

Sedona
Effluent Management Plan
Supplemental
Environmental Assessment

Prepared for:

Coconino National Forest
Sedona Ranger District
and City of Sedona

Prepared by:

Hydrometrics, Inc.
December 2000

SEDONA EFFLUENT MANAGEMENT PLAN
SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT

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CHAPTER 1–PROJECT SCOPE

A. PURPOSE AND NEED

In 1998 the city of Sedona (Sedona) completed and submitted an Environmental Assessment (EA) for an Effluent Management Plan to the Coconino National Forest (Dames & Moore, 1998). The purpose of the EA was to consider and analyze alternatives that would enable Sedona to meet increasing effluent disposal requirements due to the growth of Sedona and related wastewater treatment and disposal needs. Sedona, through the EA process, was seeking to acquire lands known as “Area 4” for the purpose of meeting future needs for land disposal of effluent. A Decision Notice (DN) to approve the acquisition, through the Townsite Act, of National Forest acreage in “Area 4” was issued by the Coconino National Forest (CNF) on December 17, 1998 (Appendix A).

Although the DN issued by the CNF specified the acquisition of “Area 4” through a Townsite Act purchase, the EA document suggested that the acquisition could occur alternatively through a land exchange. Direct purchase was favored by the CNF at the time of the decision because there was no specific proposal for a land exchange at that time. Sedona has now submitted a proposal for the acquisition of the federal lands through a land exchange involving a 100-acre portion of a private parcel known as the Woo Ranch. The remaining 60 acres of the Woo Ranch property has been recently purchased by the Trust for Public Lands and United States with Lands and Water Conservation Funds.

This Supplemental Environmental Assessment (SEA) is intended to satisfy Forest Service and National Environmental Policy Act (NEPA) requirements to allow for Sedona’s acquisition of acreage in “Area 4” through a land exchange for a portion of the Woo Ranch. This SEA relies on and incorporates by reference information presented in the Dames & Moore EA with respect to the description of the affected environment, discussion of environmental consequences, and development and analysis of alternatives that lead to the CNF DN for Sedona’s acquisition of National Forest lands for management of effluent.

The land to be acquired differs somewhat from the land identified in the EA and in the related publication. Sedona is now proposing to purchase approximately 265 acres, including an area identified as Area 4 (225 acres), and a parcel of 40 acres directly to the north of the plant site, on the west side of SR89A. This 40-acre parcel was surveyed and assessed by Dames & Moore during the preparation of the EA. Further detail regarding environmental resources and consequences is provided below.

The remainder of this SEA will present the proposed action, alternatives considered, affected environment, and environmental consequences of the proposed action related to the Woo Ranch and the land exchange proposal. The following sections have been prepared in accordance with National Forest Service NEPA guidance.

B. PROJECT LOCATION AND SETTING

A complete description of the location and setting of the acreage included in the “Area 4” parcel and additional 40 acres to be acquired is presented in the Dames & Moore EA (Dames & Moore,

1998, P. 1-2). A listing and description of the Non-Federal and Federal lands involved in the land exchange is provided in the land exchange offer letter (Appendix B). The remainder of this section will focus on a description of the location and setting of the Woo Ranch parcel.

The Woo Ranch property is a tract of approximately 160 acres located about 4.5 miles to the northwest of Sedona (Figure 1), which is completely surrounded by Coconino National Forest lands. The property is accessed from Forest Road 795 (also known as Red Canyon Road), which traverses across the western-most portion of the parcel. Woo Ranch lies on the edge of a rolling plain at the base of Bear Mountain, the slopes of which create a striking background of reddish escarpments directly to the north of the property. The property lies at an elevation of approximately 4,800 feet. As stated previously, 60 acres of this parcel have been recently purchased by the United States.

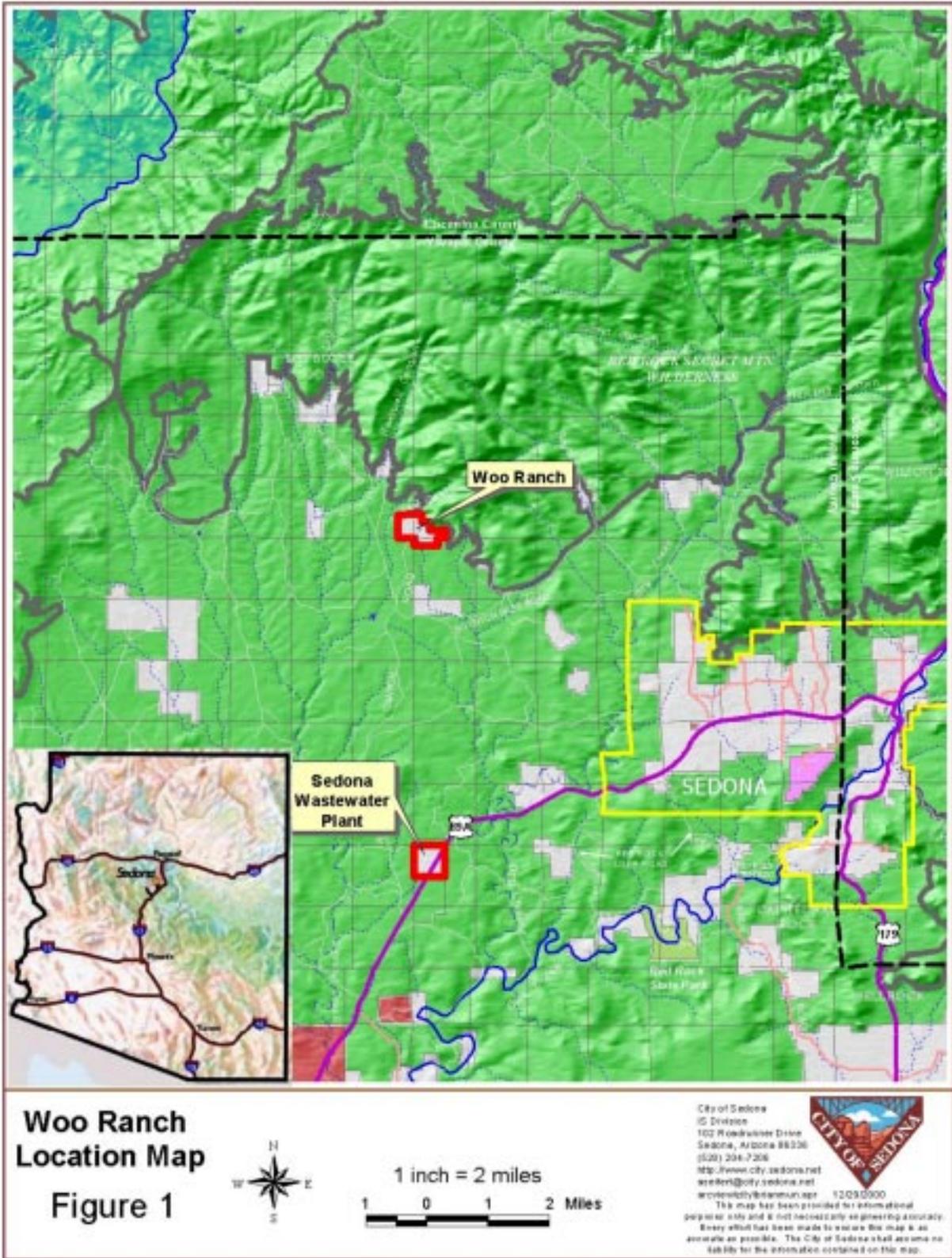
While the parcel exhibits a rugged backdrop of steep, mountainous terrain, the parcel itself occupies a rather flat to undulating upland area. The Red Canyon Road alignment trends along the drainage divide between Dry Creek and Spring Creek, both of which are tributaries to Oak Creek seven to ten miles (respectively) to the south. The major portion of the parcel (east of Red Canyon Road) drains to Dry Creek.

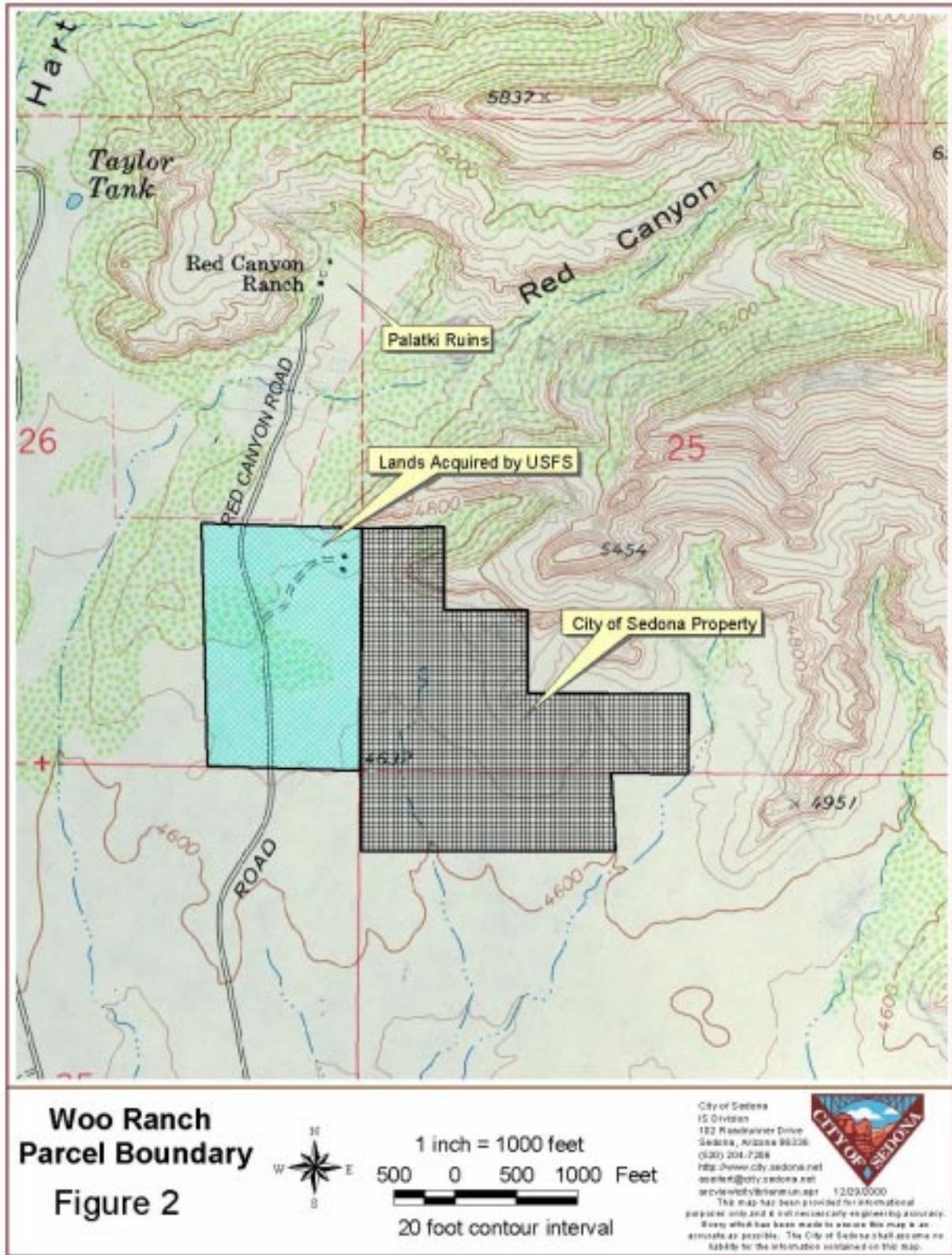
Piñon-juniper and grasslands comprise vegetation within the parcel. Soils within the parcel include fine sandy loams in the lowland areas which become more gravelly and stony into the upland areas (i.e. away from drainages).

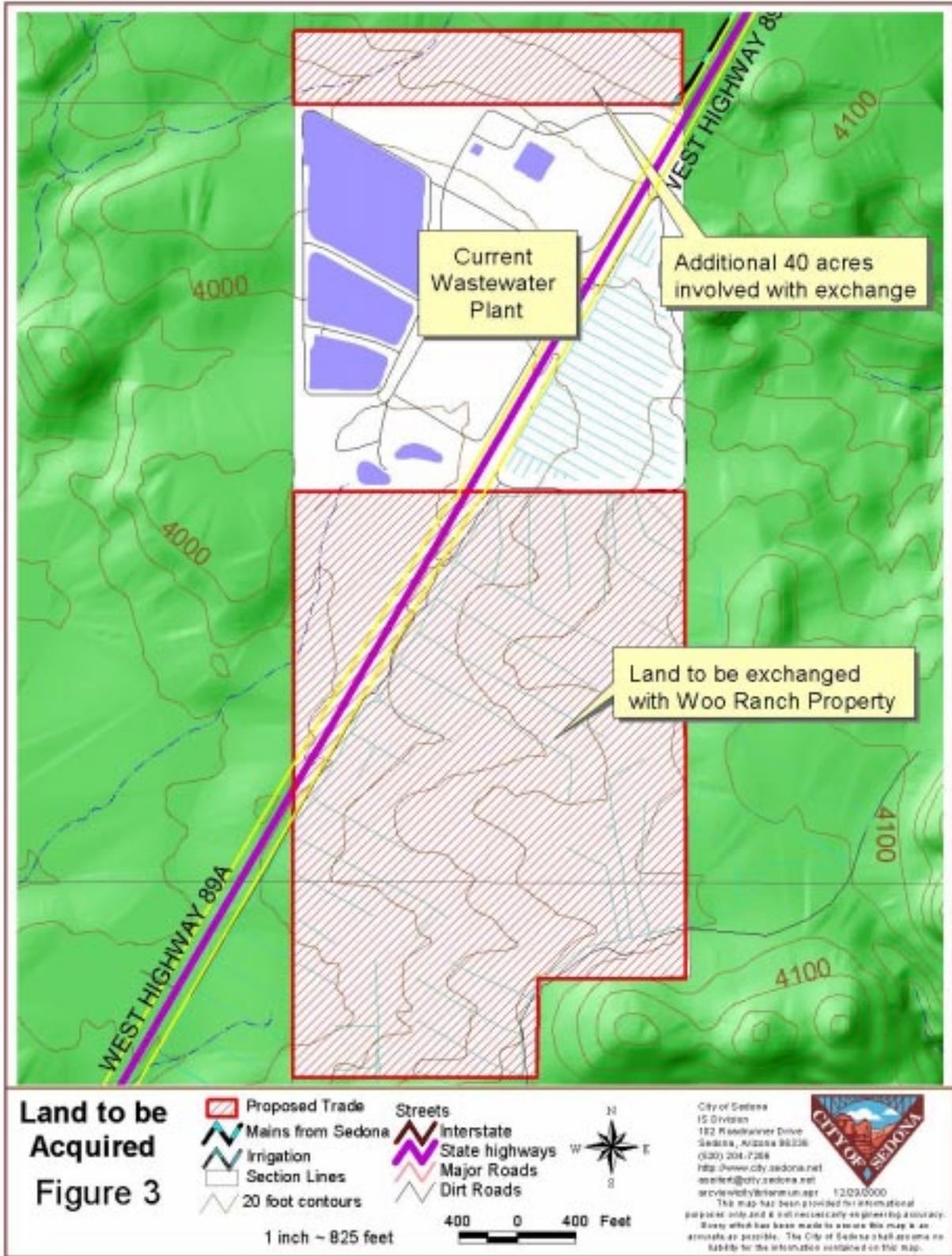
C. PROPOSED ACTION AND ALTERNATIVES

Sedona has already been granted approval by the CNF for the acquisition of land sufficient to meet its needs for effluent disposal. As mentioned, even though the EA specified that the acquisition could occur through either land exchange or direct purchase, the DN issued by CNF specified that the acquisition could occur through purchase under the Townsite Act. The specification was necessary at that time because there was no specific land identified for exchange in the EA.

This SEA identifies a 100-acre portion of the Woo Ranch parcel (Figure 2) as the parcel intended for the land exchange and constitutes the proposed action. This SEA deals only with the development of alternatives, description of the affected environment, and identification of environmental consequences for this proposed action, and incorporates by reference all of the relevant information in the EA (Dames & Moore, 1998) with respect to the approved acquisition of "Area 4." As mentioned above, this SEA also includes the acquisition of 40 acres to the north of the plant site to be used for effluent management (Figure 3).







Land to be Acquired
Figure 3

Two alternatives are identified for this land exchange proposal and are considered in this SEA which include the following:

- Alternative A – No Action – Sedona would continue with the acquisition of Area 4 through the Townsite Act purchase as approved by the CNF DN. The Woo Ranch property would continue to be under private ownership. The Woo Ranch parcel would be available for acquisition by private development interests and could be developed through subdivision or for other purposes.
- Alternative B – Acquisition and exchange of the Woo Ranch parcel for Area 4 – Sedona would exchange approximately 100 acres of the Woo Ranch parcel for approximately 265 acres of federal land within Area 4 and north of the plant site.

Detailed descriptions of these alternatives are provided in Chapter 2.

D. SCOPING AND PUBLIC INVOLVEMENT

An extensive public meeting, notification and involvement effort was undertaken for the Environmental Assessment for the acquisition of Area 4. The process of identification and discussion of issues are described in Chapter 1, Section E of the Environmental Assessment (Dames & Moore, 1998). As noted earlier, a Decision Notice approving the purchase of the area known as Area 4 was issued on December 17, 1998. No appeals were filed in reaction to the Decision Notice.

The subject land exchange of this proposal has also enjoyed rather extensive public exposure. Although there have not been the numerous public meetings and workshops associated with the original EA, the pending exchange has been the subject of numerous newspaper articles, City Council meetings, a public election, and an informational mailing.

Several articles were published in the Sedona Red Rock News between January and July 2000 regarding various aspects of the land exchange. Two of the articles (3/17/00 and 4/12/00) were written about the impact of the land exchange on a touring company and the fact that the company's access to the site will not continue. The remainder of the articles provided information regarding the nature of the exchange, some public misperceptions and the public election that was scheduled for May 16, 2000. The most recent article (7/5/00) announced that the Forest Service had issued a notice that it was taking public comments on the exchange proposal.

The City published an article about the Woo land exchange and the May 16 public election in its City Link publication on April 28, 2000. The article announced the date of the public election, explained the nature of the election, and presented facts regarding the nature of the land exchange and the importance of the exchange for the City and the Forest Service.

The proposed land exchange was also the subject of numerous City Council meetings. The Woo Ranch was originally discussed at a regularly scheduled meeting on September 23, 1997 concerning a potential land exchange involving the Woo Ranch, the Dells (a federal parcel that includes Area 4) and a private developer. Additional discussions occurred at Council meetings of June 9, 1998; June 22, 1999; December 14, 1999; January 25, 2000; March 15, 2000; March 28, 2000; and May 24, 2000. Agenda for all of these meetings were announced through public

notice and the public was invited to attend and provide comment. Issues discussed at the meetings included negotiation of a purchase agreement for the Woo Ranch with the assistance of the Trust for Public Lands, the status of the access agreement with the touring company, and the approval of the resolution for the public election of May 16, 2000 with respect to the Woo Ranch purchase.

A public election was held on May 16 to seek public approval for the land exchange with the Forest Service. A yes vote for the resolution would authorize the City Council to enter into the exchange agreement with the Forest Service involving the Woo Ranch property and the federal lands known as Area 4. The measure passed with a vote of 590 yes to 41 no.

On June 30, 2000 the Forest Service issued a letter to the public regarding the proposed land exchange. A copy of the letter is included in Appendix C. The letter was mailed to the list of interested parties of record that had expressed an interest in the original EA for land acquisition. The letter requested comments by July 21, 2000. The Forest Service received nineteen responses to the letter. Of the responses, thirteen were in support of the exchange, three against, two merely requested to remain on the mailing list, and one was neutral and requested additional information. The authors of letters written in favor of the exchange included Keep Sedona Beautiful, Inc., Responsible Residents of the Red Rocks, Inc., a member of the Dry Creek Community Plan Committee, and several local business persons and residents. Two of the opposing letters keyed on questions regarding the nature of the appraisal of the Woo property and expressed the opinion that the purchase price was inflated. The third opposing letter was mailed from a resident of Cottonwood. A summary of the comments received is provided in Appendix D.

CHAPTER 2– ALTERNATIVES

A. BACKGROUND

Sedona developed several alternatives in exploring potential avenues for disposal of reclaimed effluent utilizing National Forest lands. These alternatives are discussed in the EA (Dames & Moore, 1998, Chapter 2). The preferred alternative, as identified by Sedona, was the acquisition of the Forest Service lands adjacent to the existing plant, currently known as “Area 4,” through either a Townsite Act acquisition or through land exchange. The Forest Service issued A Decision Notice (DN) to approve the acquisition, through the Townsite Act, of National Forest acreage in “Area 4” on December 17, 1998 (Appendix A).

This Supplement to the Environmental Assessment is intended to disclose the effects of the acquisition of private lands by the Forest Service through the land exchange described above. The Supplement is necessary to obtain Forest Service approval for the land exchange.

B. ALTERNATIVES CONSIDERED

Two alternatives have been identified for the land exchange. These alternatives are described separately below, and are also discussed in the context of the Affected Environment and Environmental Consequences in Chapter 3. The alternatives considered are:

Alternative A – No Action

Alternative B - Exchange of the private Woo Ranch parcel for federal lands referred to as Area 4

Alternative A – No Action

Under this scenario, Sedona would continue with the purchase of Area 4 and lands north of the plant site through the Townsite Act. Sedona would continue to use the area in the manner it is currently used. Once the transaction was completed, Sedona would no longer need to renew its special use permit or pay the associated fees.

The money that Sedona would pay for the property under this alternative would go to the federal general treasury to be disbursed through the federal budgeting process. The CNF would likely have some of the money returned for local projects, but would likely be losing the benefit of all of the money being spent on local projects.

Also under this alternative, the Woo Ranch property would be available for private development. While the development could take many forms, including resort or residential development, it is reasonable to assume that it would be developed in accordance with the current Yavapai County zoning requirements. The parcel is currently zoned RCU 2A, which means that a residence may be constructed on no less than a two-acre parcel. With 160 acres available, this means that no more than 80 residential units could be constructed on the parcel. The actual number would likely be less to allow for the F.R. 795 corridor and right of way as well as internal roads and infrastructure.

Alternative B - Acquisition and Exchange of the Woo Ranch Parcel for Area 4

Under this alternative, Sedona would offer approximately 100 acres of the Woo Ranch property to exchange for the National Forest land in Area 4 and lands north of the current plant site. As with Alternative A, this transaction would relieve Sedona from the need to continue the special use permit and payment of the fees.

Unlike Alternative A, this alternative would have a greater benefit to the CNF. Rather than the proceeds being deposited into a general fund, the CNF would have an equivalent value in highly desirable property that would become an asset to the community. The acquisition of the parcel would also lead to a greater opportunity for land resource management that is consistent with the surrounding Forest Service lands.

The acquisition of the Woo Ranch parcel is consistent with the Amended Forest Service Plan for the Sedona Area, as is the conveyance of the Area 4 lands as a base-for-exchange. Although the actual use of the Woo parcel has not yet been specifically determined, the Forest Service will, after appropriate study and public comment, develop a use that is consistent with the surrounding Forest Service lands and the other proximate public sites, such as the Palatki archeological site.

C. COMPARISON OF ALTERNATIVES

Alternatives were compared for the acquisition of Area 4 in the original EA completed by Dames & Moore (see Dames & Moore, 1998, p. 2-12). That analysis evaluated four alternatives, including the preferred alternative of the acquisition of Area 4 and the delivery of effluent to a golf course. The forest service ultimately approved the acquisition of Area 4.

For this supplemental action, the alternatives are compared below based on the significant issues and impacts that are identified in Chapter 3 of this supplement. The following discussion summarizes these issues.

Alternative A - No Action

There is a range of actions that could take place as a result of exercise of the no action alternative. The Woo Ranch parcel would not come under the control and management of the Forest Service, which would continue the fragmentation in the management pattern relative to management of contiguous areas. Failure to complete the land exchange would also be inconsistent with the goals in Forest Plan Amendment 12.

Further, the parcel could be developed as a resort or as a residential area. Under the development scenario, there would be multiple issues related to potential impacts. Development would be inconsistent with the amended Forest Plan and would potentially lead to issues related to increased soil and wind erosion and resultant pollution. The fragmentation in the nature of the land use relative to surrounding land use would be disruptive with respect to scenic quality, wildlife migratory patterns, and recreational use of the area. Under private ownership, there is also no assurance that cultural resources will be properly protected.

Preferred Alternative – Alternative B - Acquisition and Exchange of the Woo Ranch Parcel for Area 4

The land exchange and Forest Service acquisition of the Woo Ranch property would be consistent with the objectives of Forest Plan Amendment 12. The Woo Ranch property has been identified as a highly desirable property for Forest Service acquisition. In addition, the area Sedona has proposed for acquisition through exchange (i.e. Area 4 and the additional 40 acres) was identified in Amendment 12 as base for exchange lands.

The acquisition of the Woo property would result in a less fragmented and more contiguous arrangement of Federal lands. The property would be managed consistent with the adjacent National Forest lands, and a consistent and compatible land use could be developed with respect to the nearby Palatki archeological site and trail system. Recreational opportunities will be enhanced.

Acquisition also provides a greater likelihood that important cultural and historic resources will be identified and protected. Similarly, ultimate plans for development and use of the parcel will consider low impact utilization and appropriate mitigation for environmental impacts.

CHAPTER 3– AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

The following sections describe the existing environmental conditions found throughout the study area as described earlier. This section also explains potential changes to the existing environmental conditions that may result from the implementation of the action and no action alternatives. The following natural, human, and cultural resources were evaluated:

- environmental justice
- land use
- socioeconomics
- biological resources
- surface and groundwater resources
- soils and geology
- visual resources
- cultural resources
- air quality and noise

Data for these resources in the study area surrounding the City of Sedona wastewater treatment facility (including Area 4 and 40 acres north of the current plant site, the area to be acquired) were collected from November 1997 through June 1998 and are summarized in the Sedona Effluent Management Plan Environmental Assessment (Dames & Moore, 1998). Additional data were collected for this Supplement, specifically dealing with the Woo Ranch parcel for land exchange, during January through April 2000. These data were collected through review of existing documentation and publications, consultation with various individuals and agencies, and limited field reconnaissance. A detailed list of agencies and individuals contacted is included in Chapter 5.

For the purposes of this supplement, the affected environment includes the Woo Ranch parcel that is intended for the land exchange. As mentioned, the original EA (Dames & Moore, 1998) discussed the affected environment for the lands involved in the acquisition of Area 4 near the treatment plant. Although the 40-acre parcel to the north of the current plant site was included in the baseline surveys in the EA, the use of the land for effluent management was not contemplated at that time. However, after review of the descriptions of baseline environmental resources and anticipated consequences, it is obvious that the use of the additional 40 acres will have no additional adverse impacts beyond what was contemplated in the EA. Specific impacts that warrant discussion are included in the sections below.

Where it has been determined to be effective or appropriate, and where adverse impacts are anticipated, mitigation measures have been recommended. The mitigation measures are listed at the end of this chapter and represent the proposed mitigation plan for this project at this time. In addition, more detailed measures may be incorporated throughout the process and will be implemented per mutual agreement between appropriate local, state, and federal agencies prior to construction.

B. ENVIRONMENTAL JUSTICE

President Clinton issued Executive Order 12898 on February 11, 1994 to ensure that all federal agencies are conducting their business in keeping with certain principles of environmental justice. Specifically, the order specifies that 1) “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations...,” and 2) “Each Federal agency shall conduct its programs, policies, and activities that substantially affect human health or the environment in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin.”

In the present case, the land exchange proposal has no impact on or relationship to minority or low-income populations. Neither alternative will have an adverse impact on such populations. Further, there has been no instance related to the land exchange that has or will have the effect of excluding participation, denying benefits, or subjecting any person to discrimination because of race, color, or national origin.

C. LAND USE AND RECREATION

Affected Environment

Land uses in the area surrounding the Woo Ranch parcel include grazing, utility corridors, Forest Service roads, dispersed residences, and dispersed recreation. Land uses associated with the parcel of land to be acquired (i.e. the Area 4 parcel) are described in the EA (Dames & Moore, 1998). Information regarding land use for the Woo Ranch parcel was compiled from review and interpretation of existing maps and information, land management and field reconnaissance.

The Woo Ranch parcel is currently used by a commercial touring company that supplements their permitted use of National Forest lands. The company conducts group activities and campfires on the property. The Woo Ranch parcel is otherwise closed to public use. There are no improvements on the 100 acres of the Woo parcel offered for exchange.

Land Jurisdictions

Lands surrounding the Sedona treatment plant and disposal areas, including the land to be acquired, are under the jurisdiction of the City of Sedona (treatment plant site), the CNF, and Yavapai County. Private lands surrounding the Woo Ranch parcel are under the jurisdiction of Yavapai County. National Forest lands are under the jurisdiction of the Forest Service.

The Woo Ranch parcel is currently zoned as RCU 2A by Yavapai County. The RCU 2A designation allows residences to be constructed on no less than two-acre parcels. A single lot must be a minimum of 225 feet on a side, and the maximum size of a structure is 2 stories no greater than 30 feet high, and no greater than 10 percent coverage of the lot. Yavapai County administers private land use under their ordinances and processes.

Residential and Commercial Uses

Private Holdings

There are four private holdings that are located within a 2-mile radius of the Woo Ranch parcel. These private holdings are islands of privately owned lands that are surrounded by Forest Service lands. The parcels and their land use status are described below:

Hart Well: This parcel is located within 1 mile to the northwest of the Woo parcel. It consists of approximately 60 acres in T18N, R4E, E_, SE_, SW_, and W_, SE_ Section 23.

Bradshaw Ranch: This parcel is located approximately 1 to 1.5 miles to the west of the Woo property. There are approximately 90 acres in this parcel in T18N, R4E, SW_, SE_, NW_, and the E_ Section 27. This parcel is also identified in the CNF Forest Service Amendment as a desirable parcel to add to the Forest Service system.

Bear Mountain properties: This parcel is located approximately .5 to 1 mile south of the Woo parcel, and consists of approximately 120 acres. The location of the parcel is T18N, R4E, SW_, SW_ Section 36 and T17N, R4E, N_, NW_ and NW_ NE_ Section 1.

Schneider property: The fourth parcel is located approximately .5 to 1 mile southeast of the Woo parcel in T18N, R5E, S_, SW_, NW_ Section 31. This parcel consists of approximately 18 acres.

Utilities

There is a power and telephone line that traverses the Woo Ranch parcel. This line crosses the property from roughly the southeast corner to the northwest corner, along the strike of the red cliffs to the north of the site. This power line is used to provide power and telephone services to the Ranch.

Transportation

Roads in the vicinity of the Woo Ranch parcel are a mixture of private and Forest Service roads. Private roads provide access to the private parcels that are scattered about the area. The majority of roads in the area are Forest Service roads.

Forest Service road F.R. 795 traverses the western most portion of the Woo Ranch parcel, but not within the 100-acre parcel offered in the land exchange. This is an all-weather gravel-surfaced road, which provides access to the Palatki archeological site to the north. A gated private unpaved access road intersects F.R. 795 and provides access to the Woo Ranch buildings and property.

Range Resources

As with the lands identified for acquisition by Sedona, the Woo Ranch parcel lies within the Windmill Grazing Allotment. A description of the allotment is provided in the EA (Dames & Moore, 1998, pp. 3-5 and 3-6).

There is a water tank and corral in the vicinity of Area 4 that the Windmill Ranch has used in conjunction with its allotment. The tank and corral are located in the southern portion of the area that the City has irrigated under the short-term lease with the Forest Service. The Windmill Ranch uses the tank and corral for a two-month period every other year.

The Forest Service decision to allow Sedona to purchase Area 4 was conditioned on the City taking measures to ensure that the Windmill Ranch would continue to have access to water and a corral in accordance with their agreement with the Forest Service, even after the purchase by the City. Subsequent to the Forest Service decision, the City has removed the parcel containing the tank and corral from the land to be purchased. The Windmill Ranch will continue to have access to the facilities in accordance with their allotment lease.

Recreation

Trails

Several existing and proposed trails exist along the Red Cliff area near the Woo Ranch property. All of these are classified as secondary trailheads. One trail, the Red Canyon Ranch/Palatki Trail, is located immediately to the north of the Woo Ranch parcel, in Red Canyon. This is an existing trail as identified in the Forest Plan Amendment.

Three other trails are identified along the Red Cliff area northwest of the Woo Ranch parcel, within approximately three miles. These trails are, moving from east to west, the proposed New Loy Canyon Trail, existing Old Loy Canyon Trail and the existing Honanki Trail.

Recreation Opportunity Spectrum

As discussed in the EA (Dames & Moore, 1998), the CNF uses a system of six classes for categorizing recreation opportunity. The six classes are described and explained in general and for the property to be acquired by the City in the EA (Dames & Moore, 1998, pp. 3-7 and 3-8). The EA identifies the 40 acres north of the plant site as having the Recreation Opportunity Spectrum (ROS) classification of "Rural." This is the same classification as for all of the area around the plant, and is described as consisting of paved or gravel all-weather roads, moderate to high number of encounters, and high management presence.

Directly north of the Woo Ranch parcel is the Red Rock, Secret Mountain Wilderness. In fact, the Ranch and the Wilderness share the same boundary. The Wilderness is classified as Primitive (P). Areas classified as primitive typically have primitive trail access, very few human encounters, minimal management presence, and facilities only as necessary for site protection. These areas express a very high degree of "naturalness" and are not intended to provide safety or comfort to visitors.

The Woo Ranch parcel is within an area classified as Roaded Natural (RN). The Roaded Natural classification includes paved or gravel all-weather roads with a moderate number of encounters with other people and a moderate management presence. The most pertinent example of this

category is F.R. 795 that provides access to the Woo Ranch private roadway, the Palatki archeological site and the Red Canyon Ranch/Palatki Trailhead.

The RN management objective for the Woo Ranch parcel includes the following:

- Opportunity to affiliate with other users in developed sites but with some chance for privacy. Self-reliance on outdoor skill of only moderate importance. Little challenge and risk.
- Mostly natural appearing environment as viewed from sensitive roads and trails.
- Interaction between users at camp sites is of moderate importance.
- Some obvious on-site controls of users.
- Access and travel is conventional motorized including sedan, trailers, RV's and some motor homes.
- Vegetative alterations done to maintain desired visual and recreational characteristics.
- Access for people with disabilities is of only "MODERATE" challenge.
- Rustic facilities providing some comfort for the user as well as site protection. Use native materials but with more refinement in design. Synthetic materials should not be evident.
- Moderate site modification for facilities.
- Interpretation through simple wayside exhibits. Use native-like materials with some refinement in design. Some casual interpretation by forest staff.

Access to the site is provided by F.R. 525, which connects with other forest roads that serve the area. Following F.R. 525 from Hwy. 89A these intersecting roads are 761B, 525C, 152 (Boynton Pass Rd.) and 795 which ultimately leads to the site. This network of roads provides a reasonable variety of access avenues throughout this portion of the forest.

The primary use of F.R. 525 (Red Canyon Road) and 795 is in providing access for forest recreation users which includes private vehicles with individuals/small groups and commercial jeep tour operators transporting tourists to the nearby Indian ruins, Honanki and Palatki. This route is also utilized for access to the Loy Canyon and Hart Well Canyon Trails, which provide hikers access into these remote canyons. Lesser uses would include simply providing access to the few homes, ranch/farms and other tourist/scenic attractions that occur in the area.

The primary recreational use along Red Canyon Road, and the surrounding connecting roads, is driving for pleasure to experience the scenic qualities of the area. There are no hiking trails off Red Canyon Road, however Hart Well Canyon and Loy Canyon are accessed from a continuing branch of Red Canyon Road (known as Lincoln Canyon Road) and offer hiking. There are no designated campgrounds, picnic sites or developed viewpoints along Red Canyon Road. Camping is allowed in most of this area. Cross country hiking, although seemingly not popular in this area, could occur at any point along this route. This activity probably increases somewhat during the hunting seasons, particularly for birds and small game. There are no mountain bike trails in the immediate area, however Red Canyon Road and other lower standard forest roads in the area can accommodate mountain bikers.

The Woo Ranch site lies at the base of red rock rim, south of the Red Rock-Secret Mountain Wilderness area, along the southwest side of Bear Mountain. The red rock rim creates a dramatic

scenic backdrop to the site and constitutes the predominant scenic feature within the overall setting. Forest Road 795 passes through the westerly portion of the site from the southerly to the northerly boundary of the property and continues on to a heavily visited Indian ruin and Red Canyon Ranch.

The access road to the site (Red Canyon Road) lies within the Savannah and Red Cliffs Management Areas. The site itself lies exclusively within the Red Cliffs Management Area. Recreation Management objectives in these two management areas should be consistent with a Semi-Primitive Motorized and Roaded Natural ROS setting if the site reverts to national forest ownership.

Specific forest service recreation management goals include:

For Red Cliffs Management Area:

- Provide adequate trailhead facilities for hikers and equestrians to serve Loy Canyon.
- Expand loop trails, such as Mooney and Loy Canyon.
- Maintain roads in the lowest standard possible consistent with safety and the desired primitive recreation experience.
- Discourage the construction of additional trails to limit access to unprotected cultural sites.

For Savannah Management Area:

- Opportunities to experience a natural uncrowded environment prevail, including opportunities to experience solitude and natural quiet.
- Expand opportunities for viewing wildlife.
- Provide recreation opportunities associated with personal firewood gathering and mineral collection consistent with management area goals.
- Provide opportunities for dispersed camping and hunting.
- Use only native surfacing and do not use road prism development for lateral roads (off of main access roads) unless increased use and development of private property require improvement for resource protection.

Coconino National Forest Plan and Amendment

A “Decision Notice and Finding of No Significant Impact for an Amendment to the Forest Plan for the Sedona Area”(Amendment) of the Coconino National Forest was issued on June 24, 1998. The Amendment specified an area of National Forest known as “the Dells” as base-for-exchange. Further, the Amendment identified several highest-priority private parcels for acquisition by the Forest Service. The Amendment clearly states that “Identifying base-for-exchange lands at The Dells also allows for the City of Sedona to acquire National Forest lands for wastewater disposal needs” (USDA, 1998). The Federal lands proposed for acquisition by the City of Sedona lie entirely within the Dells base-for-exchange area. The Woo Ranch non-Federal parcel that is proposed for exchange is specifically identified in the Amendment as a highest-priority land for acquisition.

The aforementioned Environmental Assessment (EA) was completed by Dames & Moore for the parcel of land that Sedona wishes to acquire. The EA (completed in 1998) was reviewed by the Forest Service and a Decision Notice was issued on December 17, 1998 which approved the acquisition for use of the land by Sedona through a Townsite Act purchase. All requirements for assessment of impacts to the environment were satisfied by the EA.

The 265 acres to be acquired by Sedona are within the Savannah Management Area (MA27) in the Sedona District. Sedona has been using a portion of these lands under a short-term lease for the disposal of treated effluent. Sedona broadcast native seed over the area used prior to initiating disposal to promote an increase in natural grassland cover and to enhance evapotranspiration rates. The current and proposed use of the 265 acres is consistent with the objectives of the Savannah Management Area, because it will promote increased grassland availability for forage, and will enhance cover/security for antelope and deer populations.

The Woo Ranch property is located in the Red Cliff Management Area (MA 25) in the Sedona District. The Red Cliff MA is a narrow area along the rim cliffs between Boynton Canyon and Casner Mountain. This area is bordered on the north by the Red Rock-Secret Mountain Wilderness. The objectives for this management area include the acquisition of intervening private properties in the area. The acquisition of these private properties by CNF will enhance adjacent property management in the Red Cliff area by consolidating managed lands and discouraging incompatible land uses. These are important considerations with respect to other stated objectives for the MA such as preservation of scenic views and protection of archeological sites (i.e. Palatki).

The land exchange being proposed by Sedona is consistent with the Coconino Forest Plan. It involves the exchange of the Woo Property, which the Forest Service has identified as a highly desirable property, for lands in the Dells area that the Forest Service has identified as base-for-exchange lands.

Environmental Consequences – Land Use and Recreation

Potential impacts on land uses were assessed for existing, planned and future land uses associated with the acquisition of Forest Service lands in Area 4 in the EA (Dames & Moore, 1998, p 3-9 to 3-13). Below is a description of land use impacts for each of the alternatives identified for the proposed land exchange.

Alternative A – No Action

Under this alternative there would be no new impacts as a result of this action. The Woo Ranch parcel would continue under the same ownership and land use patterns. This situation would continue the fragmented nature of the management of Forest Service lands in the area that is characteristic of the in-holding predicament.

There is a high probability that the parcel would be developed. While the development would occur consistent with the Yavapai County zoning requirements, the development of the property as a residential or resort development would continue and possibly magnify the land use management fragmentation on the National Forest. Development would also potentially disrupt

the rustic aura of the Palatki archeological site and would impact on the primitive nature of the Red Rock, Secret Mountain Wilderness area.

The impacts to outdoor recreation, scenery, and experience resulting from development of the site, as described above, would come from two primary sources: 1) the development of the site, and 2) the paving improvements to access roads through the National Forest as would be required by Yavapai County for development.

Development of the 100-acre site under current zoning would likely involve the building of approximately 40 homes/garages and the roads/streets accessing each two acre minimum lot. This development would occur on a gently sloping site that contains scattered small groups of native trees in fields of native grasses, all of this with the dramatic backdrop of red rock cliffs.

Development will have a profound effect on the scenic quality of the site, which will have a secondary effect on recreation values. Development would diminish the visual appeal and quality of the site from the viewpoint of individuals who are sight-seeing or visually exploring the site as a recreational activity. Additionally, if the property remains in private ownership, developed or not, it cannot contribute to the inventory of public land that could serve recreational needs on public lands including such activities as hiking, rock climbing, photography, quiet meditation, bird/wildlife watching, etc.

To subdivide and develop the site Yavapai County would likely require that the primary access route to Red Canyon Road or Boynton Pass Road be improved to meet the minimum county roadway standards for paved access to new subdivisions. These improvements would include widening the minimum pavement width to 28 ft., minimum 4' wide shoulders on each side of the pavement, longer horizontal curve radii than currently exist and maintaining minimum 10% roadway grades. The impacts to the immediate roadway corridor resulting from these improvements would be new or expanded roadway cuts and fills, removal of native vegetation and increased disturbance to existing natural areas for drainage and possibly the introduction of barbed wire fences.

These improvements and the resultant impacts will significantly alter the visual quality and completely change the character of the roadway from a primitive winding dirt road slowly meandering its way through the scenic undeveloped forestland to a semi-highway. The experience of driving for pleasure as a recreation opportunity would change as a result of these alterations to the landscape setting from more rustic to more developed.

Alternative B - Acquisition and Exchange of the Woo Ranch Parcel for Area 4

Under Alternative B the Woo Ranch parcel would be managed as a part of the CNF as a result of the exchange for Area 4. As mentioned, the exchange is consistent with the Forest Plan Amendment that was recently completed by the CNF. The Woo parcel was identified as a highly desirable property for CNF acquisition and the lands in Area 4 were identified as base-for-exchange lands.

Acquisition of the Woo parcel would give the CNF the opportunity to manage the land resources in the area in a contiguous, continuous fashion. The property would be managed consistent with the adjacent National Forest lands, and a consistent and compatible land use could be developed with respect to the nearby Palatki archeological site and trail system.

Under this alternative, the subject property comes under public ownership and would be preserved from development. The existing level of recreation opportunities at the property would remain and possibly be enhanced under Forest Service management. The forest access roads would not require major improvements and the existing level of recreation opportunities along the roadway would be preserved under Forest Service management. New residential development would not occur between existing roads and the red cliffs, preserving the natural scenic setting and views.

D. SOCIOECONOMICS

Affected Environment

The affected socioeconomic environment related to this supplement is identical to that identified in the EA (Dames & Moore, 1998, p. 3-13) for the land acquisition. The EA explains that the primary influences on the regional economy are recreation and tourism. The local area within which the Woo Ranch parcel is located is highly influenced by recreation and tourism as evidenced by the fact that it is surrounded by National Forest Land, it lies very close to a publicly accessible archeological site, and it experiences recreational pressures by virtue of the visitation by the commercial touring company.

The Dames & Moore analysis also shows past population trends and projections for 2000 and 2010 for Arizona, Yavapai County, and Sedona.

Environmental Consequences

Dames & Moore (1998, p 3-13 to 1-16) discussed the socioeconomic impacts with respect to the acquisition and use of the National Forest lands in Area 4, which would also apply to the additional 40 acres north of the plant site. The following discusses the impacts and consequences for the proposed land exchange.

Alternative A – No Action

There would be no change with respect to the socioeconomic environment under this alternative, with the Woo Ranch continuing under the same ownership and the same land uses. The land would continue to be privately held and the occasional use by the commercial touring company would continue. The discontinuity in land use management would continue and there would be no increase in public benefit regarding the use of the land.

If the land were developed for a resort or for residential dwellings, there would be some benefit to local jurisdictions in the expansion of the tax base. However, the development as a residential area would also create additional socioeconomic demand for services and infrastructure (i.e. roads, schools, etc.). A development of this nature would be inconsistent with the uses of the adjacent public lands.

Alternative B - Acquisition and Exchange of the Woo Ranch Parcel for Area 4

Under this alternative the Woo Ranch parcel would come into direct ownership and management of the CNF. The touring company would likely no longer be permitted to operate at this site,

although the general public would have access. This would allow the CNF to implement a portion of the amended Forest Plan by acquiring the private in-holding. As mentioned, this acquisition would allow for a continuous and uninterrupted management of activities in the area. This acquisition would serve to make more public lands available for recreation activities and would benefit the public at large by enhancing the public trust.

E. BIOLOGICAL RESOURCES

Affected Environment

Several sources were utilized in this description of biological resources that characterize the Woo Ranch parcel. These sources include existing literature and surveys, agency information, and various maps of the area. No formal surveys were conducted. Biological resources for the area of land to be acquired by Sedona are identified in the EA (Dames & Moore, 1998, pp 3-17 to 3-20).

Vegetation Types

The area surrounding the Woo Ranch parcel is characterized by rolling hills within the Verde Valley headwaters, with a backdrop of striking cliffs and high elevations. The elevation ranges from approximately 4600 feet at the south end of the parcel to 4800 feet at the north end. Vegetation at the Woo Ranch parcel is characterized as juniper-piñon woodland. As is typical for many sites in the area, the surface soils are characterized by the presence of a stabilizing cover of moss, algae and cryptogams, which are essential to the prevention of soil erosion and recovery of disturbed areas.

Table 1 presents a listing of the potential plant communities and individual plants that are likely to occur in the Woo Ranch parcel (from U.S. Forest Service, 1995). The listing shows the percent composition (i.e. canopy cover) potential for each mapping unit identified in the Table and in the map in Figure 4.

As Figure 4 indicates, unit 403 comprises most of the lowlands on the site in and around the drainages and headwater areas. This mapping unit is composed predominantly of grasses, with some shrubs, forbs and juniper trees of lesser occurrence. Mapping unit 457 occupies the areas that are more upland of the drainages, on the lobes that have been formed by the sculpting action of the washes. Unit 457 typically exhibits a predominance of trees and shrubs as compared with the types of vegetation in the lower areas. The most-upland areas of the Woo Ranch parcel are occupied by the vegetation assemblage of mapping unit 471. This upland area lies at the very basal slopes of the cliff area and extends toward the top of the steep slopes to the north and northeast of the parcel. The steep and rocky slopes of this mapping unit are typically characterized by a predominance of shrubs as compare with the other two mapping units in the parcel.

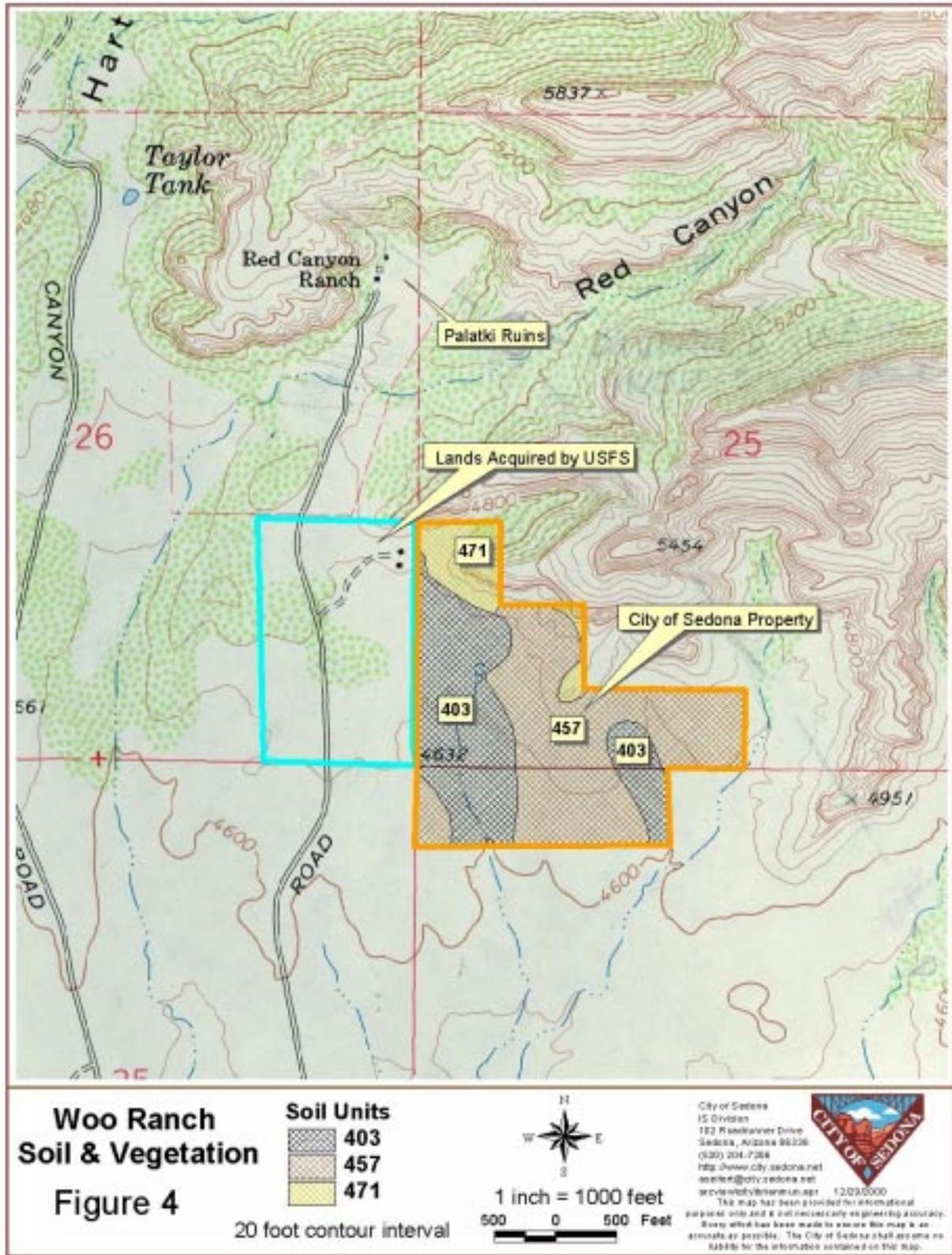


Table 1 - Potential Plant Communities at Woo Ranch by Mapping Unit (see Figure 4)

Plant Name	Scientific Name	Mapping Units (with % occurrence)		
		403	457	471
Trees:				
Utah Juniper	<i>Juniperus osteosperma</i>	5	8	T
Redberry juniper	<i>Juniperus erythrocarpa</i>		1	
Oneseed juniper	<i>Juniperus monosperma</i>		1	
Arizona piñon pine	<i>Pinus fallax</i>		12-15	T
Alligator juniper	<i>Juniperus deppeana</i>			P
Rocky mountain juniper	<i>Juniperus scopulorum</i>			P
Emory oak	<i>Quercus emoryi</i>			T
Shrubs:				
Catclaw acacia	<i>Accacia greggii</i>	T		
Fourwing saltbush	<i>Atriplex canescens</i>	T		
Palmer century plant	<i>Agave palmeri</i>		T	T
Pointleaf manzanita	<i>Arcostaphylos pungens</i>		3	15
Red barberry	<i>Berberis haematocarpa</i>	T	3	T
Crucifixion-thorn	<i>Canotia holacantha</i>	T	T	T
Desert ceanothus	<i>Ceanothus greggii</i>		1	1
Mountain mahogany	<i>Cercocarpus montanus</i>		1	10-15
Cliffrose	<i>Cowania mexicana stansburiana</i>			5
Feather indigobush	<i>Dalea formosa</i>		T	P
Mormon tea/joint fir	<i>Ephedra</i> spp.		T	T
Winter-fat	<i>Eurotia lanata</i>	T		
Wright silktassel	<i>Garrya wrightii</i>		1	5-10
Pale wolfberry/Tomatillo	<i>Lycium pallidum</i>	T		
Pincussion cactus	<i>Mammillaria</i> spp.	T		
Catclaw mimosa/wait-a-bit	<i>Mimosa biuncifera</i>	T	1	P
Sacahuista/Beargrass	<i>Nolina microcarpa</i>	T	1	1-3
Prickly pear	<i>Opuntia phaeacantha</i>	T	1	1
Whipple cholla	<i>Opuntia whipplei</i>	T		
Velvet mesquite	<i>Prosopis velutina</i>	5		
Turbinella oak	<i>Quercus turbinella</i>	1	8-10	10-15
Hollyleaf redberry	<i>Rhamus crocea ilicifolia</i>	T		1
Sugar sumac	<i>Rhus ovata</i>			T
Squawberry/Squawbush	<i>Rhus trilobata</i>	T	1	T
Banana yucca	<i>Yucca baccata</i>	1	1	1
Soaptree yucca	<i>Yucca elata</i>	1	T	
Forbs:				
Cudweed sagewort	<i>Artemesia ludoviciana</i>	T		
Aster	<i>Aster</i> spp.	T		
Mustard	<i>Brassica</i> spp.	T		
Locoweed	<i>Astragalus</i> spp.	T		
Sagebrush	<i>Artemesia</i> spp.			T
Paintbrush	<i>Castilleja</i> spp.		T	
Thistle	<i>Cirsium</i> spp.	T		
Common lambsquarters	<i>Chenopodium album</i>	T		
Dogweed	<i>Dyssodia acerosa</i>	T		

Plant Name	Scientific Name	Mapping Units (with % occurrence)		
		403	457	471
Red-stemmed filaree	<i>Erodium cicutarium</i>	T		
Trailing fleabane	<i>Erigeron flagellaris</i>	T	.5	
Shrubby buckwheat	<i>Eriogonum wrightii</i>	2-5	T	
Broom snakeweed	<i>Gutierrezia sarothrae</i>	1	T	T
Plantain	<i>Plantago</i> spp.	1		
Groundsel/Butterweed	<i>Senecio</i> spp.			T
Globe-mallow	<i>Sphaeralcea</i> spp.	T	.5	
Grasses:				
Cane beardgrass	<i>Andropogon barbinodis</i>	1		
Little bluestem	<i>Andropogon scoparius</i>			P
Threeawn	<i>Aristida</i> spp.	1	T	P
Sideoats grama	<i>Bouteloua curtipendula</i>	8	2	2
Black grama	<i>Bouteloua eripoda</i>	10-12	T	
Blue grama	<i>Bouteloua gracilis</i>	2-3	3	1
Hairy grama	<i>Bouteloua hirsuta</i>	5-6	T	.1
Tobosa	<i>Hilaria mutica</i>	2	1	
Mountain/Prarie junegrass	<i>Koeleria pyramidata</i>			T/P
Bullgrass	<i>Muhlenbergia emersleyi</i>			.5
Longtongue muhly	<i>Muhlenbergia longiligula</i>			T
Ring muhly	<i>Muhlenbergia torreyi</i>	1	T	
Vine mesquite	<i>Panicum obtusum</i>	2		
Muttongrass	<i>Poa fendleriana</i>		1	1
Bottlebrush squirreltail	<i>Sitanion hystrix</i>	2-5	1	
Sand dropseed	<i>Sporobolus crypandrus</i>	7	T	
Black dropseed	<i>Sporobolus interuptus</i>			1
Needle-and-thread grass	<i>Stipa comata</i>	1	P	1

Wildlife

As with the areas described in the Dames & Moore EA for the lands to be acquired, the area of the Woo Ranch parcel demonstrates a rather diverse assemblage of wildlife. Larger mammals such as coyote, mule deer, white-tailed deer, and javelina, are expected to be present. Occasionally elk, mountain lion, and bear may be found in the area due to the close proximity of the Red Rock Secret Mountain Wilderness. In the Woo Ranch area, the pinyon-juniper woodlands provide hiding and thermal cover for elk, mule deer, and white-tailed deer. Although elk historically inhabited the pinyon-juniper areas below the rim during the winter months when deep snow forced them off the rim, elk occurrence is becoming more common below the rim year round. Mule deer, white-tailed deer, and elk forage on the leaves and fruit of pinyon and juniper trees as well as the leaves and fruit of understory shrub species such as cliffrose, mountain mahogany, ceanothus, silk tassel, and shrub-live oak. The study area provides hiding and thermal cover for javelina. Javelina forage mainly on prickly pear cacti but also eat grasses, agaves, the tuberous roots of various plants, and the seeds of mesquites, junipers, and other trees and shrubs. Carnivorous wildlife, such as mountain lion, frequent the pinyon-juniper woodlands to feed on prey species. Bear occur seasonally in these woodlands to forage on the seeds of pinyon and junipers as well as manzanita berries, oak acorns, and prickly pear fruit.

The pronghorn antelope is the sole Management Indicator Species (MIS) for the study area. Management indicator species are monitored during forest plan implementation in order to assess the effects of management activities on their populations and the populations of other species with similar habitat needs which they may represent (FSH 2620.5). Antelope in the Verde Valley are currently restricted to the Wheatfield/Duff Flat area. This herd has remained static in size, at about 50 head, for more than 25 years. Although antelope historically occupied the study area, the fragmentation of habitat from encroaching junipers and the fencing of private land and jurisdictional boundaries have reduced habitat suitability and restricted movement. Antelope are no longer commonly found in the area around the Woo Ranch. The closest area in which antelope occur is located two miles southwest of the Woo Ranch.

Other mammal species that may be present include black-tailed jackrabbit, desert cottontail, striped skunk, gray fox, ringtail cat, bobcat, and various species of chipmunks, ground squirrels, rats, and mice. Smaller species such as woodrats and mice feed on the inner bark of pinyon twigs and these and many other small mammal species feed on the berries and seeds from junipers and pinyons. Ringtail cats, coyotes, foxes, bobcats, skunks, and other carnivorous species forage for prey in these woodlands. Bat species netted at Nolan tank, located 1.25 miles southwest of the Woo property include fringed myotis, long-legged myotis, southwestern myotis, big brown bat, pallid bat, Allen's lappet-browed bat, Mexican free-tailed bat, and western pipistrelle. Although a perennial source of water is not present in the Woo Ranch area, bats may frequent the area for foraging and roosting. The analysis area provides abundant bat roost sites including caves, cracks and crevices of cliffs and rocks, underneath rock slabs, hollow trees, and underneath loose bark.

Due to the lack of permanent water, the red-spotted toad and the spadefoot toad are likely the only amphibian species to occur in the study area. The study area does support various species of lizards including various iguanids such as earless lizards, collared lizards, spiny lizards, horned lizards, fence lizards, tree lizards, and side-blotched lizards. Other reptiles that may occur in the area include geckos, night lizards, skinks, whiptails, and alligator lizards. Lizards feed on insects, arthropods, spiders, scorpions, and occasionally vegetative matter. They seek shelter in trees, in sand and soil, underneath dead vegetation, and in the burrows of other animals. Habitat is present for various snake species including whipsnakes, kingsnakes, garter snakes, bull snakes, and rattlesnakes. The various snake species that inhabit the area forage on small mammals, birds and their eggs, lizards, and snakes and find refuge in cracks and crevices of rocks and cliffs, in caves, and in mammal burrows.

The composition of bird species in the area around the Woo ranch is diverse. Raptors such as the golden eagle, Ferruginous hawk, Swainson's hawk, red-tailed hawk, American kestrel, prairie falcon, peregrine falcon, great horned owl, western screech owl, and northern saw-whet owl, are likely to occur in the area for foraging and nesting. Other birds typical of this area include nighthawks, white-throated swift, hummingbirds, northern flicker, horned lark, pinyon jay, juniper titmouse, rock wren, canyon wren, western bluebird, Crissal thrasher, loggerhead shrike, gray vireo, dark-eyed junco, and various species of warblers, towhees, sparrows, and finches. Resident birds, such as the scrub jay, inhabit the area year-round. Some bird species that frequent the area are neotropical migrants and are present only during the breeding season. Other bird species, such as the dark-eyed junco, may occur in the area only during the winter months. Most bird species use pinyon-juniper forests in combination with other vegetative zones during the breeding season in order to fulfill their life requirements. However, scrub jay, juniper

titmouse, bushtit, gray flycatcher, gray vireo, and screech owl, are all considered obligatory nesters in pinyon-juniper woodlands.

Juniper trees are important for nesting birds due to the presence of trunk cavities and the shaggy bark which provides good nesting material. In addition to providing nesting substrate, juniper and pinyon trees and the various species of shrubs provide berries and seeds. These berries and seeds are also food sources for other invertebrate and vertebrates species that, in turn, are important components of the avian food chain.

Environmental Consequences

The environmental consequences for the acquisition of Forest Service lands in Area 4 are discussed in the EA (Dames & Moore, 1998, p 3-20 to 3-23). The following discusses the consequences of the proposed land exchange alternatives with respect to biological resources.

Alternative A – No Action

Under this alternative there would initially be no change to the biological resources that are currently present onsite. The site, now owned by the City of Sedona, is closed to public access, with the exception of touring companies. The jeep touring companies drive out to the site, park, and allow their customers to hike along trails within the private land to view archaeological sites. Wildlife species that are present currently experience relatively low levels of disturbance. Since touring companies refrain from off road travel, additional ground and vegetation disturbance would not occur from this activity. Impacts to onsite wildlife species that occur from current activities are limited to mainly visual and aural disturbance.

The development of the parcel as a resort or a residential area however, would impact the site and surrounding lands drastically. Vegetation would be removed in preparation for construction of building sites and roads. Removal of vegetation would result in the modification and loss of cover, both hiding and thermal, nesting and roosting substrate, and food sources for the various vertebrate and invertebrate species. Existing wildlife would be displaced (at least temporarily), and those species that remain would experience a permanent increase in visual and aural disturbance. It is likely that some wildlife, such as birds, coyote, and javelina, will still visit the site on occasion after development. However, other, more discreet species such as the mountain lion, bobcat, ring-tailed cat, fox, bear, and bats, may abandon the area for some or all of their activities such as foraging, roosting, and nesting.

Alternative B – Acquisition and exchange of the Woo Ranch Parcel for Area 4

Under this alternative the Woo Ranch parcel would not be developed and would come under the control of the CNF. The CNF would manage the land to be consistent with direction from the Coconino National Forest Land Management Plan (CNFLMP) for the Red Cliffs Management Area (MA). According the CNFLMP, off-road driving is prohibited area wide, and camping and campfires are prohibited in the Red Cliff MA. In addition, the construction of additional trails is discouraged in the Red Cliff MA. Once lands are under National Forest ownership, activities that would be permitted to occur would be those day use activities such as hiking, hunting, birding, vehicular use on established roads, mountain biking, Wilderness access, and archaeological exploration. Despite Forest Service goals, objectives, standards and guidelines for this Management Area, further ground disturbance from recreational activities is likely to

occur than what has occurred to date, resulting in the potential loss and modification of habitat. In addition, an increase in human presence is expected to occur and would result in an increase in auditory and visual disturbance to wildlife species in the area. If the amount, duration, and frequency of human presence becomes too high, those species of wildlife that are elusive and/or easily disturbed by human presence (ring-tailed cat, fox, mountain lion, bobcat, bear, and the various species of bats) may not use the area which would ultimately result in the loss of that habitat for those species.

Special Status Species

Special status species are those species deemed vulnerable from decreasing population numbers or loss and/or degradation of habitat. These species may be protected by the Endangered Species Act (ESA), in which case, would have the designation of endangered, threatened, or proposed (for listing). Wildlife species of concern are those species chosen by Arizona Game and Fish Department whose occurrence in Arizona is or may be in jeopardy or with known or perceived threats or population declines. The Forest Service’s Sensitive species are those species for which population viability is a concern as evidenced by downward trends in population numbers, density, or in habitat capability which would reduce a species’ existing distribution (FSH 2670.1). Most special status species carry several agency designations. ESA designations take precedence over state and Forest Service designations.

The original letter of consultation with the U.S. Fish and Wildlife Service (dated February 19, 1998), written for Yavapai County, would still apply to the Woo Ranch parcel. The Arizona Game and Fish was contacted with regard to the presence of special status species on the Woo Ranch parcel. This letter lists additional comments on the proposed project, however it did not amend or change the species list included in AGFD’s original letter for the Sedona Effluent Management Plan dated April 13, 1998. Because the USFWS and AGFD lists of species are generated from databases that cannot be queried by specific area and habitat type, many species dependent on riparian habitat or found outside of the analysis area were inadvertently included.

The Forest Service issued an original threatened, endangered, and sensitive (TE&S) list for the Sedona Effluent Management Plan EA on September 14, 1998. However, because the Regional Forester’s Sensitive Species List was updated in July 1999, the Forest Service issued an updated TE&S list for the proposed project area. This list contains species for which suitable habitat occurs in the study area. It is these species that will be analyzed in this SEA (see Table X, below). Refer to Appendix X for the USFWS, AGFD, and Forest Service’s list of special status species.

Table X: TE&S Species Potentially Occurring in the Woo Ranch Area.

Common Name	Scientific Name	Status
Bald Eagle	<i>Haliaeetus leucocephalus</i>	T, WC, Sen
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	WC, Sen
Mexican Spotted Owl	<u><i>Strix occidentalis lucida</i></u>	T, WC, Sen
Early Elfin	<i>Incisalia fotis</i>	Sen
Comstock's Hairstreak	<i>Callophrys comstocki</i>	Sen
Freeman's Agave Borer	<i>Agathymus baueri freemani</i>	Sen
Neumogen's Giant Skipper	<i>Agathymus neumogeni</i>	Sen
Aryxna Giant Skipper	<i>Agathymus aryxna</i>	Sen

Arizona Night Lizard,	<i>Xantusia vigilis arizonae</i>	Sen
Verde Valley Sage	<i>Salvia dorrii mearnsii</i>	SC, Sen
Tonto Basin Agave	<i>Agave delamateri</i>	SC, Sen

Legend :

- T = Federally Threatened
- WC = Wildlife Species of Concern
- Sen = Forest Service Sensitive

The bald eagle and Mexican spotted owl, both listed as threatened, and the peregrine falcon, listed as sensitive, are likely to use the project area for foraging, however, there is very limited nesting and roosting habitat for these three species. The cliffs and highlands within the Red Rock – Secret Mountain Wilderness to the north and northeast of the parcel support high densities of nesting peregrine falcons and Mexican spotted owls. Host plant species for five sensitive invertebrates, the early elfin, Comstock’s hairstreak, Freeman’s agave borer, Neumogen’s giant skipper, and the Aryxna giant skipper, are listed as potential plant species that may occur in the project area based on TES soil units and, as a result, indicate the potential for these five invertebrates to occur in the study area. One reptile, the Arizona night lizard, may inhabit the area. Two sensitive plants, Tonto Basin agave and the Verde Valley sage, could potentially occur in the project area.

Environmental Consequences

Alternative A – No Action

Under this alternative there would initially be no change to the biological resources that are currently present onsite. The site is closed to public access, with the exception of use by touring companies. Under current conditions, TE&S species that may be present likely experience relatively low impact. Since touring companies drive on established roads and hike on established trails, additional ground and vegetation disturbance would not occur from this activity. Impacts to onsite TE&S species that occur from current activities are limited to visual and aural disturbance.

The development of the parcel as a resort or a residential area however, would impact the site and surrounding lands drastically. Vegetation would be removed in preparation for construction of building sites and roads resulting in loss or modification of foraging, roosting, nesting, and/or hiding habitat for the various TE&S species. Loss of habitat could displace existing TE&S species such as bald eagles, peregrine falcons, Mexican spotted owls, and the Arizona night lizard. For the five sensitive invertebrate species, loss or modification of host plant species would not only result in a loss of food source but would also result in a loss of substrate for larvae to adhere to during metamorphosis. In addition, the presence of more people, vehicles, and noise-producing equipment is likely to increase the amount of visual and aural impacts to the peregrine falcon, Mexican spotted owl, bald eagle, and Arizona night lizard, ultimately reducing or eliminating the use of the area by these species. In addition, construction activities could result in the removal of individual Verde Valley sage and Tonto Basin agave plants, should they be present.

Alternative B – Acquisition and exchange of the Woo Ranch Parcel for Area 4

Under this alternative the Woo Ranch parcel would not be developed and would come under the control of the CNF. The CNF would manage the land to be consistent with direction from the CNFLMP for the Red Cliffs MA. According the CNFLMP, off-road driving is prohibited area wide, and camping and campfires are prohibited in the Red Cliff MA. Additionally, the construction of new trails in the Red Cliff MA is discouraged. Once lands are under National Forest ownership, activities that would be permitted to occur are day use in scope and including hiking, hunting, birding, vehicular use, mountain biking, Wilderness access, and archaeological exploration. Despite Forest Service goals, objectives, standards and guidelines for this Management Area, further ground disturbance from recreational activities is likely to occur than what has occurred to date, resulting in the potential loss and modification of habitat and ultimately the potential displacement of various TE&S vertebrate and invertebrate species. In addition, an increase in human presence is expected to occur and would result in an increase in auditory and visual disturbance to TE&S species in the area. If the amount, frequency, and duration of human activities become too high, the bald eagle, Mexican spotted owl, peregrine falcon, and Arizona night lizard may no longer use the area. Additional recreation may result in the loss of suitable habitat, or if present, the loss of individuals or populations of sensitive plant species.

F. GEOLOGY AND SOILS

Affected Environment

General Geology

The regional geology of the area surrounding the Woo Ranch parcel is similar to that described for the lands to be acquired and the area of the Sedona treatment plant (Dames & Moore, 1998, p 3-23). The parcel is located within the Transition Zone between the Colorado Plateau and the Basin and Range Province, and is characterized by an underlayer of Paleozoic age sedimentary deposits overlain by Tertiary volcanics and Quaternary alluvial and colluvial deposits. The sequence of formations that outcrop in the area (from youngest to oldest) include Tertiary volcanics and sedimentary deposits, Kaibab Limestone, Toroweap Formation, Coconino Sandstone, Schnebly Hill Formation, Hermit Formation, Supai Formation, and Redwall Limestone.

The surface geology of the Woo Ranch parcel consists of Supai formation materials. The Supai formation is generally described as a combination of sandstone, siltstone, limestone and dolomite of Pennsylvanian and Permian age. The rock wall to the north of the property is a member of the Coconino Sandstone, and the wilderness area even further to the north is comprised primarily of the Kaibab Limestone.

Soils

As with most locations, the soils on the Woo Ranch parcel exhibit characteristics of the parent materials (i.e. surface geology as described above). The following descriptions of the soils on the parcel are based on mapping and descriptions prepared by the Forest Service as part of the Terrestrial Ecosystem Survey of the CNF (Forest Service, 1995).

Three soil units are identified in the Woo Ranch Parcel, as indicated in Figure 4. The lowland soils (mapping unit 403) are deep, fine sandy loams with some inclusions of moderately deep

gravelly loams. Upland areas (mapping unit 457) are comprised of shallow to moderately deep, gravelly to very gravelly fine sandy loams. The soils at the base of the steep outcrops (mapping unit 471) are primarily rock outcrop with inclusions of moderately deep, very stony and bouldery fine sandy loam and a minor amount of shallow, extremely stony loamy fine sand.

The majority of the soils in the 403 mapping unit are calcareous throughout their depth or at or near the surface. Although these soils have a relatively high reclamation potential, when disturbed, the calcareous material may inhibit efforts at revegetation. Also, removal of the plant overstory could result in plant competition by shrubs.

Soils in the 457 mapping unit are more shallow with gravelly inclusions, and are also in a situation where removal of the overstory could result in shrub competition. Shallow soils in this unit limit most management activities.

The mapping unit 471 soils' steep slopes and rocky surface also limit most management activities. These soils have the potential to be extremely erosive. Maintenance of existing ground cover is encouraged and ground-disturbing activities are not advisable.

Environmental Consequences

A discussion of the environmental impacts and consequences, with respect to geology and soils, associated with the acquisition of Forest Service lands in Area 4 is provided in the EA (Dames & Moore, 1998, p 3-27 and 3-28). The following discusses the consequences related to the proposed land exchange.

Alternative A – No Action

This alternative would result initially in no change and no consequences related to soils and geology. The Woo Ranch parcel would continue to be held in the present ownership and would be subject to the same use pressures by the commercial touring company. Because there are erosive soils on the site (i.e the 471 soils on Figure 4), it is possible that some activities, if not properly managed, could result in limited soil erosion. This would be the case if, for example, the site was to be used for off-road vehicles, etc.

Construction activities will impact soils in the likely event that the parcel is developed for resort or residential uses. Construction-related disturbances will create the potential for short-term soil erosion during construction activities. Current storm-water regulations under the Clean Water Act require contractors to mitigate this erosion. Long-term impacts could occur with the disruption and surfacing of calcareous materials beneath the surface. Such disturbances may impact the ability to revegetate disturbed soils.

The majority of the soils are not particularly restrictive for most development. The soils in the 471 unit, however, are restrictive for most uses due to their steep slopes and severe erosion hazard. The remainder of the soils (mapping units 403 and 457) have moderate shrink/swell potential, slight erosion hazard and are suitable for most uses. Soils in mapping unit 457 may be limited by shallow depths for some uses.

Alternative B - Acquisition and Exchange of the Woo Ranch Parcel for Area 4

Under this scenario, the parcel becomes part of the Coconino National Forest and will be managed consistent with the National Forest lands that are contiguous to the parcel. Although it is not exactly clear how it will be managed, the CNF will conduct an evaluation process to identify the impacts from proposed activities. The evaluation of potential uses of the land by the CNF is beyond the scope of this Supplement. However, any proposed activity will have to go through a planning process with an environmental analysis and public review prior to implementation.

Uses proposed for the site would be consistent with limitations of geologic and soils resources and would require best management practices to mitigate impacts and stabilize soils. The environmental consequences for this element are also considered to be low.

G. SURFACE AND GROUNDWATER RESOURCES

Affected Environment

Surface Water

The Woo Ranch parcel is located within the Verde River watershed, which is a perennial watershed located approximately 10 miles to the west. There are headwaters of two ephemeral drainages that are on the property, both of which are tributary to Oak Creek. Oak Creek is a perennial water body that is a tributary to the Verde River and is a State designated Unique Water.

The ephemeral drainages that conduct surface flows from the Woo Ranch parcel flow only in response to precipitation events and snowmelt. There are no records of flows for these ephemeral streams, though it is expected that most flows, except under extreme weather conditions, are minimal within defined drainages.

Most of the parcel (i.e. the portion to be offered by Sedona) is drained by a wash that is tributary to Dry Creek. Dry Creek is also an ephemeral drainage which is a tributary to Oak Creek. The distance from the headwaters on the parcel to the point where Dry Creek intersects Oak Creek is approximately 7 miles, almost directly south of the parcel.

The western portion of the parcel is drained by a tributary to Spring Creek, which is also a tributary to Oak Creek. Spring Creek is an ephemeral drainage which intersects Oak Creek approximately 12 miles south of the parcel.

The USGS topographic map of the area indicates a water feature located along a drainage in the approximate center of the parcel. This feature is very likely a stock watering tank located within the basin of the small drainage in the central part of the parcel.

Groundwater

Groundwater in the area around the parcel occurs within water-bearing formations in the Verde River Basin. Regional groundwater flow trends southwest toward the Verde River. Most groundwater supplies in the area around Sedona are drawn from the Supai Formation or the

underlying Redwall and Martin Limestones. Depth to water ranges from about 180 to 1,000 feet below land surface, depending on the elevation of the land surface.

Depth to groundwater in the immediate area of the Woo Ranch parcel is likely on the order of 500+ feet. As there were no specific studies on groundwater related to this action, the exact depth, yield and quality of the groundwater beneath the site is unknown. Aquifer characteristics are likely to be similar to other groundwater in the area from the same source.

Environmental Consequences

The environmental consequences of the alternatives for the acquisition of the Forest Lands in Area 4 are discussed in the EA (Dames & Moore, 1998, p. 3-27 and 3-28). The addition of the 40-acre parcel north of the current plant site will have no impact on the conclusions reached in the EA. Surface runoff from the parcel will continue to be contained by the existing system and the amount of effluent potentially discharge to groundwater will also be the same. The consequences of the alternatives related to this supplement with respect to groundwater and surface water resources are presented below.

Alternative A – No Action

Under the no action alternative, in the short term, there will be no change in the ownership and management of the Woo Ranch parcel. Consequently, there will be no change in the impact the site currently has on groundwater or surface water resources. There are no obvious groundwater discharge activities related to the parcel, and all storm water runoff that will contribute to stream flow will be generated from relatively undisturbed areas.

With any future disturbance to the site, however, will come the potential for additional groundwater and surface water impacts. First, any new construction will involve disturbance of soil and vegetation cover, which will result in the generation of additional suspended solids with stormwater. In the long term, the increases in impermeable surfaces associated with buildings and infrastructure (i.e. roofs, sidewalks, driveways and roads) and unvegetated, unpaved surfaces will result in an increase in runoff and potential erosivity over the current situation. Yavapai County Ordinances contained in Article 6 of the Yavapai County Subdivision Regulations and the Yavapai County Drainage Criteria Manual specify drainage requirements for containment and control of runoff from roads and developed sites.

New development will require the development of a water supply as well. Because there is no existing water supply currently available, the water would have to be supplied through the development of community or individual groundwater wells. This development would impact groundwater in the vicinity and downgradient within the Verde River Basin. There is already some concern with groundwater drawdown in this basin with respect to other activities in the area.

There is also the potential for additional pollutants to be introduced to groundwater with the development of the parcel. There is no centralized wastewater collection and treatment system that can service the parcel. Any resort or residential development will need to build a package plant and disposal system or individual onsite treatment and disposal systems (e.g. septic tanks and leach fields) for individual homes. The on site disposal systems would constitute a threat to pollute groundwater through the release of nitrates and other pollutants. The actual threat to

groundwater, however, would be slight given the depths to groundwater in the area and the density of development that could occur.

Alternative B - Acquisition and Exchange of the Woo Ranch Parcel for Area 4

Under this alternative, there would be no residential or resort development as the parcel would come under the jurisdiction of the CNF. The lands would be managed consistent with the surrounding lands that are also under CNF jurisdiction. Any development involving trails or public access and use will take into account the impacts on surface water and groundwater through a process involving an analysis of environmental impacts with public review and comment on any proposal for use.

H. VISUAL RESOURCES

Affected Environment

For the purposes of this analysis, the affected environment includes 1) the existing dirt access roads (Forest Road 525, Forest Road 795 (Red Canyon Road), and/or Boynton Pass Road (152C) and 2) the Woo Ranch site.

Forest Roads 525 and 795 travel through an area of gently rolling hills, mesas and moderately undulating land forms. Vegetative type along the road is desert grasslands with juniper trees, piñon trees and woody shrubs occurring as scattered individuals or in small clusters. This setting is highlighted by the distant backdrop of the exposed face of the Mogollon Rim to the north-northeast and Mingus Mountains to the West. All of these elements create a naturally appearing landscape with a strong feeling of openness.

The only visual intrusion to this setting is the red dirt roadway. The unpaved road winds and meanders somewhat naturally through the rolling landforms and frequently remains out of view in the foreground and middleground as its alignment passes behind or around upcoming landforms. Although the presence of the road and the visual impact it creates is obvious, the road remains subordinate to the overall landscape setting through which it passes. Approaching the site, the exposed red rock cliffs appear more dominant and soon become the major landscape feature almost visually overpowering the scene. This dramatic natural setting is interrupted only slightly by the presence of roadway, barbed wire fence and several small abandoned structures on the site.

Referencing a forest service manual on scenery management "Landscape Aesthetics" the following terms classify the scenic quality of the area.

Scenic Attractiveness:
for the roadway distinctive
for the site distinctive

Scenic Integrity:
for the roadway very high
for the site very high

A Northern Arizona University Survey for the access corridor and the site indicated that the visitor's desires for both the access corridor and the site are for solitude/natural quiet, natural appearing landscape, few people/buildings evident, and a "sense of discovery." These desires are consistent with management objectives for "scenery" and, in fact, served as a primary influence in establishing the current objectives.

The access road to the site (Red Canyon Road) lies within the Savannah and Red Cliffs Management Areas. The site itself lies exclusively within the Red Cliffs Management Area. The guidelines for scenery management in the Red Cliffs and Savannah Management Areas state the following goals:

For Red Cliffs Management Area:

1. Facilities that provide access to the cliffs or occur near the cliffs should remain visually subordinate to cliffs and to the surrounding landscape.
2. Maintain or enhance views of the cliffs from the travel corridors through various means such as:
 - acquisition of intervening private properties with emphasis on undeveloped parcels
 - limiting the use of intervening areas for parking, camping and/or utilities
 - limiting motor vehicle traffic between access corridors and the cliffs

For Savannah Management Area:

1. Visitors see a landscape characterized by uncluttered panoramic vistas of scenic features. Reduce miles of road where feasible and locate remaining roads so that, except for road junctions, the sight of other roads is rare to the traveler.
2. Facilities such as roads and powerlines exist but are not prevalent and are subordinate to the natural landscape features, especially when seen from a distance greater than a half mile. Minimize evidence of "administrative presence" to a level consistent with a Semi-primitive ROS setting.

Environmental Consequences

Under this proposal, the 40-acre parcel north of the existing plant site will be added to the lands acquired for effluent management. Use of these lands will involve the use of sprinkler irrigation similar to that used on areas directly to the south and southeast of the plant. This additional land use will not alter the conclusions of the EA with respect to visual resources.

The following discusses impacts to visual resources anticipated from the land exchange alternatives.

Alternative A – No Action

Under this alternative, the Woo Ranch remains as private land and would ultimately be subjected to development. The current Yavapai County zoning for the property is RCU 2A, which would allow residential - rural lots of two acre minimum size.

Approximately 40 homesites including residences, garages and the vehicular circular system of streets and driveways would be the minimum expectable development under the existing zoning. The potential exists for developers to request a zone change for the property allowing increases in the density of development above the levels of development now permitted. Although the probability of requests for zone changes is high, the probability of approval is low.

The development of 40 homes/garages and the associated circulation system of streets and drives will have a major negative impact on the scenic quality of the site and surrounding area. The negative impact will result from the removal of existing trees and the addition of human-made features (i.e. streets, drives, roadway cuts & fills, buildings, rooftops, walls, walkways, fences, swimming pools, parked cars and landscaping). All of these human-made improvements will disrupt the naturally occurring forms, textures, lines, patterns and colors of the natural setting. The landscape character will change from a naturally occurring distinctive and unaltered landscape setting to a highly altered, disruptive unnatural setting.

The impacts of these alterations to the natural landscape are that the viewers visual experience is diminished when viewing the site.

County approval to develop the property will require that the 7_ mile length of dirt roadway from Highway 89A to the site be improved to meet minimum county standards for access to the new development. These minimum roadway standards include widening the existing roadway from 24 ft. to 28 ft., paving the 28 ft. wide roadway, adding minimum 4 ft. wide improved shoulders on both sides of the roadway, lengthening the minimum curve radii and adhering to a maximum 10% road grade.

The impacts of these improvements to the existing travel way will be the removal of existing vegetation to create a wide roadway cross section, expanded roadway cuts and fills, creating new cut and fill slopes and introducing the visual unnaturalness of a 28 ft. wide asphalt roadway surface. All of these actions would change the character of the road from its existing primitive rustic nature to the feeling of an improved, developed arterial road. As with development of the site, the existing landscape character of the natural setting would be altered to become representative of a setting with major human-made intrusions, which would not be consistent with curent management objectives as established in Amendment 12.

Impacts to the site, the roadway access and study areas resulting from the actions of Alternative A would be inconsistent with the scenery management goals described earlier in this section.

Alternative B- Acquisition and Exchange of the Woo Ranch Parcel for Area 4

Under this alternative, the subject property comes under public ownership and would be preserved from development by the private sector. The existing level of scenic quality at the property would remain and possibly be enhanced under forest service management. The forest access "Red Canyon Road" would not require major improvements and the existing level of scenic quality along the roadway would be preserved under forest service management.

Acquisition of the Woo parcel would give the CNF the opportunity to manage scenic quality in the area in a contiguous, continuous fashion. The property would be managed consistent with the adjacent National Forest lands, and a consistent and compatible scenic quality could be maintained with respect to the nearby Palatki archeological site and trail system.

I. CULTURAL RESOURCES

Affected Environment

Cultural artifacts and cultural sites are typically found in this area, as described in the EA (Dames & Moore, 1998, p. 3-43). There are known archeological sites in the vicinity of the Woo Ranch parcel, one of which, the Palatki archeological site, is located directly to the north of the parcel. The Palatki site is an interpretive site that is open to the public.

No cultural resources survey was conducted at the Woo Ranch Parcel for this study. While there may be sites of cultural significance on the parcel, a proper survey to identify the sites and development of a mitigation plan as necessary will be conducted by the CNF in the event the parcel is exchanged.

The 40-acre area north of the plant site was surveyed during the Dames & Moore preparation of the EA. While there were several isolates identified, which consist of a series of check dams constructed by the Civilian Conservation Corps, there were no National Register eligible sites identified in the area.

Environmental Consequences

Environmental consequences for cultural resources that would result from the acquisition and use of Area 4 by Sedona are evaluated in the EA (Dames & Moore, 1998, p. 3-46). Anticipated consequences for the proposed exchange are provided for each of the alternatives below.

Alternative A – No Action

Under the no action alternative, the parcel would continue under current ownership and management, at least for the short term. There is no information regarding whether any cultural resources exist on the parcel or the extent to which any may have already been impacted.

If the parcel is sold and developed by private interests at some time in the future, because it is a privately owned parcel, there will be no requirement for any survey of cultural resources or provisions for mitigation of cultural resources if found. Development could occur on this site without the benefit of any opportunity for the protection and enjoyment of cultural sites.

Alternative B - Acquisition and Exchange of the Woo Ranch Parcel for Area 4

Under this alternative the site would come under the control of the CNF. It would be managed consistent with the laws and regulations for management of historical and cultural resources.

J. AIR QUALITY AND NOISE

Air Quality

Affected Environment

The area surrounding the Woo Ranch parcel is very sparsely populated and lacks any specific pollutant sources. Perhaps the only major source of air pollutants is the system of gravel roads that traverse the area. The air quality in the area is generally good to excellent. Similar to the Sedona-proper area (Dames & Moore, 1998, p 3-47), the Woo parcel is within an area designated as Class I, which limits the types of activities that may affect air quality.

Environmental Consequences

The expected impacts and resulting consequences on air quality for the acquisition of Area 4 by Sedona were discussed in the EA (Dames & Moore, 1998, p. 3-47). Air quality impacts for the two alternatives described for this Supplement are provided below.

Alternative A – No Action

Under this alternative there would be no change in air quality, at least in the short term. The parcel would remain in private ownership with the occasional use by the commercial touring company. Use by the commercial touring company would involve the generation of minor amounts of suspended particulates due to vehicular traffic and occasional campfires. Recreational access to the Palatki ruins would likely continue at present or increased levels of visitation, which would continue dust generation from unpaved roads.

If the parcel is sold for development or developed under current ownership, there would be some environmental impacts on air quality in the short and long term. Construction activities will expose more soils to wind erosion and will also generate suspended particulate emissions. In the long term, an increase in vehicular traffic and other activities by residents, resort visitors, service providers, and visitors to the Palatki ruins and the Wilderness Area will also increase particulate emissions, although the paving of access roads would decrease the probability that particulates would increase due to traffic. In any event, increases in particulates would likely not lead to violation of the Arizona Class I air quality standards that apply to the area.

Alternative B - Acquisition and Exchange of the Woo Ranch Parcel for Area 4

Under this alternative, a greater degree of protection of air quality will be provided for the long term. The parcel would come under the management of the CNF and would be managed consistent with the surrounding National Forest lands. The roaded natural ROS objective for the Red Cliff Management Area predicts a moderate level of encounters (i.e. contact with other people and vehicles) and a high degree of “naturalness.” Increased recreational use of the general area over time will result in increased vehicular traffic, resulting in an increase in particulates. However, no significant impact is expected with respect to air quality under this alternative.

Noise

Most noise in the vicinity of the Woo Ranch parcel is probably not due to human activity. With the exception of a passing vehicle or overhead plane or helicopter, most noise in the area is associated with the wind, wildlife, or livestock.

Environmental Consequences

Environmental consequences with respect to noise pollution for the use and acquisition of Area 4 by Sedona are described in the EA (Dames & Moore, 1998, p. 3-48). The impacts on noise for the two proposed alternatives for this Supplement are provided below.

Alternative A – No Action

There would be no impacts under current ownership and management in the short term. Use of the parcel would continue with its current occasional use by the owners and the commercial touring company.

If the parcel was sold to be developed as a resort or residential area, however, there would be both long-term and short term impacts. Construction activities would increase noise levels during the period of construction. This would include the operation of heavy equipment, increase in vehicle use by construction workers, etc. In the long term, the ambient noise will be increased in the area through the increase of vehicular traffic by residents, visitors and/or delivery trucks. Ambient noise levels will increase in other ways as well as there will be a greater human presence and associated activity that is characteristic of a residential area or resort.

Alternative B - Acquisition and Exchange of the Woo Ranch Parcel for Area 4

When the land is acquired and comes under the jurisdiction of the CNF, it will be managed consistent with the surrounding Forest Service lands and the Forest Plan. There are no uses anticipated that will increase ambient noise levels on either a short or long-term basis. This alternative would therefore have no adverse impacts with respect to noise. Noise levels at night would likely decrease due to camping restrictions in the area.

K. CUMULATIVE EFFECTS

As stated in the EA (Dames & Moore, 1998, p. 3-50), cumulative effects are those combined direct and indirect impacts that result from individual and collectively significant activities within an area over time. A given ecosystem may tend to incur impacts over time as a result of the cumulative effects of these activities. This section identifies reasonably foreseeable projects, actions and developments that can be projected with a reasonable degree of confidence over a defined time frame.

Cumulative effects for the acquisition of Area 4 are identified and evaluated in the EA (Dames & Moore, 1998, pp. 3-50 through 3-52). The addition of the 40-acre parcel north of the plant site for effluent management does not warrant reconsideration of the related cumulative impacts because the effect of adding the parcel is negligible.

For the analysis of impacts relative to this Supplement, the anticipated development includes the following:

- additional commercial and residential development of other in-holdings
- construction, expansion, and use of additional recreational trails
- continued growth and population increases in the Sedona area

- continued acquisition of highly desirable private parcels

Direct and indirect impacts associated with this anticipated development on specific resources are as follows.

Land Use and Recreation

Impacts could occur through the development of some of the private parcel in-holdings that are scattered throughout the area. One particular parcel is the Tree Farm parcel, which is located approximately three miles to the southeast of the Woo Ranch parcel. Cumulative impacts related to development at the tree farm would include direct and indirect impacts on dispersed recreation activity, removal of vegetation, increased runoff, paved road access, disruption of wildlife and wildlife habitat, and potential disruption to nearby cultural sites and scenic quality. The related development and access road paving would detract from the primitive driving experience desired for the area. Impacts would be both short-term (during construction-related activities) and long-term (following development with ongoing activities).

Other desirable in-holdings may be acquired by the CNF in the near future to add to National Forest holdings. These lands are identified in the EA for the Forest Plan Amendment (USFS, 1997, Map 10). Cumulative and direct benefits associated with the acquisition of these lands include consistent management of contiguous Forest Service lands, management appropriate for the preservation of environmental resources, and addition of lands for preservation of recreation opportunities. The preservation and expansion of recreation opportunities is important in consideration of promoting quality of life as growth in the Sedona area continues.

Socioeconomics

Any development of available private parcels that are in-holdings within the forest would create short-term and long-term socioeconomic impacts. Construction activities would provide short-term employment and revenue opportunities for residents and businesses within the Sedona and surrounding areas. The development of resorts or residential areas would increase the tax base for the County and potentially for other local jurisdictions in the future. Private development would continue to keep the forest somewhat fragmented, however, and would serve to frustrate both the management and use of the surrounding forest lands into the future.

The acquisition of the private parcels by the CNF would act to enhance the management and preservation of those lands and the surrounding lands for compatible uses. The acquisition and subsequent management of the lands will have a beneficial impact on the public trust. The preservation and expansion of recreational opportunities in the area will also benefit future residents as the Sedona area continues to grow, and will have an indirect benefit on small businesses in the area that will cater to visitors of the National Forest.

Biological Resources

The combination of past, present, and future activities within the vicinity of the study area will likely result in cumulative short and long-term impacts to wildlife, TE&S species, and their habitat. Past and present activities include development of private land; the resulting construction and expansion of utilities, roads, and trails; recreational uses of private and federal lands; and livestock grazing. Potential future activities include development of in-holdings;

construction and expansion of utilities; construction, improvement, and use of new and existing roads and trails; and continued Forest Service acquisition of private parcels.

Activities of short duration, such as the use of machinery in construction, will indirectly impact wildlife and TE&S species by removing and/or modifying foraging, nesting, and cover habitat. Construction activities directly impact wildlife and TE&S species by destroying roost and nest structures and/or crushing or trampling individuals, both of which can result in mortality of individuals. The use of machinery, while short-term, can result in visual and auditory disturbance to various species. In response to construction activities, wildlife and TE&S species may temporarily abandon affected areas.

Activities of long duration, such as the presence and use of roads and trails, the development and use of private in-holdings, and the construction and expansion of utilities, will result in the loss of vegetation, increased erosion, fragmentation of habitat, and continued visual and auditory disturbance to wildlife and TE&S species. The loss of suitable habitat through vegetation removal may result in the abandonment of the area by certain species. Increased erosion, exacerbated by vegetation removal and an increase in non-pervious surfaces, can result in increased silt loads in the area's larger drainages. During flood events silt can be carried as far as Oak Creek potentially impacting various TE&S wildlife and fish species found there. The removal of vegetation and construction of roads and fences can fragment habitat which may disrupt migration corridors and patterns. The noise associated with the presence of people and the use of noise-generating equipment such as vehicles and machinery will cause ongoing auditory and visual disturbance to wildlife and TE&S species. While some species become habituated to these activities, other species do not. As a result, these activities may cause reduced reproductive success or abandonment of areas with high disturbance.

Acquisition of in-holdings by the CNF would create greater continuity in the management of National Forest lands. The lands would be managed similarly to surrounding areas. Although recreation opportunities will increase on lands acquired by the Forest Service, the construction of trails and trailheads would be limited and would be mitigated. When compared to development of private in-holdings, recreational activities on acquired lands would result in less disturbance to wildlife, TE&S species, and their habitat; less fragmentation of habitat; and less disruption of migration corridors.

Geology and Soils

Private in-holding development would impact soils in a cumulative fashion in both the long term and the short term. Short-term impacts would result from vegetation removal, soil exposure and excavation and fill. Many of the short-term impacts can be mitigated through the employment of best management practices during construction. Longer-term impacts may result from permanent road and site grading or paving activities. The creation of additional non-pervious surfaces (i.e. roof tops, paved or compacted roads and parking lots) combined with the disturbance of vegetation and soils could result in a local and cumulative increase in erosion and sedimentation.

The CNF is planning numerous improvements to trails and trailheads in the area. Specifically, improvements to parking and trail systems as well as new trails are planned for Boynton, Fay, Cockscomb, and Bear/Doe Mountain trails. Improvements to trails and parking areas will also improve the nature of impacts relative to soil and geology.

Acquisition of private parcels would help to mitigate potential soil loss and sedimentation related to development. Private parcels would, through acquisition, come under the management of the Forest Service. The potential for soil disturbance and erosion would still exist, but would be significantly less than with development. Recreational uses may lead to increased soil erosion locally, but impacts can be mitigated through avoidance of highly erosive soils, and low-impact trail construction.

Surface and Groundwater Resources

Soil and vegetation disturbance related to development of private parcels would lead to potential for increased erosion and sedimentation, particularly during high-intensity rainfall events. Sediments from disturbed areas would increase sediment loadings in adjacent washes and downstream stream segments. Washes and perennial waterways (i.e. Oak Creek and the Verde River) could experience increased sediment loads and sediment deposition. Paving of roads leading to the Tree Farm development will likely lead to improvement of runoff water quality.

As with the development of the Woo parcel, development of other parcels would also create a need for water supply and wastewater treatment and disposal. Water withdrawals would create additional pressures on local and regional water supplies. Wastewater disposal could potentially impact underlying groundwater quality in some situations, depending on the depth to groundwater and the characteristics of intervening rock formations.

Acquisition of highly desirable private parcels by the Forest Service would avoid the large-scale nature of impacts associated with development. Surface impacts and related water quality issues would be greatly reduced compared with development impacts. The uses anticipated for the parcels would result in highly reduced need for water supply development and wastewater treatment and disposal.

Visual Resources

Development of any private in-holdings as either residential or resort property will have a negative cumulative impact on scenic quality in the area. Further development of the parcels will disrupt natural forms and diminish the overall visual experience.

Acquisition of the private parcels will preserve or improve current levels of scenic quality. The essential landscape character would be maintained in a natural appearance, except for features such as signs, utilities and miscellaneous roadside structures associated with trail head and trail access point improvements.

Cultural Resources

Private in-holdings within the national forest have not been surveyed for the presence of cultural resource site occurrence. If privately developed, and the development does not involve a Federal action, there may be no survey for cultural resource sites prior to disturbance. There is therefore no assurance that the significance of a site as a national resource will be considered prior to being impacted. With the Forest Service acquisition of the private properties with cultural resources, however, they would be managed according to National Historic Preservation Act considerations, laws and regulations.

Air Quality and Noise

Level of impact related to air quality and noise is directly related to the amount of construction that may occur during development of private parcels. Timing of construction and development will dictate the intensity of the impact during short-term construction. However, cumulative long-term impacts will occur through the introduction of increased traffic and occupancy of previously uninhabited locations or with increased recreation use. Paving of FR 152C to the Tree Farm will reduce some of the anticipated vehicle associated dust impacts. These impacts are unlikely to create violations of the Class I air quality standards for the area.

Acquisition of private in-holdings will help to mitigate air and noise impacts due to construction. Acquired properties would be managed consistent with surrounding Forest Service lands. Minimal impacts would occur as a result of increased recreational uses, depending on the actual use developed for a given parcel.

L. MITIGATION MEASURES

The EA (Dames & Moore, 1998) identified numerous mitigation measures to be applied to the activities related to the acquisition of the federal lands identified. These measures dealt almost exclusively with mitigation of impacts due to construction activities related to various alternatives. These mitigation measures are incorporated by reference as they apply to the acquisition portion of the land exchange. More specific requirements may be identified and implemented at a later date following review and concurrence by CNF and city representatives.

As a condition of the Forest Service DN for the purchase of Area 4, the City was required to mitigate impacts to the Windmill Ranch stock tank and corral located at the south end of Area 4 (see Chapter 3, Section C of this Supplement). The City has modified the boundaries of the area, following consultation with Windmill Ranch and the Forest Service, to exclude the parcel containing the features. It is therefore no longer necessary for the City to mitigate the rancher for any loss in accessibility to the stock tank and the corral.

CHAPTER 4– LIST OF PREPARERS AND REVIEWERS

The following organizations and persons contributed to the preparation and review of this Supplemental Environmental Analysis:

U.S. FOREST SERVICE, COCONINO NATIONAL FOREST

Ken Anderson Sedona Ranger District	District Ranger
Judy Adams Sedona Ranger District	Lands/NEPA
Don Ward Watershed Specialist, Sedona Ranger District	Water, Biological and Range Resources
Jim Beard Landscape Architect Sedona Ranger District	Visual Resources
Janie Agyagos Biologist	Special Status Species

CITY OF SEDONA

Michael Letcher City Manager	Project Coordinator
Carol Johnson Assistant City Engineer	Public Works and Engineering
Jim Johnson Director of Wastewater Management	Wastewater Management and Operations
Aaron Seifert GIS Analyst	GIS, Map Preparation

HYDROMETRICS, INC.

Brian Munson Environmental Consultant	Project Manager
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RICHARD HUBBELL & ASSOCIATES

Richard Hubbell Landscape Architect	Visual Resources
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CHAPTER 5– CONSULTATION AND COORDINATION

The preparation of this Supplemental EA involved communication and consultation with various federal, state and local agencies. The following list summarizes the agencies and individuals contacted during the preparation of the Sedona Effluent Management Plan Supplemental EA. Consultation with the general public, special interest groups, and agencies will continue through the completion of this process.

FEDERAL AGENCIES

Coconino National Forest

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Jim Beard, Forest Landscape Architect, Sedona Ranger District
Judy Adams, NEPA compliance Officer, Sedona Ranger District
Don Ward, Watershed Specialist, Sedona Ranger District
Janie Agyagos, Biologist, Sedona Ranger District

U.S. Fish and Wildlife Service

STATE AGENCIES

Arizona Game & Fish Department

Debra Noel, Habitat Specialist

Arizona State Historic Preservation Officer

LOCAL AGENCIES

City of Sedona

Michael Letcher, City Manager
Carol Johnson, Assistant City Engineer
Jim Johnson, Director of Wastewater Management

Yavapai County

Planning and Zoning Department
Brent Ayers, Flood Control

CHAPTER 6- REFERENCES

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APPENDIX D
Summary of Public Comments Received

Frequency	Comment	Response
2	Request to remain on the mailing list.	
13	Support the exchange.	
1	Was against the exchange before and remains against the exchange.	
1	The trade should not take place because the purchase price for the Woo property was improperly inflated to twice its probable value.	The appraisal of the Woo Ranch property was conducted in accordance with the standardized procedures used by the Forest Service for land exchanges.
1	The City paid an inflated price for the Woo Ranch property. The exchange should not have gone forward without completing all of the Environmental Assessments and publishing all pertinent facts.	The Environmental Assessment and the appraisal of both federal and non-federal lands involved are separate and required steps in the Forest Service approval process for the land exchange. As mentioned, the appraisal was conducted in accordance with standard Forest Service procedures governing such transactions. With respect to the City's purchase of the Woo Ranch property, the purchase was approved by virtue of a public referendum.
1	<ul style="list-style-type: none"> • Does the exchange justify a new Environmental Assessment rather than a supplement? • Will there be a new public meeting with new opportunities for comments and questions? • Who proposed the exchange and is it in the public interest? • What are the lands to be exchanged and are they identified in the Forest Management Plan? • Who did the appraisals? • Will all surface and subsurface rights be transferred? • Were there any adjustments to the original appraisals? • Are the appraisals less than six months old? • How many miles of road is the Forest Service acquiring in the trade? 	<p>The exchange does not involve any new impacts with respect to the federal lands to be acquired. This supplement considers primarily the impacts surrounding the land exchange, which are not considered significant enough to warrant a separate assessment and public process.</p> <p>The commentator indicated that no documents were reviewed prior to these comments. Many of the questions asked are addressed in the original (Dames and Moore, <i>Sedona Effluent Management Plan Preliminary Draft Environmental Assessment</i>, 1998) and supplemental environmental analyses.</p> <p>The appraisal process is a separate process from this supplemental environmental analysis. Responses to questions regarding the appraisal process will be provided by the Forest Service.</p>