minerals/Gas

According to Forest Service records, pumice has been mined from the tract being conveyed to the Pueblo de San Ildefonso since about 1958, with total production estimated to be more than 1.5 million meters or (2.1 million cubic yards). It was one of three pumice mines in this area in the 1990s, but all have been closed.

The nearest “hard-rock” mines are located in the southern Sangre de Cristo Mountains in the Nambé District (approximately 40 kilometers (25 miles) east of tract) which produced placer gold, and mica and beryllium from pegmatites.

One oil and gas lease was recorded which included part of the tract. This was lease NMNM 051553 issued on September 14, 1982 and terminated on October 1, 1987. No record of exploration or development associated with this lease was found.

Effects to Mining/Minerals/Gas

Under the no action alternative the area would remain subject to mining laws of the United States for development. With the proposed action, exploration or development could occur under tribal policy, but given the management of adjacent lands, this use is unlikely.

Copar Pumice Company's Guaje Canyon Mine

Copar Pumice Co. (Copar) operated the Guaje Canyon Mine since May 1994, with the main haul route being across the adjoining Pueblo de San Ildefonso. The Guaje Canyon Mine produced common variety pumice suitable for use in lightweight aggregate products. Overburden was stripped from the mine area using dozers and front-end loaders, then the pumice was mined using front-end loaders and loaded directly into belly-dump semitrucks. The pumice was hauled from the site to the Copar plant in Espanola for use.

During the term of this contract (May 1994 through March 2002) a total of 338,560 cubic yards was removed.

Following the Cerro Grande Fire in 2000, the access road through Guaje Canyon was closed due to erosion. The Forest Service verbally authorized Copar to haul up Rendija Road into Los Alamos while the road was being repaired. However, in March 2002, this permission was revoked due to conflicts between the truck traffic and the community. Copar was unable to negotiate an access agreement with the pueblo, so the mine was closed.

Prior to leaving the site in 2002, Copar reclaimed most of the disturbed area, leaving only the access road and working face unreclaimed. In 2006, Copar completed seeding of the site. Final reclamation depends on the success of that seeding, which will be evaluated in the spring of 2008. If any further reclamation is required after transfer it would be conducted under the authority of the Secretary of the Interior pursuant to the act, Section 7(f).

Effects to Copar Pumice Mine and Reclamation

Under both the no action alternative and the proposed action, the reclamation would continue until the desired vegetation cover is established. Effects of both alternatives are the same. With the proposed action, reopening the mine could occur, but given the management of adjacent lands, this use is unlikely.

Reserved Mineral Rights

When the surface estate for certain lands within this tract was re-conveyed to the Federal Government, the mineral rights on those 64.75 hectares (160 acres) were reserved by the owners, Thomas G. Cornish (Trustee) and others. The Warranty Deed dated March 2, 1964 between Cornish and the United States of America specifies the property is subject to several restrictions and reservations.

Effects to Reserved Mineral Rights

Under both the no action alternative and the proposed action, these reserved mineral rights would be subject to appropriate laws governing their development. Once conveyed under the proposed action, access would continue under the act's provision to maintain existing rights.

Public Service Company of New Mexico (PNM)

A gas line crosses Townsite Tract E. This line is currently under permit to PNM. Under either alternative this gas line would continue to be used. With the no action alternative, the existing permit would be used. Under the proposed action, the act would protect that current use by

requiring an easement be reserved for this continued use once the land is conveyed to Los Alamos County.

Hazardous Materials

None of the tracts have known hazardous waste sites. Tract B of the Townsite lands contains residue from an asphalt plant that operated in the early days of the Los Alamos National Lab’s development. Efforts to clean up as recently as the summer of 2007 have been underway. Site monitoring continues. Los Alamos National Laboratory proposes to continue work on asphalt cleanup on a periodic basis as it becomes exposed through erosion.

Effects of Hazardous Materials Cleanup

Under both the no action alternative and the proposed action, continued recovery of asphalt would occur as it is exposed. Rather than working with the Forest Service, however, once the land is conveyed to the county, Los Alamos National Lab would work with the county on the cleanup.

Cumulative Effects

The effects of the transfers to land tenure and special uses are small and so do not add in any substantial way to the impacts of other similar activities (e.g. other land transfers).

Recreation Resources

Summary: *Some dispersed recreation use would be affected by the land transfers to the pueblos because both the Pueblo de San Ildefonso and the Pueblo of Santa Clara are likely to restrict public access to their lands. Lands conveyed to the county would continue their current uses for hiking, mountain biking, and some motorized access. The act assures access to these lands by requiring the establishment of trail and road rights-of-way as part of the transfer.*

Recreation resources are described by two distinct geographic areas:

- The Settlement Area, as well as the Northern Tier lands and the Water System lands comprise the eastern portion of the project area. These lands are more isolated and receive a different use pattern than the lands closer to Los Alamos (see figure 3, page 14).
- The Townsite lands, which are Tracts A through F immediately adjacent to Los Alamos (see figures 3 and 4, pages 14 and 15 respectively).

Table 3. Recreational activities in the project area

Activities	Area	Comments
OHV Use	Settlement and Northern Tier parcels, Water System parcels	Most roads and trails experience OHV use (ATV and dirt bike) as well as truck. Uses include driving for pleasure, wood cutting, and visiting archeological sites.
Hiking/Trail Running	LA Townsite parcels	Very popular. Hiking and trail running occurs primarily in the LA Townsite parcels, as well as birding.

Activities	Area	Comments
Mountain Biking	LA Townsite parcels	Very popular. Occurs mostly in the LA Townsite locations, but all others as well.
Hunting	Settlement and Northern Tier parcels	Infrequent, but occurs.
Horseback Riding	All areas	Not common, but occurs, mostly in San Ildefonso, Santa Clara and Water System parcels.
Dispersed Camping	Settlement and Northern Tier parcels	There are no developed campgrounds in the project area. Dispersed camping occurs in both these parcels.

Settlement, Northern Tier, and Water System Affected Environment

Detailed data on recreational use of this relatively remote portion of the Española Ranger District is limited. Most of the information used in this analysis derives from the experience of Española Ranger District recreation program managers.

Recreational activities mainly consist of motorized use, including 4-wheel driving in SUVs, trucks, ATVs and dirt bike riding. There is also some non-motorized use, including mountain biking and hiking, and to a lesser degree, horseback riding. There is some dispersed camping and hunting. This portion of the district experiences moderate recreation use compared to other areas of the district. Recreational use appears to be primarily from locals, with few forest visitors or out of area tourists. The exception is non-locals who may be attracted to the area because of the wealth of archeological sites.

There are no campgrounds, picnic areas or other developed recreation facilities within these parcels. Roads are rutted and in generally poor repair, with signs often missing. There are more than 55 miles of roads in the area, but no system trails. Impacts from motorized use are evident on roads that receive heavy use, while other roads are in danger of disappearing due to lack of use and post fire effects like snags falling and heavy brush growing in.

There have been no recent substantial past actions such as trail construction or campground development within these parcels. Some road/trail maintenance occurs on a periodic basis.

These areas encompass portions of the Española Ranger District which receive moderate recreational use compared to other portions of the district (see table 3).

The Cerro Grande Fire in 2000 created the need for a general closure for most of this area. Lasting until 2004, this closure was in place to provide for public safety and to allow successful revegetation of burned areas with damaged/unstable soils.

Developed Recreation: There are no developed recreation sites in the form of campgrounds, picnic grounds, trailheads, or other developed recreation sites or facilities within these parcels.

Dispersed Recreation: Recreation activities in these parcels are of a dispersed and unregulated nature, including riding/driving forest roads and trails, hiking, touring archeological sites, and some dispersed camping.

Trails and Trailheads: There are no system trails or trailheads in these parcels.

Recreation Special Use Permits: There are no long-term recreation special use permits authorizing use in these parcels.

Townsite Lands—Affected Environment

These six small parcels lie along the forest boundary west and north of Los Alamos. These parcels contain many important trails, trailheads, and access points from town into the national forest. An active outdoor recreation minded community uses these trails to access many parts of the forest. Recreation is primarily local in nature, non-motorized, and consists mostly of hiking, mountain biking, and trail running, with some equestrian use as well. There is also some motorized use, primarily dirt bike riding, and one parcel includes the Cabra Loop Trailhead, currently the only trail designated as a motorized trail on the district.

There have been recent actions such as trail construction of the Perimeter Trail with community volunteers. This trail skirts the northern and western sides of town and links up most of the six units that comprise the Los Alamos Townsite parcels.

These areas encompass portions of the Española Ranger District that receive high recreational use compared to other portions of the district (see table 3).

Developed Recreation: Developed recreation improvements consist of trailheads with signs and informational kiosks. There are no campgrounds or picnic areas. The day-use area at Los Alamos Reservoir was destroyed by the Cerro Grande Fire. Safety concerns with the canyon and the dam have left plans for reopening this area for future evaluation. However, it is likely that as safety concerns are addressed, the potential to reopen the area increases.

Dispersed Recreation: Recreation activities in these parcels are of a dispersed and unregulated nature, including hiking, mountain biking, trail running, equestrian use, and some dirt bike riding.

Trails and Trailheads: There are several important trails that have trailheads or junctions within these parcels, including the Perimeter Trail 290, Los Alamos Canyon Trail 294, Rendija Trail 297, and Mitchell Trail 69. There are 7.5 miles of trails within these parcels that provide important opportunities and connections to other Forest Service and Los Alamos Trails. These facilities will be reserved to the United States.

Special Use Permits: There are no long-term special use permits in this area. Short-term uses include local club events that occur from time to time.

Currently, there are user created (unauthorized) motorized trails that have been proposed for use as part of travel management planning (to be completed by the year 2009/2010). The rights-of-way reserved as part of the proposed action would preserve public use of these existing system trails. Whether that use is motorized or non-motorized would be determined by the travel management process. The exception is where the Settlement Lands have specific restrictions on use, such as Guaje Canyon Road, where the easement will be to public access by non-motorized means only.

Unauthorized trails would no longer be available for inclusion in a travel management system, but to date, the travel management process has identified no unauthorized trails that lie in the lands to be conveyed.

No Action Effects

With the no action alternative, existing impacts caused by OHV use would continue in the Settlement area, the Northern Tier and Water System lands. OHV use has caused resource damage, in particular to soils, vegetation and heritage resources. With implementation of the Travel Management Rule by the year 2009/2010, the level of damage would decrease as the motorized public responds to the new management requirements.

Public education would continue to occur to help OHV users understand the damage they can cause and to lessen the impact from that activity. Controls—such as area closures—could be implemented as necessary in some areas to prevent further degradation.

Any impacts from dispersed camping would continue to be short term and minor (e.g. ground disturbance). In spite of the lack of developed facilities and relatively frequent motorized recreational use, the area has significant recreational potential, including scenic vistas, a wealth of heritage and archeological sites to visit, and opportunities for solitude.

Recreation potential at Los Alamos Reservoir would continue to be evaluated against safety concerns, with a likely redevelopment as a day-use area, but such an action is not currently being contemplated by the Forest Service in the near future (e.g. next 5 years).

Environmental Effects of the Proposed Action

Once transfer takes place, the larger acreages that are being conveyed to the tribes (Settlement, Northern Tier) would result in loss of more than 7,800 acres and almost 55 miles of roads no longer available for recreation because of the likely public access restrictions on these lands.

Opportunities for the general public to use these lands would be reduced or eliminated, depending on tribal policy. With the conveyance, a reduction of recreational opportunities will occur in an area currently used for motorized recreation. One area in particular, the old pumice mine, has been a popular OHV area and this analysis assumes it would no longer be available.

For National Forest System lands west of the lands conveyed to the Pueblo de San Ildefonso, access would continue on Forest Road 416 and 416v as specified in the act and settlement agreements. Loss of the pumice mine for motorized use is likely to shift ATV use onto other areas of the forest that have not seen this use at any detectable level. For example, although evidence has been found during site visits that Road 416v is used by ATV and motorcycle travel, there is no indication of extensive off-road use. Site review and fire recovery data indicate that soil and other resources at the end of Road 416v (near an existing water tank) are less suited for ATV use than the old mine site has been.

With the implementation of a closure order (page 13), potential impacts of such a shift can be avoided by restricting off-road use to the existing roads. Thus, this effect to other resources would be minimal. It would, however, change the recreation experience for ATV and motorcycle users away from open, cross-country travel to more restrictive on-road use.

Success of this mitigation depends on enforcing the closure and cooperation of the public. Barriers would not be effective in the burned over and open landscape. With implementation of the travel management planning effort in 2009/2010, success would be expected to increase as enforcement becomes more effective.

For National Forest System lands west of the Northern Tier lands, public access would continue on Forest Road 416, Road 416v, Road 446h, Road 446 and Road 445. There will be no road reservations on the Northern Tier lands, except for the Department of Energy (DOE) stream gauge. The Pueblo of Santa Clara will provide administrative access on the road system north of the Northern Tier lands as part of the legislation. The Forest Service would grant easements to the Pueblo de San Ildefonso and private landowners on roads accessing their properties.

Transfer of the Water System and Los Alamos Townsite parcels would not have any direct or indirect environmental effects since there would be no change in management that would affect recreational use. The county would grant access to the Forest Service on Tract B of the Townsite lands for public use.

Recreation Cumulative Effects

Since the proposed action is expected to curtail all recreational use in the larger Settlement and Northern Tier parcels, it is likely that other nearby portions of the forest would experience an increase, primarily in motorized and OHV use. The Santa Fe National Forest's travel management process would provide a benefit to those lands not suitable for OHV use in the project area by reducing impacts from OHV use on them. At the same time, some opportunities would be created and experience improved where motorized use occurs as a result of the travel management effort. Also as part of the travel management decision, specific closures as well as possible adaptive management closures will provide for appropriate motorized use. Additional recreation opportunities are expected to be available because of public access to DOE lands transferred to the county, as well as additional opportunities at the Valles Caldera National Preserve.

Since there are expected to be very small direct or indirect effects of a negative nature to recreational use of the Water System or Los Alamos Townsite parcels, there are no cumulative effects expected in these areas from the proposed action. Los Alamos County's intent to redevelop the day use of Los Alamos Reservoir would eventually create opportunities for recreation in this parcel, regardless of ownership.

Heritage Resources

Summary: *Land transfers to the pueblos would not have an adverse impact to heritage resources in the project area. Lands with heritage resources that are conveyed to the pueblos would be held in trust by the Federal Government, with continued protection under Federal regulations. Lands conveyed to Los Alamos County would be managed for current uses (water system and cemetery). Surveys indicate heritage resources occur in some of these parcels and so conveyance away from Federal protection has the potential to have an adverse effect on these particular sites. Coordination would occur to develop strategies to comply with NHPA before conveyance. Strategies developed in consultation with the Advisory Council on Historic Preservation, the State Historic Preservation Officer and other parties could include conservation agreements, data recovery or other methods. Reconstruction of Forest Road 416v has also been*

analyzed. The proposed road work with mitigation measures will not adversely affect heritage resources.

Regulatory Framework for Heritage Resources

Under the provisions of the National Historic Preservation Act (NHPA 1966, as amended; 16 U.S.C. §470), adverse effects to heritage resources include a variety of criteria affecting the potential eligibility of heritage resources for inclusion on the National Register of Historic Places (NRHP) (36 CFR §800.9b). Specifically, effects may be deemed adverse according to the following (36 CFR §800.5[1]):

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register.

Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative. Under this regulation, adverse effects may be direct, related to a specific project, or indirect, arising at a later time as a consequence of a given project.

Specific examples of adverse effects cited in statute include (36 CFR §800.5[2]i-vii):

- Physical destruction of or damage to all or part of the property.
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary's standards for the treatment of historic properties (36 CFR, Part 68) and applicable guidelines.
- Removal of the property from its historic location.
- Changes of the character of the property's use or of physical features within the property's setting that contribute to its historic significance.
- Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features.
- Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and heritage significance to an Indian tribe.
- Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

In the study area, potential direct impacts to heritage resources may result from transfer of lands out of Federal ownership. Other potential indirect impacts, such as changes to the visual quality that affects a site's setting or surroundings, impacts to the heritage landscape, the introduction of

elements out of character with the surroundings, the isolation of a site from its setting, increased erosion that exposes or damages a site, and deposition of sediment from offsite erosion.

Settlement Area Lands Affected Environment

The Pueblo de San Ildefonso Settlement lands are a complex geologic and heritage landscape. This parcel consists of two blocks separated by Rendija Canyon and totaling about 7,142 acres. The area is characterized by steep walled, softer rock (tuffaceous) cliffs and flat mesa tops dominated by Bandelier Tuff. The Rendija lavas featured on Guaje Mountain are an eastern extension of the volcanic field in the Valles Caldera. Talus debris along the cliffs lies adjacent to recent undifferentiated terrace and alluvial deposits along modern streams.

This landscape forms the basis for prehistoric settlement dating between AD 1200 and 1325. There are 75 documented heritage resources in the area featuring sites with pueblos composed of multiple rooms of stone and adobe with associated midden deposits and dense, surface artifact scatters, agriheritage alignments and thermal features. Several of the larger pueblo complexes contain subsurface pit structures (kivas) and reservoirs. Smaller structures such as 1-room fieldhouses and isolated artifact scatters are also common. Eroded cavate (cave rooms) and associated talus slope houses are well represented in the area but given the erosive nature of the rock, they are typically fragile and in poor condition.

Sites dating to the more recent historic period, generally 19th and 20th century, are attributed to both Hispanic and Anglo occupation and use. An area known as the “Bean Field” is an example of this type of occupation, but structures representative of the area’s Anglo American occupation have not survived to the present. For example, the Pine Springs cabin was destroyed by an arson fire in the mid-1990s along with a telephone line that ran from Bandelier National Monument to Santa Clara Canyon. Cabins near Chupaderos Canyon were burned during the Cerro Grande Fire of 2000.

The prehistoric era resources are considered by the Tewa people of the Pueblo of Santa Clara and Pueblo de San Ildefonso as special places in their ancestral landscape. Santa Clara Pueblo tribal reservation lands lie north of the Settlement area and San Ildefonso tribal lands lie east of the Settlement lands.

Conversations with tribal members who hunt on adjacent tribal and forest lands consistently express concerns about vandalism to the most obvious and noticeable of the sites: the cavate (open cave) dwellings. Because they are the most visible and unique resources, they receive more unwelcome attention by hikers who frequently damage the fragile layers of floor plaster in the caves. Talus (slope) houses in front of the cavates and larger structural pueblo remains atop the mesas exhibit “piling” behavior where artifacts, if not removed from the site, are left in curious heaps. Other visitor created trails run on top of the mesas where larger sites are located. However, these are less a problem as users tend to stay on the trails, occasionally venturing off, but otherwise restraining themselves from digging in rooms or kivas.

Observations of Guaje Ridge Ruin, a National Register property adjacent to the Settlement area, indicates that motorized trail bike riding bisects the ridge where the archeological features are located but these features are not adjacent to the trail used for this riding, and so this use does not cause damage to pueblo rooms. The Settlement lands are monitored by forest trained Site Stewards who visit bimonthly and report activities and site conditions in writing.

Settlement Area Lands—Effects of No Action

Under the no action alternative, there is no change in current management and use of the canyons and mesas. In addition, while impacts created by recreationists visiting heritage sites would continue, the area would continue to be monitored by heritage Site Stewards. Access to sites would not be restricted, and so concerns by tribal communities on impacts to traditional use areas and special sites would continue.

If the area remains under Forest Service management, neither the proposed road work through the Forest Road 416v corridor and potential data recovery at the heritage sites in that corridor would be required.

Settlement Area Lands—Effects of the Proposed Action

Once the Settlement land is conveyed, reduced public access would result in less impact to the heritage resources on these newly acquired tribal lands. This would lead to recovery of the high use, heavily visited sites from damage by eliminating the potential for further disturbance.

On National Forest System lands west of the Settlement Area lands, there would likely be an increase in the amount of disturbance to highly visible sites because recreationists' historic access/use would be substantially reduced on the Settlement Area lands. An area closure would mitigate increased motorized use by restricting such uses to existing roads.

The reconstruction of Forest Road 416v would involve five sites, but given mitigation measures (page 12), the activity would result in no adverse effects to the qualities that make these sites eligible for the National Register of Historic Places. Sites with an *undetermined* eligibility are considered *eligible* for purposes of consultation. This means they receive the same consideration as eligible properties, yet for archeological reasons, they require additional investigation to determine if they meet the eligibility criteria.

The potential increase in visitor traffic and use of the area at the terminus of Forest Road 416v (Bean Field tank area and Forest Road 446H) has potential to cause disturbance to the Guaje Ridge Ruin, which is less than a quarter mile northwest of this point. In addition, there is a small, not highly visible but hard to avoid, pueblo site located at this junction. The closure to motorized vehicles off the road (page 13) will mitigate this potential effect.

Also it is important to consider road maintenance as a means to avoid vehicles getting off the access routes (e.g. Corral, Sawyer, Chupaderos, Garcia, Alamitos Canyons).

In summary, with mitigation measures in place, no adverse effects are expected from the transfer of lands to the tribe or road reconstruction. Long-term cumulative impacts would also be minimized by implementation of the Travel Management Rule.

Northern Tier Lands Affected Environment

The Northern Tier contains about 748 acres, in two units; one a small, 5-acre block adjacent to Puye Cliffs Road and the other, an irregular parcel carved around private lands. The nearest access to both is via the "Garcia gate" although access is also provided through the "Sawyer gate" approximately 3 miles west along Puye Cliffs Road, which is closed to general use by the Pueblo of Santa Clara. The Northern Tier is one-half mile south of Puye Cliffs, a popular tourist

attraction (until the Cerro Grande Fire in 2000), located on Pueblo of Santa Clara lands. Both gates are controlled by the Pueblo of Santa Clara and, thus, access except for administrative use by the pueblo and Forest Service during fire season is restricted. Currently visitors drive into the area via Los Alamos and Rendija Canyon, then follow Forest Road 416 to the area.

Geology and soils are similar to that documented in the Settlement Area where steep-sided, soft cliffs form the parent material from which the cavate enclosures and the attached talus house pueblos that are the predominant heritage resource in the parcel are constructed.

Typical historic properties are part of the same heritage landscape described for the Settlement Area due south. Both parcels are only separated by a quarter-mile swath of private land. Cavate complexes are visible along the tips of both Corral and Garcia Mesas. Recent documentation by heritage staff and volunteers (1994-1999, 2004-2006) have identified at least 10 new heritage sites along the eastern edge of these two mesas, bringing the known heritage site total to approximately 25 sites.

No heritage management program has been present in the Northern Tier except for seasonal volunteer efforts, such as Passport in Time (PIT) and Site Stewards. The resources along the cliffs form a pattern similar to other south-facing slopes where numerous cavate enclosures are punctuated by large (viga) holes that represent the horizontal log support for multistory room blocks in front of the cavates that are in effect, the back rooms of these unusual pueblo units. The cavates are similar to others in the area. They reflect heavy, long-term visitation where smoke blackened interiors with delicate wall features such as niches, loom holes, and pictographs and multiple plastered floor layers are erased. As a result of people visiting and of past grazing, valuable heritage information, such as pollen fill in floor pits, has been lost.

Along the Garcia face, handholes and footholes are additional unique features linking the cavate communities on the slope to the mesa top pueblos above. Unlike the more access friendly, highly eroded handholds at places like Tsankawi, these features on the Garcia mesa slope are on more vertical faces and, thus, harder to negotiate and more protected.

The Northern Tier lands are a particular concern for the Pueblo of Santa Clara. Two years ago a mining company returned several hundred acres of mine adjacent to the Northern Tier to the pueblo.

Northern Tier Lands—Effects of the No Action

Under the no action alternative, Forest Service management would continue and heritage specialists and Site Stewards would periodically monitor the sites. Heritage sites would remain in much the same condition where minimal, if any, protective actions are initiated to mitigate site damage.

The recreating public would continue access into the area with little change in their behavior toward visible heritage resources. Prior to Cerro Grande Fire in 2000 the area was a popular half-day trip from Los Alamos. Following the fire, the area was closed, later opened, but with decreased visitation due primarily to the poor quality of the roads and the threat of falling trees. In the past few years however, despite unmaintained roads, visitors still look to the challenge of negotiating bad roads and climbing to archeological “ruins.” This would be expected to continue if the transfer did not take place.

Northern Tier Lands—Effects of the Proposed Action

Conveyance of the Northern Tier lands would have an effect similar to removing the Settlement Area lands from Forest Service management. Forest visitors, cut off from a familiar recreation area, could shift use to similar resources on National Forest System lands remaining to the west. This would concentrate use and possibly impacts to the remaining cavate, talus house and mesa top pueblos along Corral and Garcia Canyons' slopes and mesa tops. However, with access more difficult because of the change to FR 416v away from FR 416, this reduced access is expected to be a benefit to these heritage resources as well.

Loss of access to these lands by Forest Service and outside researchers would result in no further documentation of these areas, so information would be less available.

Los Alamos County Water System—Affected Environment

The Los Alamos County Water System consists of about 550 acres located along the bottom and slopes of Rendija Canyon, an entrenched tributary of Guaje Canyon, and continuing into Guaje Canyon to encompass Los Alamos County's water system. Geology is consistent with quaternary deposits found in the Settlement and Northern Tier lands.

The area has had limited heritage surveys since between 1991 and 1998. This survey occurred along the bottom of Rendija Canyon and parts of Guaje Canyon (total approximately 70 acres), with no sites identified during these surveys. Although there is the potential for heritage sites located along some of the slopes, their steepness has prevented intensive survey and the likelihood of finding rock shelters in the vicinity is minimal. To augment these surveys, a survey plan designed for the area as part of this project included two areas: a transect was conducted along the south side of Rendija Canyon and a second transect along a flatter area on the western portion of the Los Alamos County Water System parcel. Appropriate evaluation and protection/data recovery development will assure compliance with the NHPA and implementing regulations (page 12).

Effects of the No Action and the Proposed Action

Under either the no action alternative or the proposed action, the area would continue to be used for the Los Alamos County Water System. Little additional ground-disturbing actions are expected. In addition, the road access to the southeast is currently blocked by the Pueblo de San Ildefonso, which keeps the corridor somewhat protected from recreationists. If heritage resource sites are found during a new survey, the ability to access them from the southeast is still restricted and users, knowing the area is blocked, reduce the amount of time spent traveling along a road with only one way out.

No cumulative effects are expected under either the no action alternative or the proposed action because direct and indirect effects of continuing this use are negligible.

Los Alamos Townsite Parcels—Affected Environment

There are six tracts within the Los Alamos Townsite parcels (figures 4 and 5, pages 15 and 16 respectively). Geology, soils and landforms are consistent with the previously discussed parcels. Surveys for previous undertakings and for this project indicate a range of use and site eligibility. Some locations, such as Tract A, have poor opportunities for past use because of the dissected

nature of the terrain. Tract B, on the other hand, displays a more complex pattern of use by Native Americans (Tewa ancestry) along with Anglo-American components. Tract F (the Los Alamos Reservoir) contains one site found not eligible for the National Register of Historic Places because its integrity has been compromised by repeated improvements. Before conveyance, appropriate evaluation and protection/data recovery development will assure compliance with the NHPA and the law's implementing regulations (page 12).

Effects of the No Action and Proposed Action to Townsite Lands

Under the no action alternative, there would be no change in management of the area so that the impact to heritage resources is low. As noted, heritage resource sites have been found in several of the parcels, but sites located in the area are not substantial. Examples include walled structures that are highly visible and attractive to the public and, therefore, more susceptible to vandalism. However, since there are few reported impacts by the public to these sites, the effect of the no action alternative would be low. The steepness of many of the parcels indicates finding new sites is unlikely, but any future ground disturbance under current management would require further survey and appropriate protection of any newly found sites.

Although there are no restrictions on the Townsite parcels to prevent future development, Los Alamos County has expressed its intent to continue to use these areas as currently used, for either water supply or cemetery (Mortillaro 2007). Nevertheless, before conveyance, known sites would be evaluated and appropriate steps taken to comply with NHPA. Therefore, once the land is conveyed to the county, potential for ground-disturbing development, primarily in Tract B, adjacent to the Guaje Pines Cemetery would not cause additional effects.

If evaluation of heritage resource sites in the Townsite parcels found them eligible for inclusion in the National Register (subject to consultation with tribal governments and consultation and concurrence with the SHPO), then a strategy would be developed for protection/data recovery consistent with NHPA.

Cumulative effects to heritage resources would likely benefit from Travel Management Rule implementation, which would cumulatively reduce impacts to heritage resources in the area by limiting motorized access to a designated system.

Water and Soils

Summary: *The soil and water resources of the lands proposed for transfer have been impacted by the Cerro Grande Fire, but are recovering. The transfer of land would not change this condition or change the rate of recovery. With mitigation in place, reconstruction of Forest Road 416v would have a slight beneficial effect over the long term by providing better hydrologic condition (e.g. better water runoff) for this road. A closure to restrict motorized use to existing roads would also prevent impacts from off-road use expected from the change in public use expected as a result of the conveyance of land to the tribes.*

Affected Environment

The Settlement Area, Northern Tier, Water System and Townsite lands are located in the eastern Jemez Mountains, specifically the eastern flank of Sierra de los Valles that breaks to the gentler slope of Pajarito Plateau.

The Pajarito Plateau developed from ash fall, pumice and rhyolite tuff that together comprise the Bandelier Tuff. This formation covers older basalt to a depth of up to 1,000 feet (NPS, 2007). Deep canyons having a northwest to southeast alignment creating high vertical walls and elongated moderate sloping mesas dissect the plateau. Valley bottoms consist of alluvium deposits primarily derived from eroded tuff and basalt. Land transfer tracts include nine geomorphic landforms, which describe the surface of the earth in broad descriptions, based on the Terrestrial Ecosystem Survey (USDA Forest Service, 1993). The dominant landforms are elevated plains or mesa tops (41 percent), scarp slopes and hillslope scarps and steep valley slopes or canyons (35 percent) and lowland plains hills (17 percent).

The surface hydrology and drainage patterns of contributing watersheds, above and within the land transfer tracts, have a dendritic drainage pattern in the headwaters transitioning to deeply incised parallel drainage patterns (narrow canyons). Average annual precipitation ranges from 25 inches in higher elevations to 15 inches in lower elevations, falling as snow during the winter months, as large-scale frontal storms with low-intensity rainfall during spring and fall, and as localized high-intensity thunderstorms from June through September. In these semi-arid ephemeral stream channels, rainfall generated flows are of relatively short duration and high intensity during the monsoon season, with extended low flows from long duration storms during the spring and fall (Englert, et al. 2004).

The Pueblo de San Ildefonso Settlement lands are located entirely within the 249,849-acre 5th level Hydrologic Unit Code (HUC) Pojoaque River – Rio Grande watershed.

Other tracts are divided within four 6th level HUC sub-basin watersheds, with the percentage of lands changing ownership at about 25 percent for lands conveyed to the Pueblo of Santa Clara and Pueblo de San Ildefonso. Lands conveyed to Los Alamos County would be about 13 percent of the relevant watershed.

Soil development has been greatly influenced by local volcanic geology, climate, mountainous and dissected canyon topography, and vegetation. The hydrology and soils of the land transfer tracts and contributing watershed areas have been dramatically affected by the Cerro Grande Fire of May 2000, which burned approximately 43,000 acres along the eastern rim of the Jemez Mountains and Pajarito Plateau (BAER, 2000). Of the 43,000 acres that burned, 25,633 acres were national forest lands, 15,270 acres were on other Federal lands, and 2,067 acres were privately owned (USDA Forest Service, 2005).

Surface vegetative and soil characteristics were altered by the fire resulting in increases in erosion and runoff relative to pre-fire conditions (Lavine et al., 2005). Due to the magnitude of the Cerro Grande Fire and proximity to Los Alamos Laboratory, many investigations have focused on post-fire effects to the soils and hydrology. For example, the watershed above Los Alamos Reservoir (Los Alamos County land transfer Tract F) has been studied extensively to determine post-fire effects on erosion and sedimentation rates as well as watershed recovery following the Cerro Grande Fire (Levine et al., 2005). Reservoir sediment deposits were evaluated for a period of 5 years after the fire to determine pre-fire and yearly post-fire soil loss rates for the contributing watershed that experienced moderate to high burn severity (32 percent), low burn severity (36 percent) and was unburned (32 percent).

Post-Cerro Grande Fire soil loss rates for the land transfer tracts that experienced moderate to high burn severity were well above potential soil loss due to the hydrophobic effects or decrease

in soil infiltration in addition to consumption of the litter or duff layers, vegetative ground cover and, to a lesser extent, overstory cover.

Soil loss rates have sharply decreased as vegetation became re-established and watershed recovery occurred. Present soil loss rates from moderate and high severity burned acres have recovered to near pre-fire rates and may range between slightly above current and well below tolerance soil loss rates, while low burn severity and unburned acres were not adversely affected and remain at current soil loss rates.

Before recovery, the Cerro Grande Fire exacerbated the water runoff conditions and sediment yields that previously formed and maintained the channel systems on Pajarito Plateau (Englert et al., 2004). Soils that experienced moderate to high burn severity had reduced soil infiltration (hydrophobic effect) and storage capacity resulting in greater runoff and flooding in channels draining the watersheds. Cerro Grande Fire impacts to the upper watershed of Pueblo Canyon have changed the flow regime through increases in peak flows (flooding and flood impacts), total discharge, and sediment yield.

Runoff conditions that followed the Cerro Grande Fire vary, and are dependant on the fire severity and extent of the fire in each watershed and size of the watershed.

Channels have responded to the increased magnitude, frequency, and duration of flow and the resultant substantial increase in sediment load—suspended and coarse-grained—after the Cerro Grande Fire. This has resulted in channel morphology adjustments through lateral extension of banks, flood plain development, deepening and widening of the channels, straightening of the stream pattern, and an increase in channel slope. Although channel morphology will gradually achieve stream morphology similar to what existed before the fire, advancement of the tributary drainage network will continue far into the future to compensate for the new base level that now exists at the lower elevation (Englert et al., 2004).

Stream channel reaches that are undergoing adjustments within land transfer tracts are dominated by intermittent flow regimes (30 miles), a small reach having a perennial flow regime (0.1 mile) and the Los Alamos Reservoir (0.1 mile).

The New Mexico Environmental Department has identified five surface waters within land transfer tracts that do not meet state water quality standards. These are listed in the State of New Mexico Water Quality Control Commission Integrated Clean Water Act 303(d)/303(b) report (NMED, 2004). The Cerro Grande Fire of 2000 is listed as a probable source of impairment that has resulted in high erosion and sedimentation rates as well as mobilization of contaminants that adhere to the sediments. Streamflow data and water sampling data collected at stream gages is available online (USGS National Water Information System).

Environmental Consequences—No Action/Proposed Action

Under either alternative, the area would continue to recover from fire effects since management activities are not expected to be different in any of the parcels. Present soil loss rates from moderate and high severity burned acres have recovered to near pre-fire rates and may range between slightly above current and well below tolerance soil loss rates, while low burn severity and unburned acres remain at current soil loss rates.

The tracts and their contributing watersheds that burned at low, moderate and high severity have recovered to near pre-fire hydrology showing diminished peak flows and stabilized runoff conditions.

In either alternative, channel morphology will gradually achieve stream morphology similar to that before the fire as described above. Processes such as headcutting will continue far into the future. Pre-fire hydrology, soil loss rates and channel morphology will be fully achieved as overstory vegetation in moderate and high severity burned areas becomes re-established.

The only difference between no action and the proposed action is that under no action, Road 416v would continue to be used for off-road access by mountain bikes, motorcycles and possibly 4-wheel vehicles until the decision is made on this area through the travel management process. Otherwise, impacts to soils and water resources would not change from current conditions.

With reconstruction of Forest Road 416v, improved access to the area near the terminus of Forest Road 416v would occur. With better access, OHV activities would be expected to increase. Without mitigation, this increased use would likely affect vegetation cover and soils in adjacent lands. This would set back their recovery from the Cerro Grande Fire effects. The closure to non-motorized use off the road would reduce the likelihood of this occurring. Road drainage improvements, road realignment, and installation of dips/culverts would reduce water concentrations on the road surface resulting in reduced soil loss and sediment delivery.

Cumulative Effects to Soil/Water

Cumulative effects are often analyzed by watershed, commonly at the 5th or 6th Hydrologic Unit Code (HUC) level. Cumulative effects analysis addresses the incremental impact of an action when added to other past, present, and foreseeable future actions, regardless of what entity undertakes such other actions (40 CFR 1508.7).

Cumulative effects within a watershed can be defined as the total impact, positive or negative, on: runoff, erosion, water yield, floods and water quality that result from the incremental impact of a proposed action, when added to other past, present and reasonably foreseeable future actions occurring within the same natural drainage basin (watershed).

It is expected that conveyance of lands having existing recreational amenities (i.e. hiking trailheads and trails) located on Townsite tracts would be maintained and improved in the future. Trail maintenance and possible future trail construction would not have an adverse effect on existing soil/water resources.

Also in either alternative, maintenance of the Los Alamos Reservoir would be needed as larger re-mobilized channel sediment deposition continues. This maintenance would require compliance with all relevant permits and restrictions regardless of land ownership and so the effects would be identical.

For lands adjacent to the Settlement Area lands, displacement of OHV use is expected because of the loss of the old pumice mine. In addition to the closure proposed as mitigation in this project, implementation of the travel management plan currently underway would reinforce the effectiveness of this closure and so would be a beneficial cumulative effect.

There would be no long-term, cumulative effects to the soil/water resources because no single or multiple actions described will result in additive or interactive effects.

Wildlife Resources

Summary: *Wildlife resources in the project area would not be affected by the change in landownership. For the lands going into Tribal Trust, land management activities would still be subject to major Federal laws designed to protect biological resources, such as the Endangered Species Act. For lands conveyed out of Forest Service management, a less restrictive regulatory framework for protection of some species is expected. For example, no restrictions would be in place for Forest Service designated sensitive species or for management indicator species (MIS), but because management is not expected to vary substantially from current use, no impacts would be expected, even without this designation. For animal species protected under the Endangered Species Act (such as Mexican spotted owl), some protections would continue to apply. Moreover, none are located in the parcels to be conveyed. Other species, such as the Jemez Mountains salamander, are protected by the State and so a transfer would not affect protection. Aside from the change in regulation, no actual effect would occur because no listed species would be affected. Effects to sensitive species would not occur, and effects to MIS and migratory birds would not occur. Some wildlife benefit would result because of the more restricted access to pueblo lands which, in general, would result in increased wildlife habitat effectiveness.*

Threatened, Endangered, Sensitive Species Affected Environment

Endangered Species Act listed, proposed, threatened or endangered species and/or critical habitats for the Santa Fe National Forest are limited or do not occur (USDA 2004). Rio Grande silvery minnow, Mexican spotted owl and Holy Ghost Ipomopsis do not occur in the area. No critical habitat exists for these species within these areas.

Table 4. Threatened and endangered species

Species	Status	Habitat Present
Mexican spotted owl <i>Strix occidentalis lucida</i> Critical Habitat	Threatened	One unoccupied PAC within the project area; possible foraging habitat. No critical habitat.
Rio Grande silvery minnow <i>Hybonathus amarus</i>	Endangered	No habitat for this species. Does not occur in project area.
Holy Ghost Ipomopsis <i>Ipomopsis sancti-spiritus</i>	Endangered	No habitat for this species. Does not occur in project area.

Mexican Spotted Owl Affected Environment and Effects

Habitat within the project area for Mexican spotted owl is within Los Alamos Canyon at the location of the reservoir and up canyon. This area has a PAC partially within Parcel F (see attached map) slated to change ownership. None of parcels A-F or the Pueblo de San Ildefonso/Pueblo of Santa Clara parcels are within critical habitat.

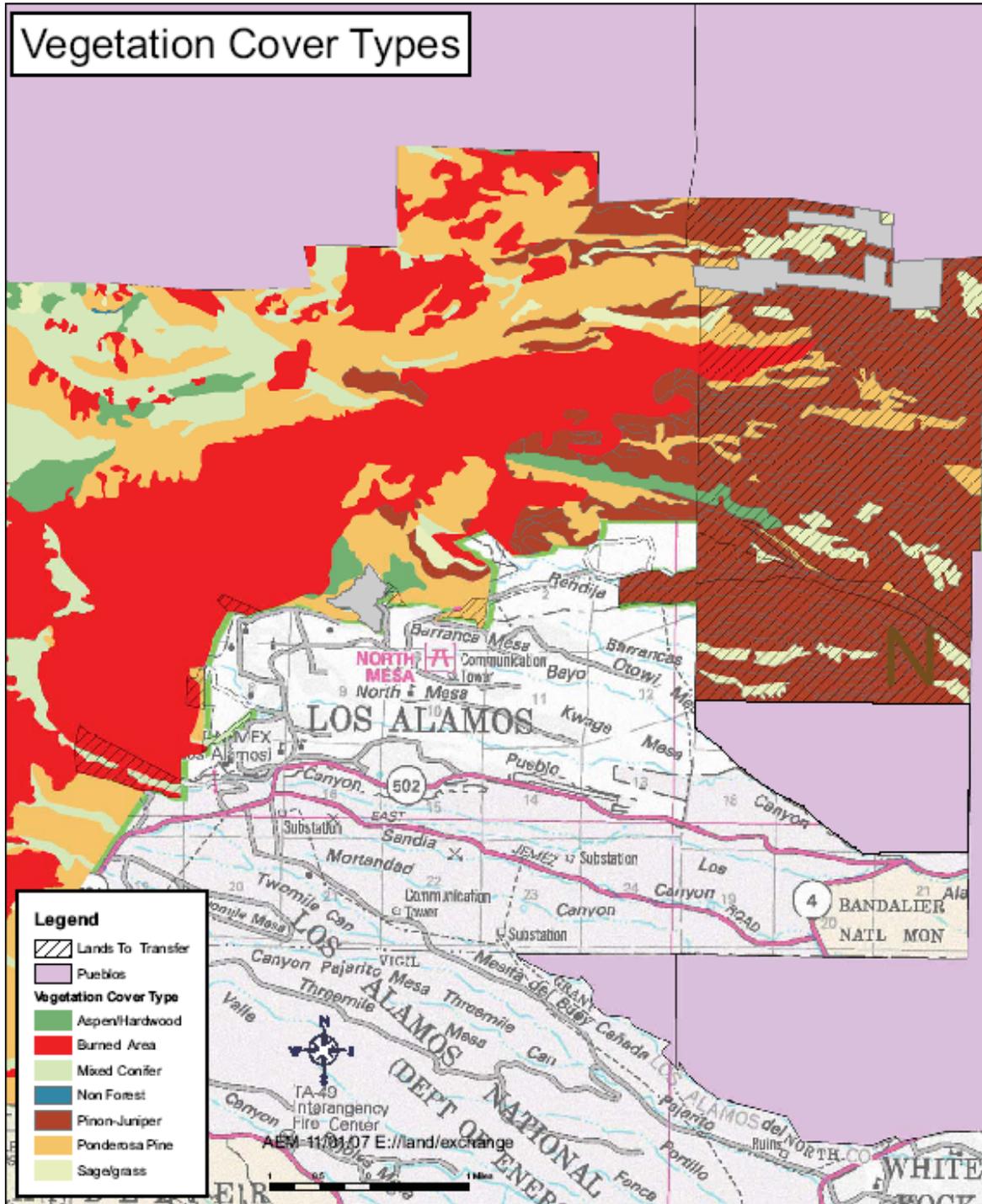


Figure 8. Vegetation/habitat types in the project area

The reconstruction of Forest Road 416v parallels Guaje Canyon on the north edge instead of Forest Road 416 which lies in a north-northeast direction away from the canyon rim. FR 416V was a barely discernible two track and will become the main access to the remaining forest land. No activities are proposed that would alter tree densities, snags, down woody debris, or other elements of habitat.

The Los Alamos Canyon protected activity center (PAC) was created from a management unit (MU) from the early 1990s. The MU was based on one response to a survey. No nest was ever located. Two years of subsequent survey to protocol of the area for the proposed large capacity transmission line called the Ojo Line Extension were negative.

Tract F is the Los Alamos Reservoir parcel (221 acres, figure 4, page 15), which must be offered to Los Alamos County under the act. The area was severely burned in the Cerro Grande Fire in 2000. The tree canopy within the canyon surrounding the reservoir was burned off and the steep slopes became very unstable. The reservoir was dredged with an excavator after completely filling with debris coming off the slopes in 2001 and 2002. This was done to allow the reservoir to collect water and prevent downstream flooding during major storm events. Water from Los Alamos Creek flowing into the reservoir is continually drained out again through the existing discharge pipe. The canyon has been occupied by great horned owls (GHO) at least 1 year since the Cerro Grande Fire. Juvenile GHO were seen and reported in a burned snag close to the reservoir.

The reservoir currently is not storing water because of concerns about the hazard rating of the dam. In 2006, the New Mexico Office of the State Engineer found it to be a high hazard dam. When these concerns are mitigated, water storage would likely resume. Access is through a single gravel road at the bottom of the canyon that ends at the reservoir. The proposed action could slightly or moderately increase the recreational activities sooner than no action because the county intends to reopen the area to day use recreation (“Recreation Resources,” page 26). Fishing, picnicking and hiking were all uses of the area before the Cerro Grande Fire. Even once these activities were restored, they would have minimal impact to wildlife. No activities are proposed that would alter tree densities, snags, down woody debris, or other elements of habitat.

Other activities would consist of increased use of Forest Road 416v. Forest Road 416v proceeds westerly from the junction with FR 416 north of Guaje Canyon, then it veers northeast toward Chupaderos Canyon. Reduced activity would occur on the land going to Pueblo de San Ildefonso and Pueblo of Santa Clara (which is not MSO habitat). It is likely that this land would be limited to access by tribal members or individuals granted access. No cumulative effects to MSO are expected because no other activities are taking place or are expected in the foreseeable future in the area.

The nature of the land use within the PAC would not change from what it was in the past. Currently the habitat is not considered suitable for MSO and will not be for decades, therefore this project may affect, is not likely to adversely affect the Mexican spotted owl. During informal consultation, the U.S. Fish and Wildlife Service concurred with this determination.

Sensitive Species

Table 5 displays the Forest Service Sensitive Species for Santa Fe National Forest from the Regional Forester’s List, 1999.

Table 5. Sensitive Species

Common Name	Scientific Name	Present (yes or no)
Goat Peak pika	<i>Ocotona princeps nigrescens</i>	No
NM meadow jumping mouse	<i>Zapus hudsonius luteus</i>	No
Swift fox	<i>Vulpes velox</i>	No
American peregrine falcon	<i>Falco peregrinus anatum</i>	Yes
Bald eagle	<i>Haliaeetus leucocephalus</i>	No
Boreal owl	<i>Aegolius funereus</i>	No
Northern goshawk	<i>Accipiter gentilis</i>	Yes
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	No
White tailed ptarmigan	<i>Lagopus leucurus</i>	No
Jemez Mountains salamander	<i>Plethodon neomexicanus</i>	Yes
Northern leopard frog	<i>Rana pipens</i>	No
Rio Grande chub	<i>Gila pandora</i>	No
Rio Grande cutthroat trout	<i>Onchorynchus clarki virginialis</i>	No
New Mexico silverspot butterfly	<i>Speyeria nokomis nokomis</i>	No
Arizona willow	<i>Salix arizonica</i>	No
Hairless fleabane	<i>Erigeron subglaber</i>	No
Chiricahua (Bloomer's) dock	<i>Rumex orthoneurus</i>	No

Sensitive species are analyzed only if they occur or have habitat within one or more parcels of land within the Settlement Act.

American Peregrine Falcon: Habitat occurs in open country and cliff areas characterized by steep, inaccessible sheer faces, generally exceeding 200 feet in height and adjacent to water. Suitable cliff habitat exists adjacent to the Pueblo de San Ildefonso parcel. Falcons have been known to use the area in the last few years.

No new activities are proposed within the suitable falcon habitat area. Since the area would not be open to the public, less recreational activity would take place. Disturbance by activity type is within the limits of tolerance by possible nesting birds and outside of sensitive zones. The change in land status does not create any change in activities and so the transfers would have no impact to the American peregrine falcon. The proposed action would not be expected to decrease population viability or cause a trend to Federal listing of this species.

Northern Goshawk: The mature and over-mature forests in the analysis area provide suitable/potential nesting and post-fledgling areas. The analysis area also provides suitable foraging habitat. Vegetation structural stages (VSS) defined by the "Management Recommendations for the Northern Goshawk" (USDA 1992) throughout the analysis area would be considered VSS 1, areas dominated by grasses, forbs, and shrubs; VSS 4, mid-aged forests; and VSS 5, mature forests. Goshawks typically nest in large trees. They are predators of forest

birds and mammals. The alternatives do not propose changing tree density, which is important habitat for goshawk prey species (e.g. tree squirrels, large woodpeckers, and blue grouse).

No changes are proposed to the forested areas to be acquired by Los Alamos County. No direct, indirect or cumulative effects are expected. The change in land status does not create any change in activities. The transfer of land and road reconstruction would have no impact to the Northern goshawk. The proposed action would not be expected to decrease population viability or cause a trend to Federal listing of this species.

Jemez Mountains Salamander: This salamander is endemic to the Jemez Mountains in portions of Los Alamos, Sandoval, and Rio Arriba Counties. They occur in and under rotting coniferous logs or under rocks in coniferous forests where they feed upon invertebrates including ants and beetles (**BISON-M 2001**). Jemez Mountains salamander (JMS) is present above ground only during late summer monsoon rains when rainfall is sufficient. The “Cooperative Management Plan” (New Mexico Endemic Salamander Team 2000) will be used to identify areas to protect the salamander.

One parcel of land (Tract F) falls within the JMS Cooperative Management Plan and may have salamanders. This is the area of the Los Alamos Reservoir. The slopes were severely burned in the Cerro Grande Fire and habitat was destroyed through loss of tree canopy. One record of a salamander occurs within this parcel. No changes are expected to management of the area when it changes ownership to Los Alamos County.

The change in land status does not create any change in activities. The transfers and road reconstruction would have no impact to the Jemez Mountains salamander. The proposed action would not be expected to decrease population viability or cause a trend to Federal listing of this species.

Migratory Birds

No significant effects would occur to migratory birds because no change to the habitat is anticipated other than restricted human visitation.

Highest Priority: New Mexico Partners in Flight lists priority species of concern by vegetation type. Species of highest priority for vegetation types found in the project area are piñon-juniper and ponderosa pine. Table 6 displays the species that may occur in or near the project area and any expected effects.

Table 6. Migratory Birds that may occur in or near the project area.

Vegetation Type	Species	Habitat	Habitat Impacts	Disturbance Effects
Piñon-juniper	Black-throated gray warbler	Mostly in piñon for nesting. Habitat quality is reduced due to high piñon mortality from beetle kill and drought.	No impacts would occur from the conveyance. In either alternative, as fire recovery occurs, young trees would be available for habitat.	None

Ponderosa pine	N. Goshawk	See TES writeup	See TES writeup	None for all species in ponderosa pine.
	Mexican spotted owl	See TES writeup	See TES writeup	
	Flammulated owl	Large snags in or near open areas.	No changes expected.	
	Virginia's warbler	Nests on ground in a variety of understory species and high litter cover. Gambel oak shrub preferred.	No changes expected.	
	Grace's warbler	Gleans insects from needles on large trees. Prefers open forest.	No changes expected.	
Mixed conifer, ponderosa pine, ponderosa pine/gambel oak.	Northern goshawk	See above.	Habitat is not changed with proposed transfer. Area would continue to be managed for day-use recreation.	There are no impacts to goshawk or their prey base habitat.

The analysis did not consider the Ferruginous hawk, Gray vireo, Gray flycatcher, or Bendire's thrasher in piñon-juniper because they are not found in the project area. The Greater pewee or the Olive warbler were not considered because they do not occur on the Santa Fe National Forest.

Important Bird Areas

The nearest important bird area (IBA) is located more than 50 miles from the project area. There are no designated IBAs affected by the project, and so there is no effect to IBA adjacent to the Santa Fe National Forest (SFNF). A proposed IBA would be located in Pecos Canyon (SFNF). There is no association or important link between the bird communities in the conveyed lands and these IBA. Therefore, no IBA is affected by the project.

Overwintering Areas

Many important overwintering areas are large wetlands. Important overwintering areas recognized on the forest include the Rio Chama and Rio Grande corridors. The project area is not recognized as an important overwintering area because significant concentrations of birds do not occur there nor do unique or a high diversity of bird species winter there.

Management Indicator Species

Table 7 lists the management indicator species designated by the "Santa Fe National Forest Plan."

Table 7. Management indicator species designative in the Santa Fe NF

Common Name	Scientific Name	Other Designations
Merriam's turkey	<i>Meleagris gallopavo</i>	
Pinyon jay	<i>Gymnorhinus cyanocephalus</i>	
Hairy woodpecker	<i>Picoides villosus</i>	
Mourning dove	<i>Zenaida macroura</i>	
Mexican spotted owl	<i>Strix occidentalis lucida</i>	FWS Threatened Species
Elk	<i>Cervis elaphus nelsoni</i>	
*Rocky Mountain bighorn sheep	<i>Ovis canadensis canadensis</i>	
*Rio Grande cutthroat trout	<i>Oncorhynchus clarkii virginialis</i>	FS Sensitive Species

* not present in project area

Populations of wildlife are extremely difficult to quantify. In some cases populations can vary substantially year to year. Environmental factors can dramatically influence recruitment of young and survival of adults. A precise figure on the number of animals is very difficult if not impossible to attain; and would only be valid for a short time period.

Population estimates for management indicator species (MIS) were evaluated from a number of sources for each species and then ranked into descriptive categories for the Santa Fe National Forest ("Santa Fe National Forest Management Indicator Species Assessment 2006"). Populations of MIS would be expected to fluctuate within a category from year to year. For instance a change in ranking from uncommon to rare would be a cause for concern; and would warrant intensive evaluation of a species. A ranking system is based on the predicted number of breeding pairs or adult females depending on which is most appropriate for the species addressed.

Acres of each habitat type involved in the land transfer are: Pinyon Juniper—8,430; Ponderosa Pine—103; and Mixed Conifer—221.

Table 8 displays an evaluation of the appropriate MIS. Two species (bighorn sheep and Rio Grande cutthroat trout) are not included because no individuals or habitat are present in lands to be conveyed.

Table 8. Evaluation summary of MIS

Common Name	Evaluation Summary
Merriam's Turkey	The transfer of land should have a neutral to beneficial effect on habitat conditions for turkey. No changes to the habitat are expected. Two parcels—C and D—have low habitat value because they are occupied by large municipal water storage tanks. The other parcels have heavy recreational use by hikers, dog walkers, bicyclists, runners, etc. Although there could be some temporary and minor disturbance to individual turkeys, causing them to move away from the disturbance for a short period of time, this would not negatively affect their ability to reproduce or survive. Turkeys are very mobile, so all potential negative effects would be minor and would not impact the population or contribute to a downward trend in the population.

Pinyon Jay	No change in use of the land is expected and less human disturbance would take place because general public use of tribal lands would no longer occur. Land transfer would not damage or destroy individual nests so potential negative effects would be minor and would not impact the population or contribute to a downward trend in the population. Road reconstruction would have a small effect although there could be some temporary and minor disturbance effects to individual piñon jays, causing them to move away from the disturbance for a short period of time. This would not negatively affect their ability to reproduce or survive.
Hairy Woodpecker	No change in large tree density would occur under the land transfer. No effects to individual woodpeckers are expected.
Mourning Dove	The land transfer would not change uses of the land and would be neutral for the mourning dove. Although there could be some temporary and minor disturbance effects to individual doves, causing them to move away from the disturbance for a short period of time, this would not negatively affect their ability to reproduce or survive.
Mexican Spotted Owl	The project area has only Parcel F in the mixed conifer type. No changes are planned for the habitat type. Part of an MSO protected activity center (PAC) would be conveyed to Los Alamos County. The area was severely burned in the Cerro Grande Fire in 2000 and is no longer functioning habitat for the MSO. The project would not modify restricted or protected habitat types.
Elk	This project would slightly improve elk habitat by decreasing public presence on lands conveyed to Pueblo de San Ildefonso and Pueblo of Santa Clara. Water availability limits use of the area during winter months, but otherwise there is good habitat. Reduced disturbance expected as a result of reduced public access may encourage some additional use of that parcel. The smaller parcels A-E that would be acquired by Los Alamos County are close to the Los Alamos urban area and have large municipal water storage tanks on them or are too heavily used by recreating residents of Los Alamos to be effective habitat. They may occasionally have an individual animal pass through them. Parcel F is very steep and mostly occupied by Los Alamos Reservoir so it is not used by elk.

Other Resources: Scenic Resources, Air Quality, Noise, Social-Economic, Safety

Change in ownership of these parcels would not substantially alter the use of the land. Therefore, impacts to other resources are expected to be the same in either alternative.

- **Scenery:** No changes in scenic values would occur in either alternative. Some scenic resources found in the Settlement Area lands and Northern Tier lands would no longer be accessible to the general public.
- **Air Quality:** The air quality in this area is generally good. There have been no violations of the National Ambient Air Quality Standards. The closest air quality monitoring site is at Bandelier National Monument. This monitor indicates some visibility impacts from distant sources but no threats to human health. Upon transfer to the pueblos these lands would no longer be under the jurisdiction of the State of New Mexico for air quality regulation. However, the tribes are required under the Clean Air Act to comply with EPA standards.

- Noise: the area ranges from being low noise levels in the western lands, to more industrial/urban setting near Los Alamos, where water tanks and urban sounds are more noticeable. No change in noise levels in the project area is expected in either alternative.
- Social-economic: No change is expected in the social-economic conditions of the area in either alternative. The reduction in recreation opportunities on the conveyed lands would be compensated for by shifts to existing lands. No large numbers of economic benefits were derived from the lands to be conveyed. In balance, the lands near Los Alamos conveyed to the county would provide a more flexible system of ownership.
- Public health and safety would not change in either alternative. Lands conveyed to the Tribal Trust would no longer be open to the general public, but continued cooperation between the Forest Service, tribal governments, and BIA would provide for emergencies, such as fire fighting capacity. Actions that have potential to affect public health would be subject to the same laws regardless of ownership (e.g. Clean Water Act, Clean Air Act).

Environmental Justice

The positive social and economic effects expected from this project would primarily benefit the Native American populations who would have more exclusive access to and use of the lands conveyed to them. Thus, beneficial effects expected from this project would primarily be seen by the Native American populations who would have more exclusive access to the lands once conveyed to tribal ownership and then into trust. Some impact in reduced public access would also occur, but in consideration of environmental justice factors (in accordance with Executive Order 12898), there would be no significant adverse impacts anticipated from this project that would disproportionately fall on minority or low-income populations. The act authorizes other actions beyond the scope of the impact to national forest lands. For example, the granting of a permanent easement over State Highway 4 would benefit minority and low-income populations.

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). All practicable mitigation 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).

Some dislocation of use would occur. Multiple-use activities on the forest, including recreation, collection of wood and other forest products, livestock grazing, forest management, and others would not be substantially altered by this project.

Unavoidable Adverse Effects

Minor, short-term adverse effects predicted for this project would occur during the road reconstruction, but with mitigation in place, effects to other resources would be minimal. No significant, long-term adverse effects were predicted for this project, and long-term soil productivity would be maintained.

Irreversible and Irrecoverable Commitments of Resources

Irreversible commitments of resources are those that cannot be regained, such as the extinction of a species or the removal of mined ore. Irrecoverable commitments are those that are lost for a period of time such as the temporary loss of timber productivity in forested areas that are kept clear for use as a power line right-of-way or road.

Lands conveyed out of the National Forest System would be an irreversible commitment of resources in terms of Forest Service management, but considering the expected use would continue either as trust lands or Los Alamos County, this would not result in an actual loss of resources to the environment.

Chapter 4. Consultation and Coordination

List of Preparers

The Santa Fe National Forest prepared this document with an interdisciplinary team (ID team) and contributors. In addition, the document was prepared in close coordination with the Bureau of Indian Affairs (BIA) and the Pueblo de San Ildefonso.

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Consultation with Others

The Forest Service consulted with the following Federal, State, and local agencies, as well as tribal governments during development of this draft environmental impact statement.

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 U.S. House of Representatives, Congressman Tom Udall

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Pueblo of Santa Clara, Governor J. Michael Chavarria, Espanola, NM
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Pueblo of Zuni, Governor Norman Cooney, Zuni, NM

Others

In addition to governments and agencies, more than 300 people were contacted and provided an opportunity to comment on the project.

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New Mexico Mountain Club	Scott Archer
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New Mexico Wildlife Federation	Shirl Harrington, Forest Trust
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List of Agencies, Organizations and Persons to Whom Copies of the DEIS Were Sent

This draft environmental impact statement has been distributed to individuals who specifically requested a copy of the document. In addition, copies have been sent to the following Federal agencies, federally recognized tribes, State and local governments, and non-governmental organizations.

Federal Agencies

Advisory Council on Historic Preservation, Planning and Review
Bureau of Indian Affairs, Branch of Forestry
Bureau of Reclamation, Albuquerque Projects Office
Federal Aviation Administration, Office of the Regional Administrator
Interstate Commerce Commission, Energy and Environment
National Marine Fisheries Service, Protected Species Division
National Park Service, Intermountain Region
National Park Service, Santa Fe
Natural Resource Conservation Service
Office of Civil Rights, Policy and Planning Division
Region VI Environmental Protection Agency
Rocky Mountain Research Station
U.S. Army Corps of Engineers, Southwest Division
U.S. Department of the Interior, Office of Environmental Policy and Compliance
U.S. Fish and Wildlife Service
U.S. Department of Agriculture, Natural Resources Conservation Service, Santa Fe
U.S. Department of Energy – LANL Community Relations Office
U.S. National Park Service, Bandelier National Monument
USDA APHIS PPD/EAD
USDA National Agricultural Library, Acquisitions and Serials Branch

USDI Bureau of Land Management, New Mexico State Office
USGS Jemez Mountain Field Station
USDA Forest Service: Carson National Forest, Cibola National Forest, and Southwestern Region
Regional Office

State Agencies

New Mexico Department of Game and Fish
New Mexico Division of Forestry
New Mexico Economic Development Office
New Mexico Environment Department; Air Quality Bureau, Drinking Water Bureau,
Groundwater Quality Bureau, and Surface Water Quality Bureau
New Mexico Interstate Stream Commission
New Mexico State Engineer's Office
New Mexico State Governor's Office
New Mexico State Highway and Transportation Department
New Mexico State Land Office

Local Governments

City of Santa Fe: Office of the Mayor, Planning and Land Use Division, and
Sangre de Cristo Water Division
City of Española, Office of the Mayor
County of Santa Fe, Commissioners
County of Los Alamos, Council

Tribal Governments

Eight Northern Pueblos Agency
Jicarilla Apache Nation
Ohkay Owingeh
Pueblo of Cochiti
Pueblo of Jemez
Pueblo of Nambe
Pueblo of Picuris
Pueblo of Pojoaque
Pueblo of Santa Clara
Pueblo of Santo Domingo
Pueblo of Taos
Pueblo of Tesuque
Pueblo of Zuni

Libraries

Albuquerque Public Library, Main Branch
College of Santa Fe Library
Española Public Library
Mesa Public Library, Los Alamos
NM Highlands University Library, Las Vegas
NM State Library, Santa Fe
NM State University Library, Las Cruces
Santa Fe Community College Library
Santa Fe Public Library, Main Branch
Santa Fe Public Library, La Farge Branch
St. John's College Library
University of New Mexico Library, Albuquerque

Individuals/Other Organizations

The following individuals or organizations commented during scoping or requested a copy of the draft environmental impact statement:

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Mercer, David

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Index

Alternatives	
considered but eliminated	11
considered in detail	11
mitigation	
heritage resources	12
soils	13
monitoring requirements	11
no action	12
proposed action	12
Climate	1
Copar Pumice Company	25
Cumulative Effects	
considerations	22
grazing	24
heritage resources	35, 36
mining, mineral, gas	24
recreation resources	30
soil and water	39
water system use	23
Environmental Justice	48
Forest Plan	7
MA C	7
MA N	8
MA Q	8
Grazing	
effects to	24
Hazardous Materials	26
phase 1 assessment	9
Heritage Resources	32
cumulative effects	35, 36
effects	32, 33, 34, 35, 36
mitigation	12
Irretrievable and Irreversible Commitments	49
Issues	5
Location	3
Mining, Minerals, Gas	
effects to	24
Missing or Incomplete Information	22
Mitigation Measures	11, 48
Other Resources	
air quality	47
health and safety	48
noise	48
scenery	47
social-economic	48
Permits and Authorizations	9
Purpose and Need	
Docket 354	3
Forest Road 416v	4
Los Alamos Settlement	3
P.L. 109-286	3
road easement reservations	4
San Ildefonso Settlement Agreement	3
Recreation Resources	26
Reserved Mineral Rights	25
Road 416v	5, 7, 12, 13, 29, 30, 32, 33, 35, 39, 42, 48
Short-term Uses and Long-term Productivity ..	48
Social	
effects of action alternatives	
environmental justice	48
Native American benefits	48
Soil and Water	36
effects	39
mitigation	13
Specialists Reports	21
Unavoidable Adverse Effects	48
Water System	
effects to	23
Wildlife Resources	
migratory birds	
effects to	44, 45
MIS	45
effects to	46
sensitive species	42
effects to	43, 44
threatened and endangered	40
effects to	42

