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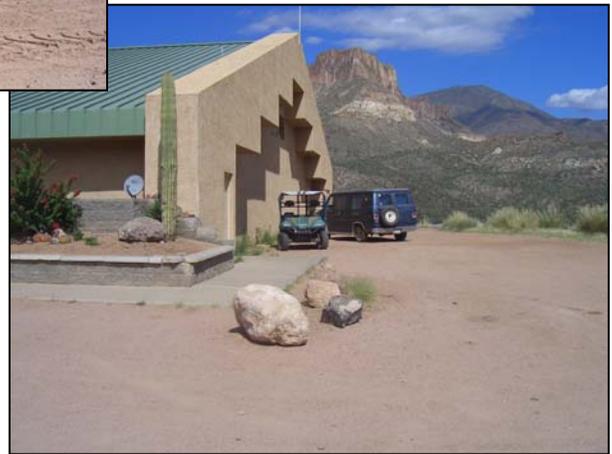
Forest  
Service

Southwestern  
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# Environmental Assessment for Apache Lake Communications Site

## Tonto National Forest





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# Summary

The Tonto National Forest (TNF) is considering a proposal by Commnet Wireless (Commnet) to construct a communication tower and support facilities to allow use by wireless telephone providers. The proposed facility is located at the Apache Lake Marina, Arizona, in Maricopa County, within the Tonto Basin Ranger District (T. 3 N., R. 11 E., section 29).

The project is proposed to improve wireless telecommunication services in the Apache Lake area where such services are not currently available and/or reliable. Communications sites must be designated in the Tonto National Forest Land Management Plan (LMP) and authorized under lease. A communications site plan that provides guidance and limitation on development must be approved before the facilities are constructed. There is a need for site designation through a Forest Plan amendment and for a site plan to guide future development and management of the site.

This Environmental Assessment (EA) presents the results of an analysis of the direct, indirect, and cumulative environmental consequences of the proposed action and no action. Updating the TNF LMP with an amendment is an administrative and programmatic action that, itself, has no direct effects on the environment. This environmental analysis investigates proposed implementation of this project — that is, designating the communication site, issuance of a lease and construction of facilities.

# Chapter 1 – Purpose and Need

## Background

Apache Lake currently has several areas where wireless personal communication services are not currently available and/or reliable. Commnet has proposed to construct a communication tower and support facilities near the Apache Lake Marina.

Federal agencies were directed by Congress and the President to facilitate implementation of the Nation's strategy for wireless communications. On August 10, 1995, President Clinton released a memorandum entitled "Facilitating Access to Federal Property for the Siting of Mobile Services Antennas." In this memorandum, the following is stated:

*Upon request, and to the extent permitted by law and where practicable, executive departments and agencies shall make available, Federal Government buildings and lands for the siting of mobile service antennas.*

On February 8, 1996, the Telecommunications Act of 1996 was enacted, giving further direction to Federal agencies. In response to the memorandum and the Telecommunications Act, the General Services Administration released a bulletin listed in the Federal Register on June 16, 1997, titled "Placement of Commercial Antennas on Federal Property." This bulletin provides general guidelines and processes for implementation of President Clinton's memorandum. Regarding granting of siting requests, the bulletin states:

*Requests for the use of property, right-of-way, and easements by duly authorized telecommunications service providers should be granted unless there are unavoidable conflicts with the department's or agency's mission, or current or planned use of the property or access to that property.*

On June 22, 2006 Commnet Wireless, LLC submitted an application for a communication site lease to be located within the permitted area of Apache Lake Marina on the Tonto Basin Ranger District of the Tonto National Forest. There are no current communication sites at the Lake.

This EA will analyze the allocation of a communication site serving Apache Lake recreationists and specific impacts of constructing a wireless telecommunication site near the Apache Lake Marina, Apache Lake, in Maricopa County, Arizona.

## Purpose and Need for Action

No communication sites are currently designated in the Tonto National Forest Land and Resource Management Plan (Forest Plan) for the Apache Lake area. The overall purpose of the analysis of this proposal is to provide consistency with Forest Service Handbook direction (FSH 2709.11, ch. 90) that communication sites on National Forest System land be formally designated as land allocations through the land and resource management planning process. This may be accomplished through Forest Plan amendment.

The project is proposed within Management Area 6F (T. 3 N., R. 11 E, section 29). The management emphasis (Forest Plan, pp. 179-183) in this area includes water-oriented recreation. Visual resources are an important consideration and the objective for the area is Retention (i.e., human activities are not evident to the casual forest visitor).

**Existing Condition.** The project areas are located within the permitted area of the Apache Lake Marina. These areas have been previously disturbed due to marina construction and use. Wireless telecommunication sites require three basic services: electricity, access to hard wire telephone lines (this can be accomplished via telephone cable or microwave), and road access. Hard wire telecommunication lines and electricity are available within the Marina permitted areas. The Marina’s impact on the Visual Quality Objective of retention has been mitigated through building location, design and color selection. Structures at the Marina are built of slump block. Some have stucco finish.

The closest publicly available wireless telecommunication site to Apache Lake is adjacent to Roosevelt Lake approximately 9-10 miles to the northeast. Due to topographic constraints and propagation parameters, wireless telecommunication coverage of Apache Lake is not adequate from that location. While the Lake is under the jurisdiction of both Maricopa and Gila Counties, by agreement, Maricopa County Sheriff’s Office responds to most emergencies at the Lake. In calendar year 2006, Maricopa Sheriff’s deputies responded to a varied assortment of 187 emergency situations at Apache Lake. During the last five years (2002 through 2006), the deputies have responded to an average of 169 emergencies each year. Of these, approximately 50 have involved medical emergencies or accidents.

**Table 1. Maricopa County Sheriff’s Office Activity – Apache Lake**

	2002	2003	2004	2005	2006	Average
<b>All calls</b>	354	348	362	253	315	326.4
<b>Emergencies</b>	156 44%	182 52%	192 53%	127 50%	187 59%	168.8 52%
<b>Medical/Accidents</b>	41 12%	73 21%	43 12%	30 12%	61 19%	49.6 15%

Several areas along Apache Lake are already lit at night. These include the Sheriff’s Aid Station and the Marina.

**Desired Condition.** The Tonto National Forest offers water-based outdoor recreation opportunities in a relatively safe, visually pleasing environment. Forest visitors experience is enhanced due to expectation of timely response to emergency calls due to improved wireless telecommunication coverage in the area of Apache Lake.

## Proposed Action

The actions proposed to meet the purpose and need:

- Amending the Tonto National Forest Plan by allocating less than one acre (approximately 500 square feet) within Management Area 6F for communication site use. The site is located within the permitted area of Apache Lake Marina on the west side of and adjacent to the existing water tanks (see Figure 8). The amendment to the Forest Plan will alter output levels of multiple-use goods and services projected in the Forest Plan;
- Authorizing construction of a locally-lighted 50-foot, monopole stealth (flagpole) tower;
- Authorizing construction of a pad, lockers and wall enclosure to house communications equipment;
- Developing and approving a communications site plan; and

- Issuing a communication site lease for a twenty-year term.

## Decision Framework

Given the purpose and need, the Forest Supervisor of the Tonto National Forest will review the proposed action and the other alternatives and will be responsible for deciding whether to implement one of the action alternatives or the no action alternative, or whether to require further analysis in an environmental impact statement. The decision may also include mitigation measures to be applied to any selected alternative. If the analysis demonstrates that there are no significant impacts, the Forest Supervisor would record the decision in a Decision Notice and Finding of No Significant Impact.

## Public Involvement and Scoping

The proposal was mailed to known interested members of the public and government agencies for comment during scoping December 15, 2006 to January 16, 2007. A total of 108 scoping letters were mailed out. By January 16, 2007, 17 responses were received (6 letters – one containing 12 signatures).

## Issues

The Forest Service separated the issues into two groups: significant and non-significant issues. Significant issues were defined as those directly or indirectly caused by implementing the proposed action. Non-significant issues were identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council for Environmental Quality (CEQ) NEPA regulations require this delineation in Sec. 1501.7, "...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)..."

Of the 17 responses received, 16 either were in favor or had no comments regarding the communications site. There were no significant issues identified. All comments and concerns received were determined to be non-significant issues and are summarized below.

**Comment #1. Demand: Cell phone communication is needed at Apache Lake.** 14 responses received were in favor of the communications site.

The improved wireless telecommunication coverage will increase the safety factor of the area. Improved communications should reduce response time in emergency situations. It is will also provide public cell phone usage.

**Comment #2. Effects on Avian Population. The area in question is already disturbed and it is unlikely that this installation will affect ecosystem functioning. However, the owner/operators of these utilities should be required to fund research that informs designs and installations that are as wildlife friendly as possible. There is evidence that towers do in fact affect avian populations.**

Effects on avian populations (primarily impacts on migratory birds due to collisions with telecommunication structures), as far as they are known, will be addressed in the analysis.

However, it is beyond the scope of Forest Service authority to require research funding regarding communication site design.

**Comment #3. Option 2 will limit the Marina's options for expansion, affect aesthetics of the building and impact buried utility lines.**

The Apache Lake Marina and Resort feels that Option 1 located near the existing water tanks would be the best site for the tower location. They feel that locating the tower at Option 2 would destroy the aesthetics of the building and would limit any future expansion of the building. Option 2 is also located over existing water and telephone line. There are no current proposals for Marina expansion. Therefore, this issue is beyond the scope of this analysis. Impacts on the Marina aesthetics and utilities will be addressed in the analysis.

The Forest Service Special Uses Handbook (FSH 2709.11, chapter 91) identifies several items that must be addressed when considering new communication site allocation in the Forest Plan. The following required items will be addressed in this assessment:

1. **Demand for the site** - Commnet intends to be a wholesale provider of radio service to licensed telecommunication providers. They will provide a one set of antennas that can serve several providers. T-Mobile has expressed interest. Currently, there is no wireless telecommunication service at Apache Lake;
2. **Alternate locations** – see Chapter 2: Alternatives Considered but Eliminated from Detailed Analysis;
3. **Availability of non-federal land** – see Chapter 2: Alternatives Considered but Eliminated from Detailed Analysis;
4. **Compatibility of types of communication uses to be located at the site** – the sites will be limited to wireless telecommunication uses;
5. **Interference from other users and other sites** – the only other authorized radio usage at the Lake is by Maricopa County Sheriff's Office. All proposed uses are currently compatible;
6. **Areas of coverage** – will be addressed in the analysis;
7. **Signal paths** – will be address in the analysis;
8. **Relationship to other sites** – see Chapter 2 – Alternatives Considered but Eliminated from Detailed Analysis;
9. **Management guidelines for the area, including visual quality objectives** – will be addressed in the analysis;
10. **Suitability of the site for the intended use** – will be addressed in the analysis.

## Chapter 2 – Alternatives

This chapter describes and compares alternatives considered for the Apache Lake Communications Site project. It includes a description and map of each alternative considered. This section also presents the alternatives in comparative form, sharply defining the differences between each alternative and providing a clear basis for choice among options by the decision maker and the public. Some of the information used to compare the alternatives is based upon the design of the alternative and some of the information is based upon the environmental, social and economic effects of implementing each alternative.

### Alternatives Considered but Eliminated from Detailed Analysis

In addition to the current proposed project location, alternate sites for the communication site were evaluated.

- **Private land:** There are no privately held parcels in the vicinity of Apache Lake from which to provide adequate radio frequency patterns and signal paths and enable wireless telecommunication coverage for recreation visitors at the Lake.
- **Bronco Butte:** The closest existing designated communication site to Apache Lake is in section 36, T. 3 N., R. 10 E., south and within two miles of Apache Lake. Bronco Butte Communication Site was established in 1981 to improve law enforcement and public safety radio communication capabilities at Canyon and Apache Lakes. Due to its topography, the site has limited development capacity and the Site Plan limits development to the existing free-standing 70-foot tower and eight-by-ten-foot building. It is accessible only by horse, foot or helicopter. The site currently houses private mobile radio service repeaters for Maricopa County Sheriff's Office, the Arizona Department of Public Safety, Arizona Game and Fish Department and Arizona Department of Transportation. There is neither access to grid electricity nor telephone cable. Electricity needs are served by a solar array with battery back-up. Lack of grid electricity, telephone service and access were determining factors in eliminating this site as an option for serving Apache Lake with wireless telecommunication services.
- **Apache Lake (Maricopa County Sheriff's) Aid Station:** Maricopa County Sheriff's Office currently has a tower supporting their radio communication at the Lake. When approached by Commnet, MCSO was not interested in placing commercial equipment on their facility. In addition, Commnet radio frequency plots indicated better coverage of the Lake's heavily used recreation areas from sites placed within the Marina's permitted area.

### Alternatives Considered in Detail

The alternatives include a "no action" alternative and two action alternatives that respond to the need for action and issues identified in Chapter 1. Both action alternatives include amendment of the Forest Plan for site designation, development of a site plan and issuance of a 20-year lease. Construction, if approved, is expected to be completed within 7-10 days and will include materials approved as matching existing building Marina structure materials.

## **Alternative 1**

Alternative 1 is located on the west side of and adjacent to the existing water tanks at the Apache Lake Marina (see Figure 8). The proposed facility lies within Section 29, Township 3 North, Range 11 East, Gila and Salt River Base and Meridian. Access to the proposed site is via existing Forest Road 79.

Alternative 1 includes construction of a self-standing 50-foot monopole flagpole tower with three panel antennas and three associated 6-foot by 30-inch by 30-inch cabinets housing radio equipment. The components will be installed within a block wall that will match existing marina structures both in color and texture (split-face block walls). The site is 20-feet by 12-feet and is attached to the existing block wall that surrounds the water tanks. There will be no guy wires on the tower. The tower will be lighted to protect approaching aircraft. Lighting will be localized to focus on the flag and not create additional light pollution in the area. Elevation of the proposed site is 1978-feet above msl.

The site location has been previously disturbed during the construction of the water tank compound. Fill dirt surrounds the water tanks and has been covered with various shrubs and grasses (see Figures 1-4). There is power within 50-feet and telephone within 100-feet. Power and hard line telephone connections will be tapped via buried cables.

## **Alternative 2**

Alternative 2 is located within the parking lot of the Apache Lake Restaurant (see Figures 5-7), attached to the southeast corner of the restaurant building. The proposed facility lies within Section 29, Township 3 North, Range 11 East, Gila and Salt River Base and Meridian. The area is currently level crushed granite with no natural vegetation. Access to the proposed site is via the existing Forest Service Road 79.

Alternative 2 includes construction of a block structure attached to the side of the Apache Lake Restaurant. The walls will be 15-feet by 10-feet by 8-feet high and will match existing marina architecture, both in color and texture (split-face block). They will house three 6-feet by 30-inch by 30-inch cabinets housing radio equipment. A self-standing 50-foot monopole stealth (flag pole) tower will be located approximately 20 feet outside the block structure. There will be no guy wires on the tower. The tower will be lighted to protect approaching aircraft. An underground waveguide trench will connect the tower to the equipment inside the block structure. Telephone connection is located within inches of the block wall. Electric utility connection will entail accessing a transformer on the far side of the Marina access road and is within 80-feet of the proposed site. Elevation of the proposed Alternative 2 site is 1936-feet above msl.

## **Alternative 3**

Alternative 3 is the no action alternative, where current management plans would continue to guide management of the project area. No communications tower would be authorized or constructed.

## Summary of Effects and Mitigation Measures

The following table compares the effects of the alternatives considered in detail in this Environmental Assessment. Proposed mitigation measures and Best Management Practices to minimize effects are included where necessary.

**Table 2. Alternative Comparison**

<b>Resource</b>	<b>Alternative 1 Water Tanks</b>	<b>Alternative 2 Restaurant</b>	<b>Alternative 3 No Action</b>
<b>Wildlife (Avian Species)</b>	50 foot tall tower with no guy wires. Lights on the tower will be directed onto the existing tower limiting light pollution in the vicinity. Based on Migratory Bird Analysis & limited size and scope of project, no impact (4/15/2008)	50 foot tall tower with no guy wires. Lights on the tower will be directed onto the existing tower limiting light pollution in the vicinity. Based on Migratory Bird Analysis & limited size and scope of project, no impact (4/15/2008)	No effect
<b>Special Status Species</b>	No effect (BE, 4/15/2008). Area previously disturbed	No effect (BE, 4/15/2008). Area previously disturbed.	No effect
<b>Heritage Resources</b>	No heritage resources located. Clearance approved (11/8/2006)	No heritage resources located. Clearance approved (11/8/2006)	Clearance unnecessary.
<b>Demand for service</b>	Demand will be met for some but not all those who wish to use wireless telecommunication services.	Demand will be met for some but not all who wish to use wireless telecommunication services. On-Lake coverage will be a little better than in Alt. 1.	Demand will not be met.
<b>Areas of Coverage/Signal Paths</b>	Good coverage of the Marina area. Burnt Corral Rec. Site not covered. Other areas of Lake not covered are not heavily used.	Good coverage of the Marina area. Slightly better coverage of upper portion of Lake than Alt. 1. Burnt Corral Rec. Site not covered.	No coverage. Marina has hard line telephone connection.

Resource	Alternative 1 Water Tanks	Alternative 2 Restaurant	Alternative 3 No Action
<b>Visual Quality</b>	<p>The proposed monopole may be visible from the Apache Lake Vista and other areas around Apache Lake, but not from Burnt Corral.</p> <p>Commnet will work with the Forest's Landscape Architect to determine appropriate color to minimize visual impact.</p> <p>The block wall and other facilities installed would be colored to blend in with the land in the area and will match existing Marina facilities both in color and texture.</p> <p>Several areas adjacent to Apache Lake already have lights. The lights on this tower will be focused on the flag to minimize light pollution while still maintaining safety of aircraft approaches.</p>	<p>The proposed monopole will be visible from the Lake but not visible from Apache Lake Vista or Burnt Corral.</p> <p>Concern with effects on the aesthetics of the existing Marina building would be addressed by using similar materials and colors for new construction. The block wall and other facilities installed would be colored to blend in with the land in the area and will match existing Marina facilities both in color and texture.</p> <p>The cell tower would resemble a flag pole in order to minimize the visual impact of a cell tower in the middle of the Apache Lake Marina and Resort.</p> <p>Several areas adjacent to Apache Lake already have lights. The lights on this tower will be focused on the flag to minimize light pollution while still maintaining safety of aircraft approaches.</p>	No change.

Resource	Alternative 1 Water Tanks	Alternative 2 Restaurant	Alternative 3 No Action
<b>Site Suitability</b>	Site provides access & both power and telephone cable utility connections. There will be no conflicts with existing communication uses. Day-to-day permitted Marina operations will not be affected.	Site provides access & both power and telephone cable utility connections. The placement of the facilities adjacent to the Marina restaurant will be adjusted to avoid buried utility lines. There will be no conflicts with existing communication uses. Day-to-day permitted Marina operations will not be affected.	No effect



**Figure1.**  
**Alternative 1, looking southeast at proposed communications site. Water tanks can be seen at left of photo. (Photo taken 9/20/06)**



**Figure 2. Alternative 1 looking south along western portion of water tank site. Proposed communications site is to the left of the photo. (Photo taken 9/20/06)**



**Figure 3. Alternative 1, looking east from western road towards water tanks. Proposed communication site is located to the left of the photo. (Photo dated 9/20/06)**



**Figure 4. Alternative 1, looking southeast towards the southwest corner of water tanks. (Photo dated 9/20/06)**



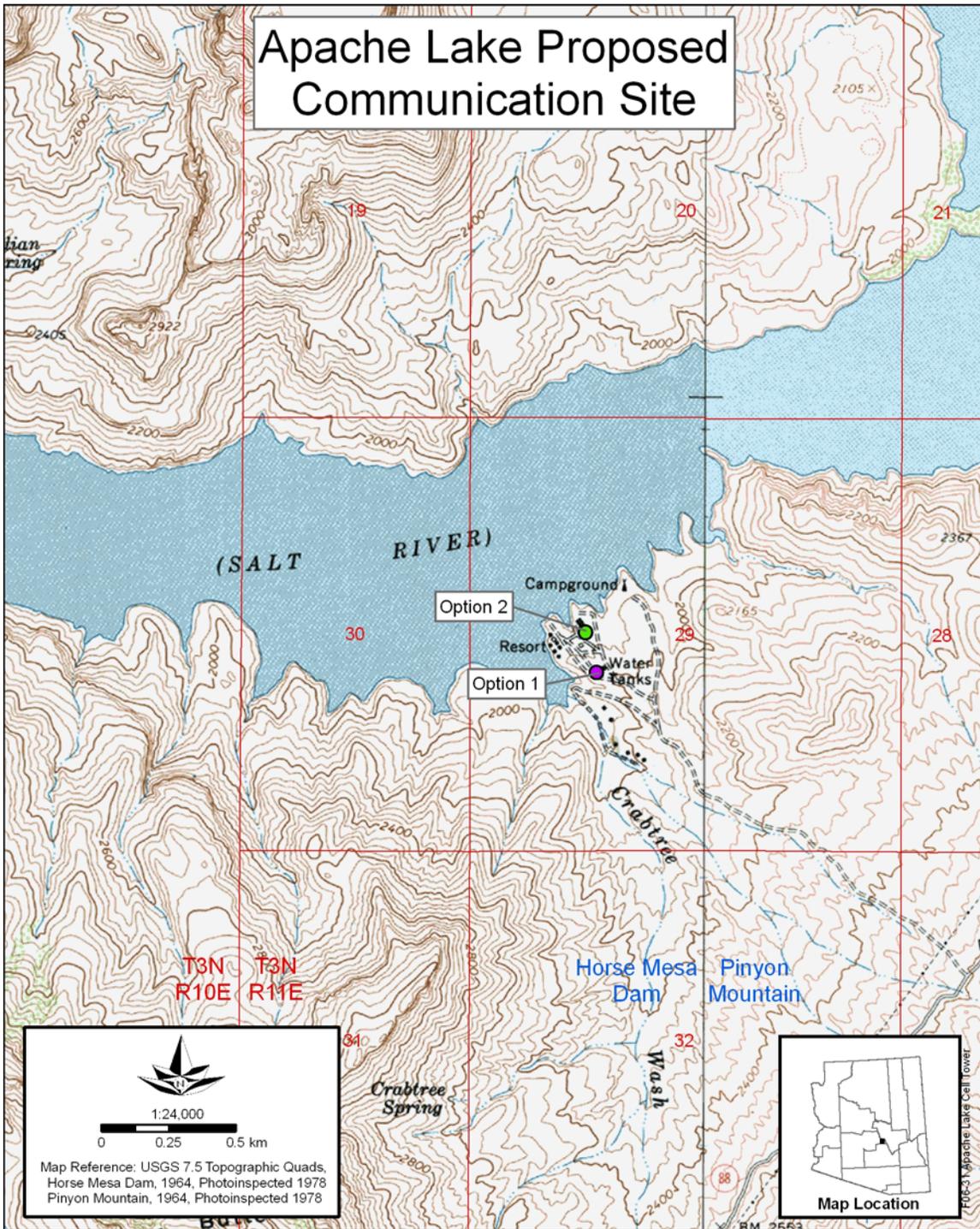
**Figure 5. Alternative 2, looking east towards the Apache Lake Restaurant. Proposed communication site is located to the right of the building. (Photo dated 9/20/06)**



**Figure 6. Alternative 2, looking north towards the southeast corner of the restaurant. Proposed site is located to the right of the door and left of the ATV (Photo dated 9/20/06)**



**Figure 7. Alternative 2, looking northeast towards the restaurant. Proposed building site is to the left of the ATV, proposed tower site is near the top right of the rocks in center of photo. (Photo dated 9/20/06)**



**Figure 8. Proposed locations of Alternatives (Options) 1 and 2.**

# Chapter 3 - Environmental Consequences

This section summarizes the physical, biological, social and economic environments of the affected project area and the potential changes to those environments due to implementation of the alternatives. It also presents the scientific and analytical basis for the comparison of alternatives presented in the chart above.

## Wildlife (Avian Species)

In 2000 (USF&WS “Guidance on the Siting, Construction, Operation and Decommissioning of Communication Towers,” Memo of September 14, 2000), the U.S. Fish and Wildlife Service (USF&WS) identified construction of new towers as having a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. They have estimated that communication towers kill anywhere from 4-50 million birds each year. Based upon preliminary research, USF&WS developed interim voluntary guidelines to be implemented while further research was conducted. This included collocating communication structures; limiting tower height below 199 feet; limiting lighting, if possible; and discouraging guy wires. Since then, the Federal Communication Commission has released proposed rules (November 7, 2006) that would codify many of these guidelines.

## Affected Environment

Thirty species of migratory birds (see Migratory Bird Analysis Form, April 7, 2008) may be located near the proposed project sites in low elevation desert riparian, and Sonoran desert scrub vegetation types. In addition, Golden Eagle and Bald Eagle are located within two miles of the proposed project sites. Although over-wintering by species occurs in the project area, no areas of critical habitat have been designated near the project area. Existing two-story buildings (motel and main marina structure) are the tallest structures in the Marina area.

## Direct, Indirect, & Cumulative Effects

### *Alternative 1 (Water tanks) and Alternative 2 (Restaurant)*

Both action alternatives include a 50-foot monopole tower with lights, but no guy wires. Collocation would be achieved by providing the technology to locate more than one licensed service provider on tower antennas. Both alternatives follow USF&WS and FCC guidance protecting migratory birds. The project Migratory Bird Analysis (4/15/2008) found that the project will have no impact on migratory bird species.

Cumulative effects would include previous construction at the Marina. The tallest structures at the site are buildings. Burying required utility lines would limit placement of any additional structures of relative height. There is already some lighting in the area so limited additional lighting will not have any effect on wildlife. The project is of limited size and scope and no effects are anticipated.

### *Alternative 3 (No Action)*

Under the No Action Alternative, there will be no new construction and no effects on migratory avian species.

## Special Status Species

### Affected Environment

This is a previously disturbed area. Vegetation has grown on the fill dirt at the Water Tank site and includes: triangle leaf bursage (*Ambrosia deltoidea*), mesquite (*Prosopis sp.*), cassia (*Cassia covesii*), brittlebush (*Encelia farinose*), and grasses (*Poaceae*). The restaurant site is within a graveled parking lot with no extant vegetation.

The project area does not contain habitat for federally listed species or sensitive species. Gila topminnow, Lowland Leopard Frog, Bald Eagle and Golden Eagle occur within two miles of the project area. Although over-wintering migratory bird species occur in the area, there are no areas designated as critical habitat.

### Direct, Indirect, & Cumulative Effects

#### *Alternative 1 (Water tanks) and Alternative 2 (Restaurant)*

Since both areas have been previously disturbed and the construction footprint would be less than one acre, there will be no loss of habitat. Cumulatively, there would be no substantial effects to Forest Service sensitive species or forest-wide trends to Management Indicator Species populations as a result of this project (Biological Evaluation, 4/15/2008; Management Indicator Species Analysis, 4/15/2008).

#### *Alternative 3 (No Action)*

Under the No Action Alternative, there will be no new construction and no effects on special status species.

## Heritage Resources

### Affected Environment

Survey of the project areas in October 2006 revealed no cultural resources sites. Telecommunication sites proposed under Alternative 1 and 2 are heavily disturbed due to prior construction activities. Clearance for this project was approved on November 8, 2006 (Report 2006-12-121).

### Direct, Indirect, & Cumulative Effects

#### *Alternatives 1, 2 & 3*

There are no heritage resources present in either of the project locations. Clearance has been approved for this project (11/8/2008). There are no direct, indirect or cumulative effects.

## **Demand for Service**

### **Affected Environment**

Access to wireless telecommunication service has become commonplace in the United States even in relatively remote locations. While we do not have scientifically accurate data specifically from recreation users at Apache Lake, we do know that a great many of those who recreate there come from Phoenix and Tucson. These urban dwellers expect wireless telecommunication coverage.

The locations analyzed are outside of any Ranally Metro Area. These sites would serve less than 25,000 people.

During the last several years the forest has been contacted from time to time by service providers and tower companies who wish to provide service at one of the Lakes within the Tonto. There are currently active sites serving Saguaro and Roosevelt Lakes.

Apache Lake Marina currently has telephone service via hard line. This is the only telephone service accessible by the public at Apache Lake. Commnet has interest in their proposed tower from one licensed service provider (T-Mobile). Law enforcement agencies believe that access to wireless telecommunication service would be advantageous for 911 emergency service calls.

### **Direct, Indirect, & Cumulative Effects**

#### *Alternative 1 (Water tanks) and Alternative 2 (Restaurant)*

Demand would be met with placement of wireless telecommunication equipment within the Marina at Apache Lake. Recreationists would be able to contact friends, family and business associates from the Lake area. Placement would be responsive to and in accordance with the Telecommunications Act of 1996 and President Clinton's memorandum.

Some heavily used areas of the Lake would still not be reached with wireless signal coverage. The Marina would have the best coverage. It is likely that coverage at the Burnt Corral Recreation Site would be spotty, at best. We expect that access to service away from the Marina would reduce law enforcement response time in emergencies.

There are no current plans to expand recreation services at Apache Lake, however, general growth of population in the Phoenix and Tucson metropolitan areas should increase demand for services in this location. Providing wireless telecommunication service will address that need.

#### *Alternative 3 (No Action)*

Marina members and members of the public in the vicinity would still have emergency access to the Marina telephone. Demand for more convenient wireless telecommunication service would not be met.

## Areas of Coverage/Signal Paths

### Affected Environment

Apache Lake presents topographic challenges to providing extensive wireless telecommunication service from one antenna site. As a rule, antenna sites require power, access to hard line telephone service, and access for periodic maintenance. The only location at Apache Lake that can provide this constellation of utilities without placement of additional facilities is at the Marina. The majority of users at Apache Lake are either at the Marina, on the Lake or at Burnt Corral Recreation Site. Due to topographic features, Burnt Corral does not have sight line to the Marina.

### Direct, Indirect, & Cumulative Effects

#### *Alternative 1 (Water tanks)*

Radio Frequency plots provided by Commnet indicate that good coverage would be provided at the Marina. Coverage in some areas of the Lake would be spotty, but these areas are not heavily used. Burnt Corral Recreation Site (a heavily used location) would probably not receive signal.

The only other communication site authorized at Apache Lake is for law enforcement purposes at the Maricopa County Sheriff's Aid Station. We do not expect there to be any conflicts or impacts from additional service.

#### *Alternative 2 (Restaurant)*

Radio Frequency plots provided by Commnet indicate that good coverage would be provided at the Marina. Coverage in the mid section of the Lake would be good and there would slightly better coverage of the upper portion of the Lake than under Alternative 1. Burnt Corral Recreation Site would probably not receive signal.

The only other communication site authorized at Apache Lake is for law enforcement purposes at the Maricopa County Sheriff's Aid Station. We do not expect there to be any conflicts or impacts from additional service.

#### *Alternative 3 (No Action)*

No wireless telecommunication would be available from Apache Lake. Marina members and members of the public in the vicinity would still have emergency access to the Marina telephone.

## Visual Quality

### Affected Environment

The Forest's management and intent for visual quality in this area was established in 1985 based upon the Visual Management System. This categorizes forest landscapes from the perspectives of likely forest visitors. People are most-likely to view national forest lands from travel ways and use areas. For this project, most people would see the development from the Lake.

Distance zones are divisions used to describe the part of the landscape being viewed. For this project the distance zone would be foreground (i.e., < ½ mile, distances at which details can be

perceived) for those on the Lake and middle ground (i.e., ½ - 4 miles, individual forms of trees or structures are usually only discernable in very open, sparsely vegetated landscapes) for those at Apache Vista (on the Apache Trail, about a mile from the Marina).

Visual Quality Objectives (VQO) identify different degrees of acceptable alteration of the natural landscape based upon the importance of aesthetics. The VQO for management of this area, as established in 1985, is Retention: human activities are not evident to the casual forest visitor.

During the process of site selection, special consideration was taken to minimize the visual impacts of the tower. Specific care was taken to locate flat sites so that minimal cut and fill will be required to build the site. The site was also located near the existing structures, in areas that are already disturbed and already lit at night.

## **Direct, Indirect, & Cumulative Effects**

### ***Alternative 1 (Water tanks)***

The only part of the facility that may be visible from Apache Vista would be the very top of the pole. A ridge between the Vista and the site would hide most of the facility.

The Monopole would be visible from within the Marina and from the Lake. To mitigate the effect on visual quality, the block walls and other structures will be built and colored to blend in with the surrounding architectural and landscape features. Generally, darker colors are visually preferable: they blend better with their surroundings. The specific color will be selected by the Forest's Landscape Architect. Concerns for aircraft approach safety have forced some changes from what might be visually preferable. A flag will be placed on the monopole so that approaching aircraft will notice the pole during the day. At night, the pole will be locally lit.

From a cumulative effects stand point, the Marina already is nonconforming with the management direction of Retention. The impact of the Marina facilities has been mitigated through appropriate color selection. By using similar color schemes and localizing the new structures and lights within the Marina permitted area, further impacts would be minimized.

### ***Alternative 2 (Restaurant)***

The facility will not be visible from Apache Vista or the Apache Trail. A ridge between the Vista and the site would hide the facility.

The Monopole would be visible from within the Marina and from the Lake. To mitigate the effect on visual quality, the block walls and other structures will be built and colored to blend in with the surrounding architectural and landscape features. Generally, darker colors are visually preferable: they blend better with their surroundings. The specific color will be selected by the Forest's Landscape Architect. At this location a flag would be placed on the monopole so that it will be less recognizable as a wireless telecommunication tower and more visible to approaching aircraft.

From a cumulative effects stand point, the Marina already is nonconforming with the management direction of Retention. The impact of the Marina facilities has been mitigated through appropriate color selection. By using similar color schemes and localizing the new structures and lights within the Marina permitted area, further impacts would be minimized.

### *Alternative 3 (No Action)*

No additional structures would be built within the Marina. There will be no effect on visual quality.

## **Site Suitability**

### **Affected Environment**

During the process of site selection, special consideration was taken to minimize construction impacts. Specific care was taken to locate flat sites so that minimal cut and fill will be required to build the site. The sites were also located near the existing structures, in areas that are already disturbed. They provide access & both power and telephone cable utility connections.

The nearest communication facility is located at the Maricopa County Sheriff's Aid Station where they have radio service for law enforcement needs.

### **Direct, Indirect, & Cumulative Effects**

#### *Alternative 1 (Water tanks)*

There will be no conflicts with existing communication uses. The frequencies at which Commnet will operate will not create noise issues for the Maricopa County Sheriff's Office Aid Station. If any unanticipated conflict arises, it will be Commnet's responsibility to correct the problem or remove their offending equipment from the Forest.

Day-to-day permitted Marina operations will not be affected by placement of the antenna site at this location.

#### *Alternative 2 (Restaurant)*

There will be no conflicts with existing communication uses. The frequencies at which Commnet will operate will not create noise issues for the Maricopa County Sheriff's Office Aid Station. If any unanticipated conflict arises, it will be Commnet's responsibility to correct the problem or remove their offending equipment from the Forest.

In order to assure the Marina that their operations will not be affected by placement of the antenna site at this location, Commnet will work with the Marina to locate the site away from buried utility lines.

#### *Alternative 3 (No Action)*

No additional structures would be built within the Marina.

# Chapter 4 - Consultation and Coordination

The Forest Service consulted the following individuals, Federal, state and local agencies, tribes and non-Forest Service persons during the development of this environmental assessment:

## Federal, State and Local Officials and Agencies

U.S. Fish and Wildlife Service  
Arizona Game and Fish  
Gila County Emergency Management  
Maricopa County Sheriff's Office

## Tribes

The Scoping Letter was sent out to the following tribes: the Fort McDowell Yavapai Nation, the Yavapai-Prescott Tribe, the Yavapai-Apache Nation, the Tonto Apache Tribe, the San Carlos Apache Tribe, the White Mountain Apache Tribe, the Salt River Pima-Maricopa Indian Community, the Gila River Indian Community, the Hopi Tribe, and the Pueblo of Zuni Heritage and Historic Preservation Office. As of January 2007, only the Hopi Tribe responded with a request for a copy of the Cultural Resources Survey report.

## Others

On December 15, 2006, scoping letters were mailed out to 108 recipients. As of January 2007, 6 responses were received with one containing the signatures of 12 people.

On March 28, 2007, the Forest Service placed a legal advertisement in the *East Valley Tribune*. The ad announced the availability of the Environmental Assessment for review. The EA was also mailed to those who had responded during initial scoping for the proposed project. No further comments were received.

On October 11, 2007 the Forest Service mailed twelve letters to interested parties and on October 12, 2007 placed an additional legal advertisement in the *East Valley Tribune* announcing the availability of the draft Environmental Assessment. As a result, two letters were received. One was a letter of support for an action alternative. The other from MCSO requested lighting and color considerations in placing the tower due to concerns regarding aircraft approach safety. We have addressed this issue in this document.

# Chapter 5 – List of Preparers

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