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Environmental Assessment

Triangle Mountain Communications Site

Richfield Ranger District, Fishlake National Forest
Sevier County, Utah

Preliminary Version for Public Comment

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SUMMARY

Forest Service special uses policy authorizes use of National Forest System lands as communications sites by issuing leases to facility owners or facility managers who may sublease their facilities to multiple tenants for the operation of communications equipment. The Fishlake National Forest proposes to authorize construction of a new facility (Triangle Mountain) designed to accommodate anticipated Federal Communications Commission licensed wireless carriers needs at this location for the next 10 years. The project area is located on Triangle Mountain, NW1/4 Section 11, Township 22 South, Range 1 East, Salt Lake Meridian and is within the Richfield Ranger District, Fishlake National Forest, Utah.

This action is needed because there are inadequate wireless personal communication services on the I-70 corridor east of Salina, Utah. The decision to authorize the Triangle Mountain Communications Facility will constitute a non-significant amendment to the Fishlake National Forest's Land and Resource Management Plan.

The Environmental Assessment analyzed the proposed action and No Action Alternative. The Proposed action involves construction of a wireless communications facility which includes a 180 foot tall free standing tower, equipment shelters, and construction of new overhead and underground electrical distribution line to provide power for the facility.

The proposed action would result in improved wireless communications services for the Interstate 70 corridor. The proposed action meets purpose and need and is in compliance with the Telecommunications Act of 1996. Reliable wireless service would be provided to a portion of the I-70 corridor east of Salina. The Triangle Mountain communications facility would link to other existing and planned wireless telecommunications sites in the area and be a part of the I-70 corridor wireless system eventually providing seamless coverage on the Interstate.

The proposed action is consistent with the management direction, standards, and guidelines of the Fishlake National Forest Land and Resources Management Plan and will specifically comply with Management Prescriptions 9F and 5A. The proposed action would result in a non-significant management plan amendment and the designation of a new communication site (Triangle Mountain) in the Fishlake Land and Resources Management Plan. Although the tower will be evident from I-70, the proposed tower does not dominate the landscape and will not change the Fishlake National Forest's visual quality objectives for the area under the Scenic Management System or the Visual Management System.

Potential impacts to wildlife will be mitigated by construction timing restrictions limiting disturbance to the area in the winter and spring.

Based upon the effects of the alternatives, the responsible official will decide whether to implement the proposed action, an alternative to the proposed action, or whether further environmental documentation is needed. As the project proposes to amend the Forest Plan, the Responsible Official for this project will be the Forest Supervisor.

CHAPTER 1 – PURPOSE AND NEED

Document Structure

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

- *Introduction:* The section includes information on the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.
- *Comparison of Alternatives, including the Proposed Action:* This section provides a more detailed description of the agency's proposed action as well as alternative methods for achieving the stated purpose. This discussion also includes mitigation measures. Finally, this section provides a summary table of the environmental consequences of the proposed action compared with no action.
- *Environmental Consequences:* This section describes the environmental effects of implementing the proposed action. 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 proposed action. This analysis is organized by analysis the following subject areas:

    1. Visual Quality
    2. Biological Resources
    3. Land Use
    4. Air Quality
    5. Noise
    6. Cultural Resources
    7. Socioeconomics
    8. Environmental Justice

    Within each section, the affected environment is described first, followed by the effects of the proposed action. No action represents no change from the current conditions and therefore is not described in detail except where notable consequences would occur.

- *Agencies and Persons Consulted:* This section provides a list of preparers and agencies consulted during the development of the environmental assessment.

Additional documentation, including more detailed analyses of project-area resources, may be found in the project planning record located at the Fishlake Ranger District Office in Richfield, Utah.

Background

Forest Service special uses policy authorizes communications uses by designation of communications sites in land management plans and issuance of leases to facility owners/managers. The public and local, state, and federal government agencies have come to expect reliable wireless telephone and internet service while traveling major transportation corridors for general use and emergencies. Interstate 70 (I-70) is a major east/west transportation corridor through central Utah. In 2004, an informal group consisting of licensed wireless carriers, tower companies, and federal agencies examined the area on I-70 east and west of Richfield, identifying holes in wireless service and potential sites for communication towers with an objective of eventually providing continuous wireless coverage along the highway corridor. Triangle Mountain was identified at that time as a potential location for wireless facilities to serve the area east of Salina. Construction of some of the planned communications facilities were delayed because of economic factors and wireless carrier build out strategies. The proposed Triangle Mountain Tower is part of the system of wireless communications towers being developed for the Interstate 70 Corridor. Figure 1 shows the proposed Triangle Mountain tower in relation to other existing and proposed towers on the highway corridor.

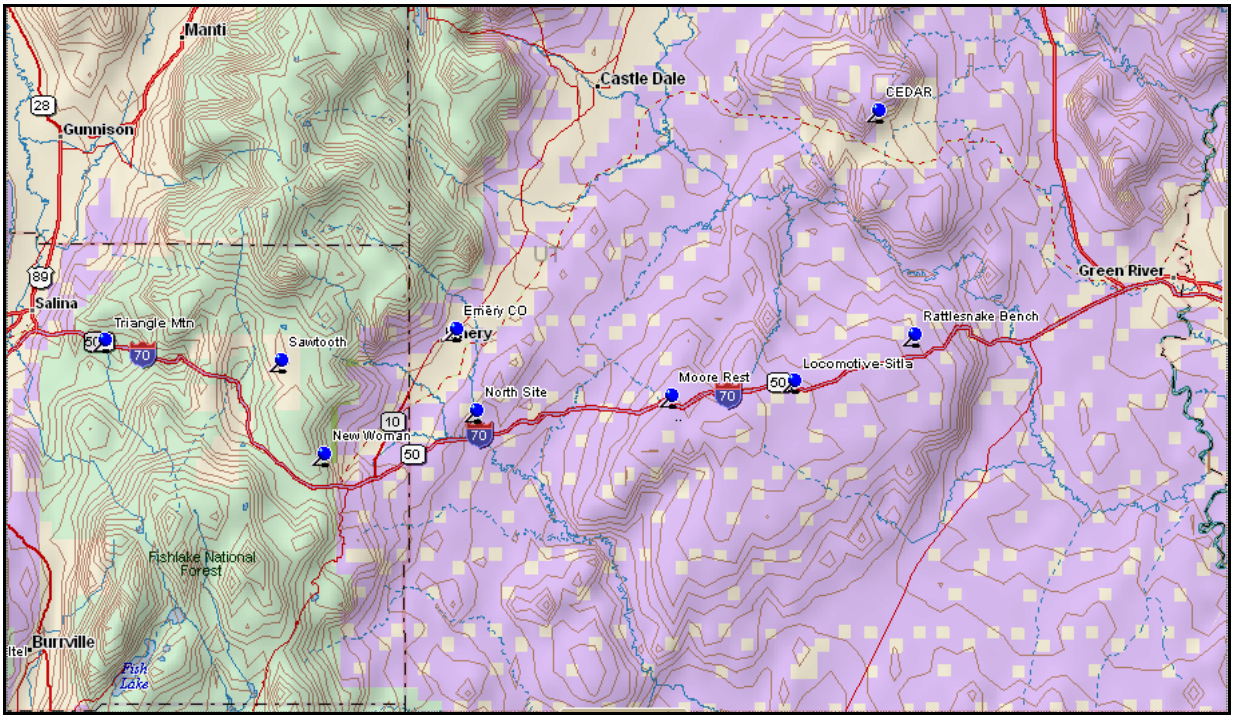

Figure 1. Interstate 70 Corridor Plan.

There are currently no designated communication sites in the Fishlake National Forest Land Management Plan that could be developed to provide service to the target area.

Purpose and Need for Action

The Forest Service has been given direction from Congress and the Executive Branch 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 into law, 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.*

The proposed project is needed to improve wireless personal communication services in Central Utah, principally east of Richfield Utah along the Interstate 70 corridor where such services are currently not available and/or reliable. Interstate 70 is a major travel route across Utah and consequently experiences heavy traffic by tourists and commerce. Travelers now expect and rely on wireless communications on major transportation corridors. The proposed Triangle Mountain Tower would function as part of the system of wireless communications towers being developed for the Interstate 70 Corridor between Salina and Green River, Utah.

Wireless signal strength studies (Propagation) and wireless users complaints show that the area on the highway corridor near Triangle Mountain is currently not receiving adequate or reliable wireless service. Typically in order to provide seamless wireless coverage for all of the licensed wireless providers on a highway corridor, a tower is needed approximately every 7 miles unless extremely tall towers or mountain tops are used. Each provider has different technical needs in regards to the maximum distance between towers based on propagation characteristics of their radio frequencies. Therefore, in order to develop a collocation corridor plan that minimizes the proliferation of towers and meets the needs of all of the licensed carriers, all carrier propagation needs must be addressed. For instance, Verizon and AT&T have very different needs in regards to distance between towers because of differences in how far their signals will travel. After all of the sites shown on Figure 1 are developed, the licensed carriers will be able to provide seamless coverage on the highway corridor from Salina to Green River.

Proposed Action

In order to meet the purpose and need for improving wireless communications the Fishlake National Forest proposes authorizing construction of a new communications facility designed to accommodate anticipated Federal Communications Commission (FCC) licensed wireless carriers needs at this location. The proposed communications facility is located on Forest Service land on Triangle Mountain, south of I-70 (Figure 2). The proposed site can be accessed using existing roads. Figure 2 is an aerial depiction of the proposed tower location. The proposed Tower is located within Section 11, T22S, R1E, Salt Lake Meridian. (Figure 3)

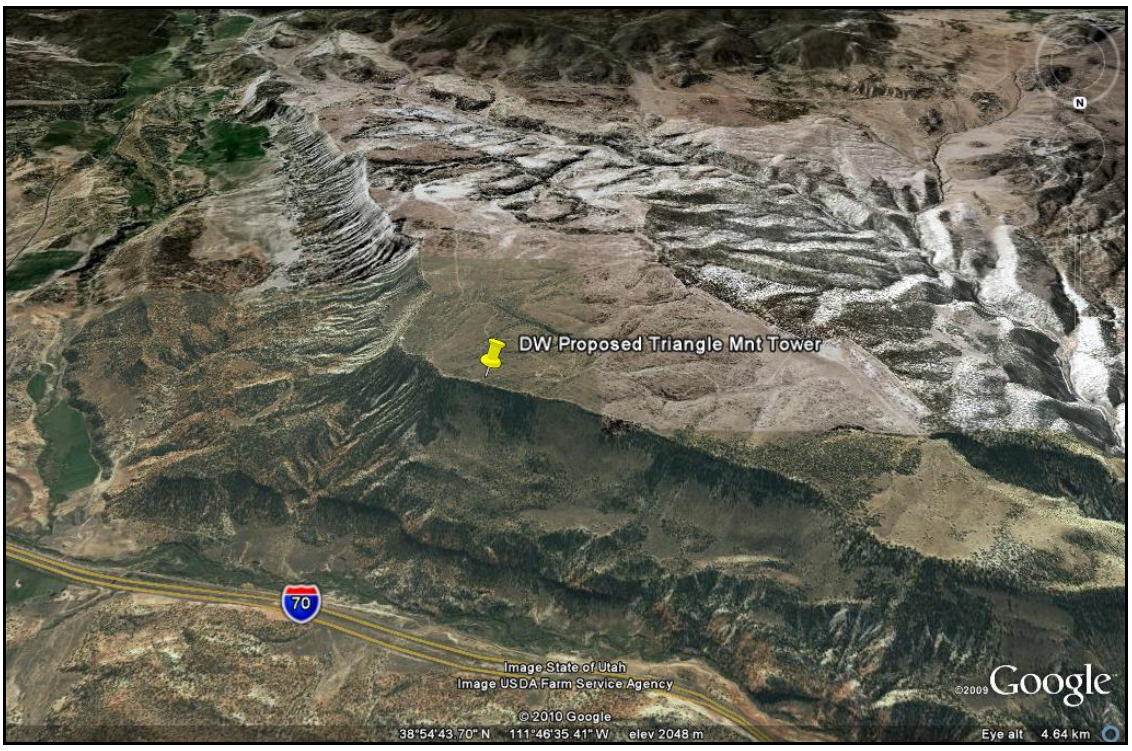

Figure 2. Proposed tower Location Aerial View. Looking south towards Triangle Mountain.

The major components of the proposal are as follows:

- Construct a communications facility to accommodate up to 4 wireless carriers and other low power users within a 100 feet x 100 feet fenced compound.
- Construct a 180 foot tall free standing lattice tower capable of accommodating at least four wireless carriers and associated microwave dishes.
- Construct equipment shelters designed to house all tenants within a 100 feet by 100 feet compound. The equipment shelter will be designed to initially accommodate three wireless carriers with the ability to expand within the compound area to provide additional tenant space. Equipment buildings and towers will house all tenants and will be owned and managed by the lease holder.

- Authorize use and spot improvements and maintenance of the existing Forest roads needed for construction and facility operational access.
- Designate the Triangle Mountain Communications Site in the Fishlake National Forest Land Management Plan through a non-significant plan amendment.
- Install approximately 3.8 miles of distribution power line on National Forest land. Approximately 15,372 feet will be overhead and 4,874 feet will be underground.

The entire project involves a power run that crosses multiple jurisdictions as displayed in Figure 3 and on Table 1 below. Effects of the project on private and State Trust lands are considered as indirect effects in this analysis.

Table 1. Land ownership per segment of proposed new power line.

Land Ownership	Segment A Overhead (feet)	Segment B Underground (feet)	Segment C Overhead (feet)	Totals by Land Ownership
Private	6,759	1,504	0	8,263
State	2,680	0	0	2,680
NFS Proposed Action	**1,794**	**4,874**	**13,578**	**20,246**
Totals by Segment	11,233	6,378	13,578	31,189

The Proposed Action involves only the activities on National Forest System lands as shown on Figure 4.

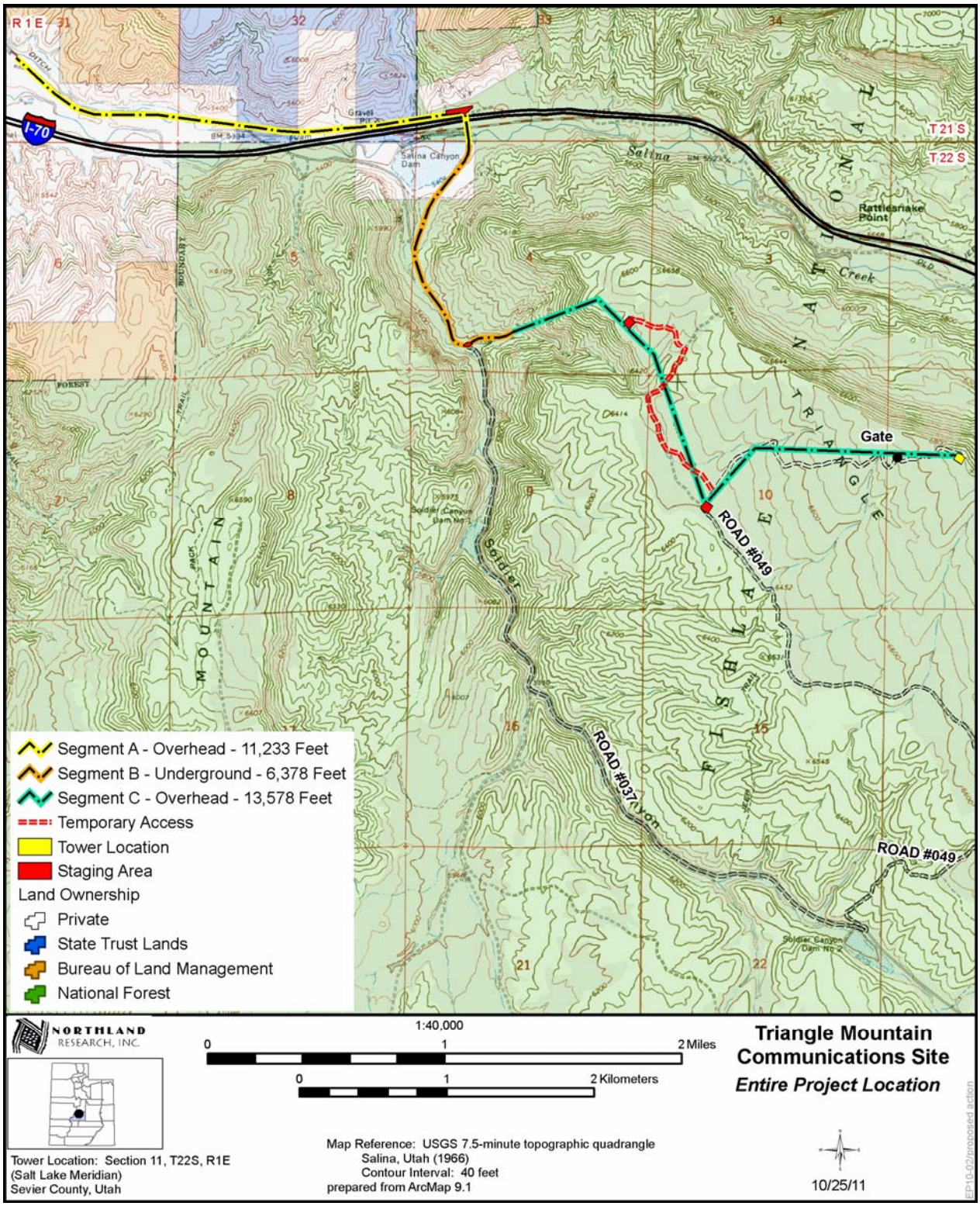

Figure 3. Map of the entire project.

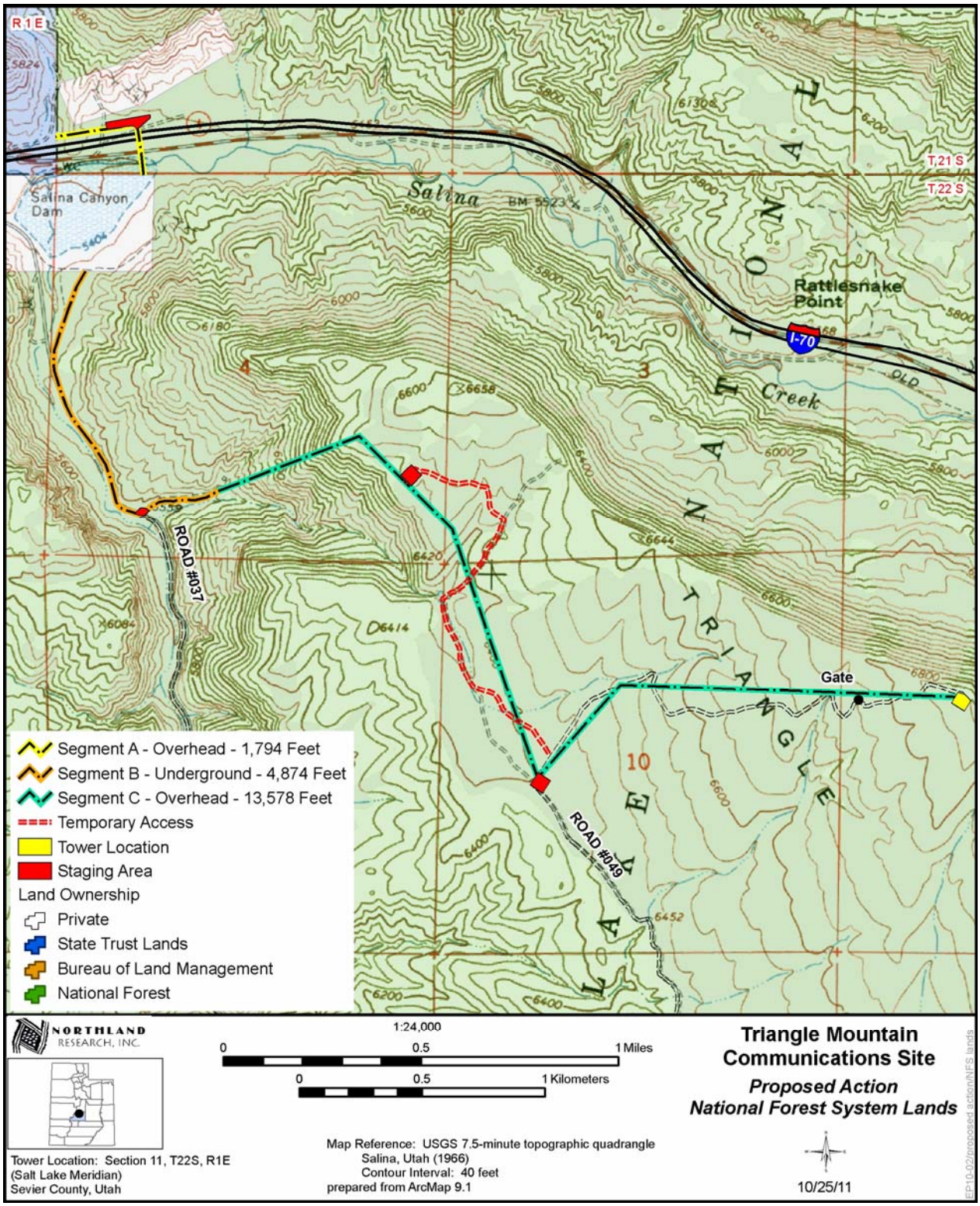

Figure 4. Proposed Action located on National Forest System lands.

Decision Framework

Given the purpose and need, the deciding official reviews the proposed action and the other alternatives in order to make the following decisions:

Should a new communications site be authorized on Triangle Mountain?

If authorized, what design features or mitigation should be required?

Should the Fishlake National Forest Plan be amended through a non-significant amendment to designate a communications site on Triangle Mountain?

As a result of implementation of the proposed action the FNF will prepare a Communication Site Management Plan which will specifically identify the bounds and size of the proposed Triangle Mountain Communications Site. The communications site plan will include management objectives, prescriptions, standards and guidelines of the LRMP. The site plan will also stipulate the type of communications equipment and transmitter power that will be allowed to operate from the site in order to mitigate radio interference issues.

The Forest Service decision applies only to the portion of the project located on NFS lands.

Public Involvement

The proposal was listed in the Schedule of Proposed Actions for the Fishlake National Forest beginning on October 1, 2010 and has appeared on every quarterly edition until the present time. On August 25, 2010, a Notice of Proposed Action and Request for Comments document was mailed to 44 interested individuals and groups. On November 5, 2010 the same items were mailed to another six names including local government, two Indian Tribes, and a local grazing association. A total of three comments were received. The Back Country Horsemen of Central Utah supported the project stating the importance of cell coverage during emergencies. The Hopi Tribe expressed interest in consulting on the project if cultural resources are identified and will be adversely affected. The Public Lands Policy Coordination Office provided information regarding Air Quality rule R307-205-5 for Fugitive Dust that apply to construction activities that disturb areas greater than ¼ acre in size.

Using the comments from the public, other agencies, and Forest Service specialists the interdisciplinary team developed a list of issues to address.

Issues

The Richfield District Ranger directed the interdisciplinary team to focus the analysis on the following issues:

1. Rare Plants. Ground disturbance activities associated with powerline installation or tower construction could impact rare plants: *Townsendia jonesii* var. *lutea*, *Penstemon wardii,* and *Eriogonum batmanii* var. *ostlundii*
    - Measure: acres of potential habitat impacted

2. Big Game Winter Habitat. Vehicular travel and human presence associated with facility operation and maintenance could disturb wintering big game.
    - Measure: amount of activity during January 1-April 15
3. Raptors. Construction activities could impact nesting golden eagles.
    - Measure: probability of nest abandonment (based on project activities that create disturbance near nest locations)

CHAPTER 2 – ALTERNATIVES

This chapter describes the alternatives considered for the Triangle Mountain Wireless Communications Facility project. This section also presents the proposed action in comparative form with no action, defining the differences and providing a clear basis for choice among options by the decision maker and the public. The No Action alternative is not presented as a separate stand- alone alternative. The effects analysis will contrast the impacts of the Proposed Action with the current condition for disclosing the impacts of not implementing the Proposed Action.

Alternatives

Alternatives Eliminated from Detailed Study

A variety of alternatives were investigated during the process of developing a proposed action that is feasible and addresses resource concerns.

Locate the facility on private land
Potential tower locations on private land were investigated. A high topographic feature such as a mountain top or ridge line is preferred location for a communications tower location because wireless signals operate by line of site. A high elevation tower location will not be blocked by other topographic features or trees and will transmit greater distances. There is no private land in the target area located on mountain tops or a high topographic feature. Typically private land within the National Forest is the result of homesteading and is bottom land suitable for agriculture.

Locate the facility at an existing communication site
Existing communications facilities were investigated and it was determined that there are no existing facilities that would provide wireless service to the target area. Triangle Mountain was the only location in the area that provided the topographic position to provide wireless service for the targeted area on I-70 with reasonable access to electrical power and existing vehicular access.

Locate the facility at the ridge line of Triangle Mountain
The general area making up Triangle Mountain ridge line overlooking I-70 was determined to be the best location for a new wireless facility to provide service on that portion of the Interstate. Alternative locations on Triangle Mountain were then investigated.

Most of the top of Triangle Mountain has been cleared of pinyon and juniper trees sometime in the past to enhance grazing conditions. A location was originally considered in the cleared area near the ridge line overlooking the Interstate. A communications facility at this location would be very visible as seen from Forest roads to the south of the proposed facility. In order to mitigate the visual concern a new location (the proposed action) was identified in an area that still has pinyon and juniper trees that could be used to screen the equipment buildings from views as seen from the forest roads to the south.

All Overhead Power

The original proposal included all overhead power. This alternative was eliminated due to concerns over visual effects in Soldier Canyon and heavy raptor flight use up and down the canyon.

All Underground Power

The Fishlake National Forest directed the ID Team to develop and analyze an all underground alternative that followed existing roads because of potential concerns for raptors and impacts to rare plants. An all underground alternative power run of approximately 7.5 miles was considered but eliminated because it would create more ground disturbance through trenching compared with individual pole placement, would create waste material, and is economically infeasible. It was determined an all underground alternative following existing roads would be economically unfeasible.

The costs to construct the all underground alternative as compared to the proposed action were analyzed (Power Run Analysis in Project Record). Cost estimates were provided by PacifiCorp for each power line alternative. Figure 5 depicts the all underground route.

Table 2. Cost estimate comparison for all underground power run vs. proposed action.

Alternative	Linear feet Overhead	Linear feet Underground	Total Cost
All Under Ground on FS land Following Existing Roads	11,329 feet	39,985	$1,042,137
Proposed Action – Overhead with Underground in Soldier Canyon	24,382 feet	6,628 feet	$ 410,968
		COST DIFFERENCE	**$ 631,169**

The all underground alternative would cost approximately $1,042,137 compared to $410,968 for the proposed action (Alternative 1). Wireless Industry standards for power costs indicate that anything over $500,000 for power would make the project economically unfeasible. Therefore, the all underground alternative was dropped from further analysis.

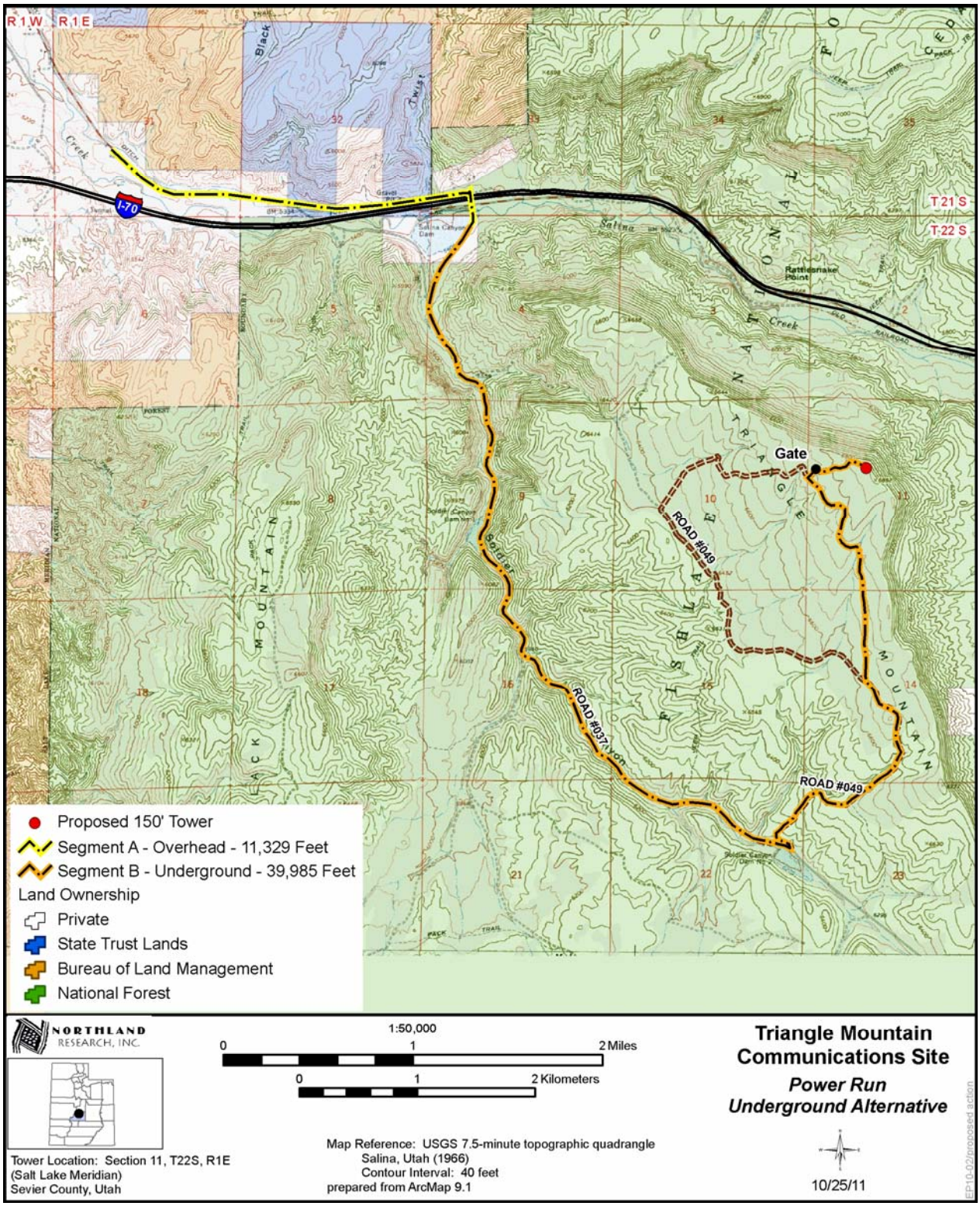

Figure 5. All Underground Alternative following existing roads dropped from detailed analysis.

Alternative 1

The Proposed Action

The Fishlake National Forest would authorize construction, operation, and maintenance of a new communication facility on Triangle Mountain east of Salina, Utah in Section 11, T22S, R1E, Salt Lake Meridian. The facility would be designed to accommodate anticipated Federal Communications Commission (FCC) licensed wireless carriers needs for this area for the next 10 years. The major components of the proposed facility include:

1) A single 180 foot tall freestanding lattice tower
2) Equipment shelters for tenants
3) A propane powered generator to provide auxiliary power
4) A 100 feet by 100 feet chain link fenced compound
5) Installation of approximately 15,372 linear feet of new overhead distribution power line and approximately 4,874 linear feet of new underground distribution line to provide electricity to the facility.

The facility is designed to accommodate up to 4 wireless carriers and other low power users within a 100 feet x 100 feet fenced lease area. Tenants will primarily be wireless communications carriers (cellular, PCS, EMRS) operating using radio frequencies authorized by the FCC.

See page 16 for additional required design criteria.

Construction Sequence – Construction will begin by spot maintenance activities on the access road into the site. This will involve a grader and dump trucks with road surfacing material for spot improvement. After the spot maintenance activities are completed the facility compound will be prepared by removal of all (approximately 20 pinyon pine and 10 juniper) trees from within the facility compound area. The tower foundation and equipment shelter foundation will be dug using an excavator. Waste material excavated for the tower foundation will be spread on the 100 x 100 lease area to level it if suitable for such use. Otherwise waste dirt and rock will be hauled to a designated disposal site Approximately 30 loads of concrete will be brought in for the tower foundation. The foundations for equipment shelters will also be poured at this time. After the concrete is poured the steel for the tower will be trucked in and assembled in sections within the lease area. The tower will then be stacked using a crane. Equipment buildings and auxiliary power generator infrastructure will then be constructed on site. A six foot tall chain link fence would be constructed around the compound to provide security for the facility.

Electrical power will be needed for the facility. Installation of new electric distribution line to the site on National Forest lands will include approximately 15,372 feet of overhead line and 4,874 feet of underground line. A helicopter will be used to install the approximately 2,022 foot section on the steep slopes coming out of Soldier Canyon. Helicopter pole setting is estimated to take three days. The helicopter staging area is located immediately north of I-70 on a previously disturbed area adjacent to the frontage road. The remainder of the pole setting and stringing the wire will take approximately 42 days to complete. Line construction equipment will include several line trucks, a 1 ton flatbed truck, a back hoe with auger, and an air compressor. The underground section will be trenched along the road bed.

Access would be via existing roads. Minor spot maintenance will be performed to smooth out rough spots but no new road construction or changes in road level will occur. A gate would be installed on FR 2096 as shown on the map in Figure 3. Access beyond that point will be limited to facility users and administrative use.

The Triangle Mountain Communications Site would be designated as a communication site in the Fishlake National Forest Land Management Plan through a non-significant amendment as a result of this decision.

Figure 6. Tower location looking south.

Figure 7. Tower location looking northeast.

Design Criteria

The following design criteria are identified to address potential impacts the proposed action may cause. These items are incorporated (required) as a part of the proposed action.

1. Wildlife
    - Construction may occur only during the period of June 16 – December 31 (dependent on weather).
    - To prevent disturbance to wintering big game during the critical period, construction is not allowed from January 1 to April 15.
    - To prevent possible nest abandonment by golden eagles, powerline construction is not allowed during the period of February 1(courtship) - June 15 (young fledgling).
    - Overhead power line pole design will include raptor protection devices.
2. Visuals
    - The tower will be painted a slate gray color which will blend with the skyline.
    - The equipment shelters will be painted FS dark brown.
    - Overhead power poles will be wood and a dark brown in color.
3. Noxious Weeds
    - Remove mud, dirt, and plant parts from project equipment before entering the project area.
    - Seed mixtures, if needed for reseeding disturbed ground, will be certified weed free.
4. Road Use/Travel Management
    - Site Construction will be restricted during periods of wet soil conditions. Operational and maintenance access would be minimized during periods of wet soil conditions.
    - Emergency access requiring snow removal would be handled on a case by case basis, requiring separate authorization.
    - A gate will be installed on the intersection FR 049 and FR 2096. FR 2096 will be restricted to administrative use only.
5. Revegetation
    - Disturbed area will be re-seeded with salt tolerant species.

Comparison of Alternatives

This section provides a summary of the effects of implementing the proposed action compared to no action. Information in the table is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives.

Table 3. Summary of the effects of the alternatives.

Topic	Proposed Action Alternative 1	No Action
Scenery	Limited short duration views of the tower as seen from I-70 traveling north and south. Generally, the tower is far enough off the highway so that views of the tower would be at an angle and therefore there would be no head on duration views. Scenic integrity objectives for the area would not be impacted	No change from current conditon.
Rare Plants	*Penstemon wardii* is present but is not located in areas where ground disturbance will occur. No effect.	No effect.
Soil	Disturbance on 8.35 acres for construction.	None
Availability of wireless services	The proposed action meets purpose and need and is in compliance with the Telecommunications Act of 1996. Reliable wireless service would be provided to the I-70 corridor east of Salina. The Triangle Mountain tower would link other existing and planned wireless telecommunications sites in the area and be a part of the I-70 corridor system eventually providing seamless coverage to the Interstate.	Does not meet purpose and need. Limited and unreliable wireless service along I-70 would continue.
Bird Collision Mortality	Tower design meets USFWS Tower guidelines. No collision mortality anticipated.	None.
Big Game Winter Habitat	Construction would not be allowed during January 1 to April 15 resutling in no disturbance. Emergency maintenance may occur during the wintering period but would be infrequent.	No disturbance.
Noise	Temporary construction noise during a 4-6 week period. No construction related noise during Big Game Winter Habitiat construction restriction or raptor nesting period.	No additional noise
Raptors	Timing restriction on construction protects nests from activity and noise disturbance. No effect on reproduction.	No change

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 proposed action. It also presents the scientific and analytical basis for comparison of alternatives presented in the chart above. No Action is the current condition and is the baseline for the analysis. Environmental consequences of the No Action are only displayed when there would be a consequence rather than a lack of consequence.

Visual Quality

The Scenery Management System is a system for the inventory and analysis of the aesthetic values of National Forest System lands. It combines elements of the landscape character (natural features), landscape visibility (the human values of the relative importance of scenery and sensitivity based on distance from an observer), and constituent information about the meaning people give to the identified landscape. It provides a way to analyze the impacts of management activities on forest scenery. The following information is summarized from the June 2011 Visual Analysis Report, based on the Scenery and Visual Management Systems, located in the project record (Figures 8, 9, & 10).

Affected Environment

The proposed tower site is located on a south west aspect at the crest of the ridge line making up Triangle Mountain. The land immediately north of the tower site falls steeply towards I-70 located approximately ¾ of mile away. The land gently slopes downhill southwest of the tower site towards Soldier Canyon. Tree cover is mostly pinion pine with some small junipers with an understory of sage brush, grasses, and mountain shrubs. The tower site is visible from I-70 when traveling both directions. Interstate 70 to the north, a high voltage power line located to the south, and chaining treatments are existing significant human influences on the landscape.

The site is classified as Moderate Scenic Integrity which means the landscape is slightly altered but sill naturally appearing. The Visual Quality Objective is partial retention which means human activities are evident but remain subordinate to the landscape.

Environmental Consequences

The proposed Triangle Mountain Communications Tower is located within an area with a visual quality objective of partial retention meaning human activities are evident but remain subordinate to the characteristic landscape. The proposed communication tower could be considered a deviation from partial retention; however visual simulations indicate that the tower would not dominate the landscape at that location as seen from I-70 while traveling in either direction. The tower site land characteristics are typical of

the surrounding area landscape however it is adjacent to I-70, a primary travel route and its associated impacts.

The proposed Triangle Mountain tower is located approximately 0.75 miles south of I-70. There are presently no human activities evident as seen from I-70 on the ridge where the tower is proposed. Visual simulations show that the tower will be evident on the ridge when traveling on the Interstate. However, there will not be any direct long duration views from vehicles traveling in either direction. Views of the tower will be at angles from the highway and would be short duration when traveling the posted speed limit for the interstate highway. The equipment shelters, compound fence and other associated communications equipment will not be seen from the Interstate because the lease area is located below the crest of the ridge and would therefore be blocked from view from I-70 by the Triangle Mountain landform. The new distribution power line which will provide electrical service will not be seen from I-70 except where it follows the I-70 frontage road on private and State lands. The power line will not be visible from I-70 on National Forest Land because the line approaches the site from the south which is blocked from views from I-70 by Triangle Mountain.

To reduce visual impacts the tower, antennae, and microwave dishes would be painted a slate gray color to eliminate and reflective shiny surfaces which will enable the tower to better blend in on the skyline. The equipment shelter would be painted FS dark flat brown, a color that blends in well to the surroundings. Wood poles will be used for the power line which are brown in color and are not reflective.

Although the tower will be evident from I-70 the proposed tower does not dominate the landscape and will not change the Fishlake National Forest's visual quality objectives for the area under the Scenic management System or the Visual Management System.

Cumulative Effects

Past activities that modify visual quality, such as vegetative treatments (chaining) and power lines, were considered in the existing scenery classification. There are no ongoing activities or known proposed activities that would affect the visual quality of Triangle Mountain as seen from Interstate 70 or local Forest Roads.

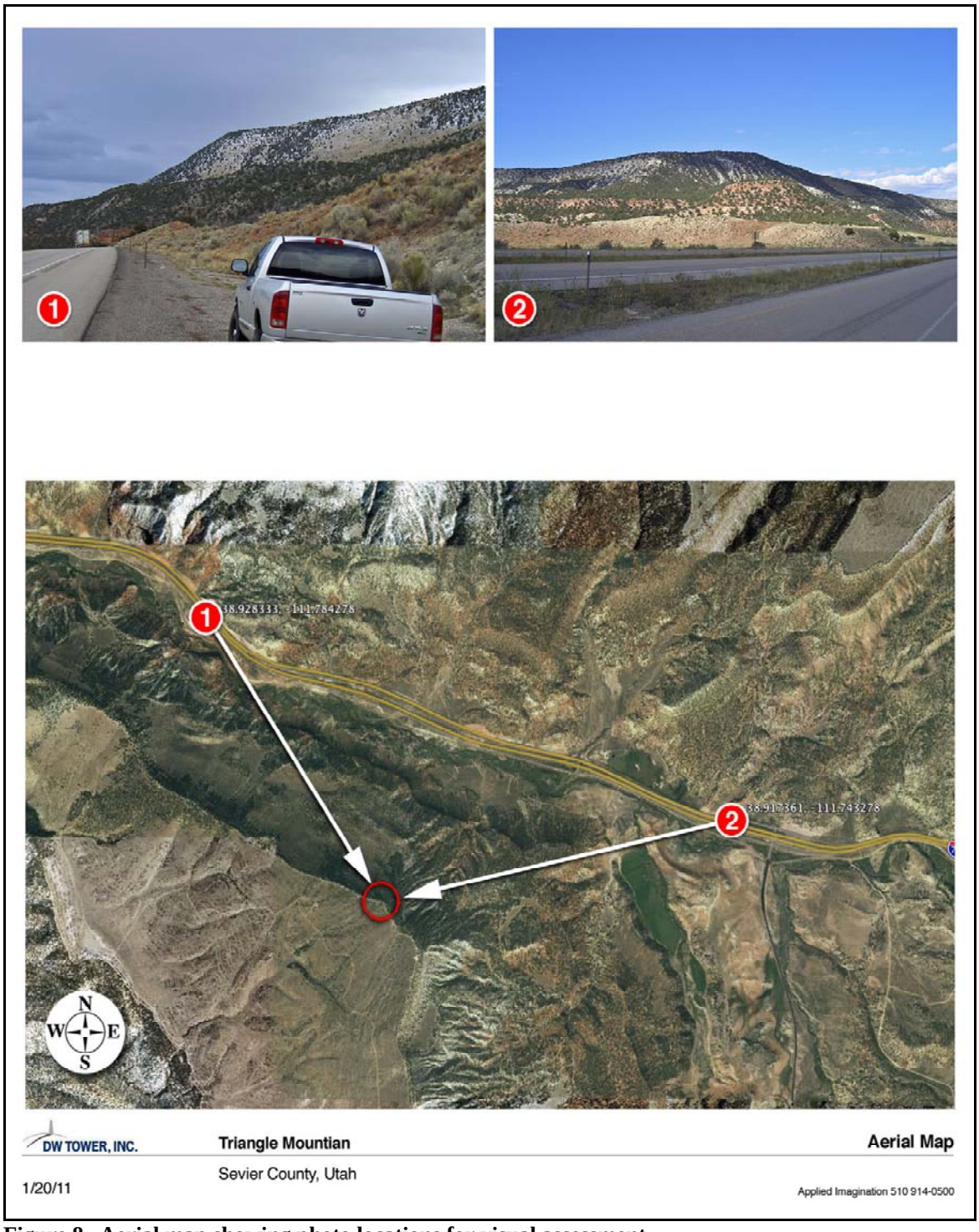

Figure 8. Aerial map showing photo locations for visual assessment.

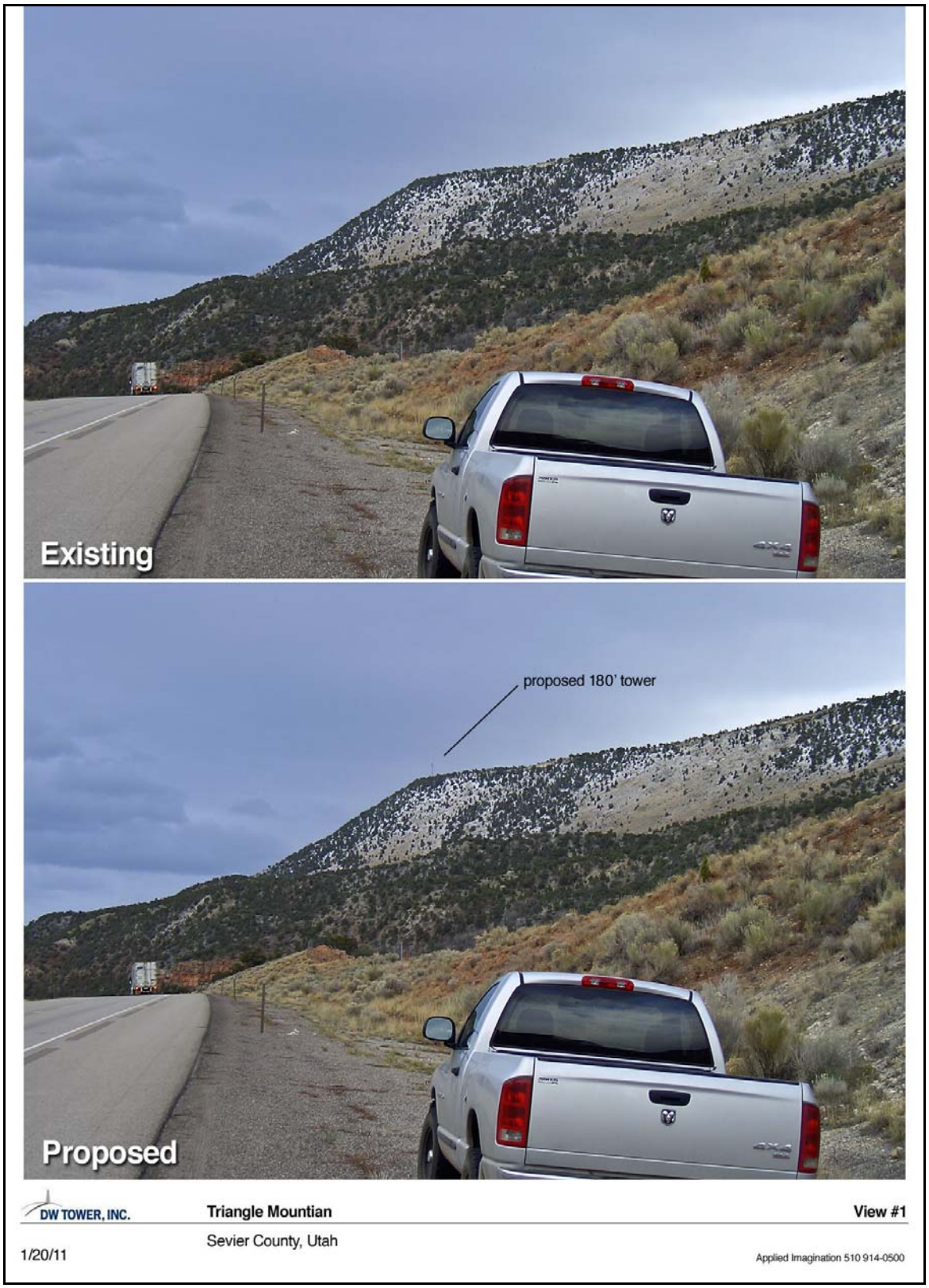

Figure 9. View from Photo Location 1.

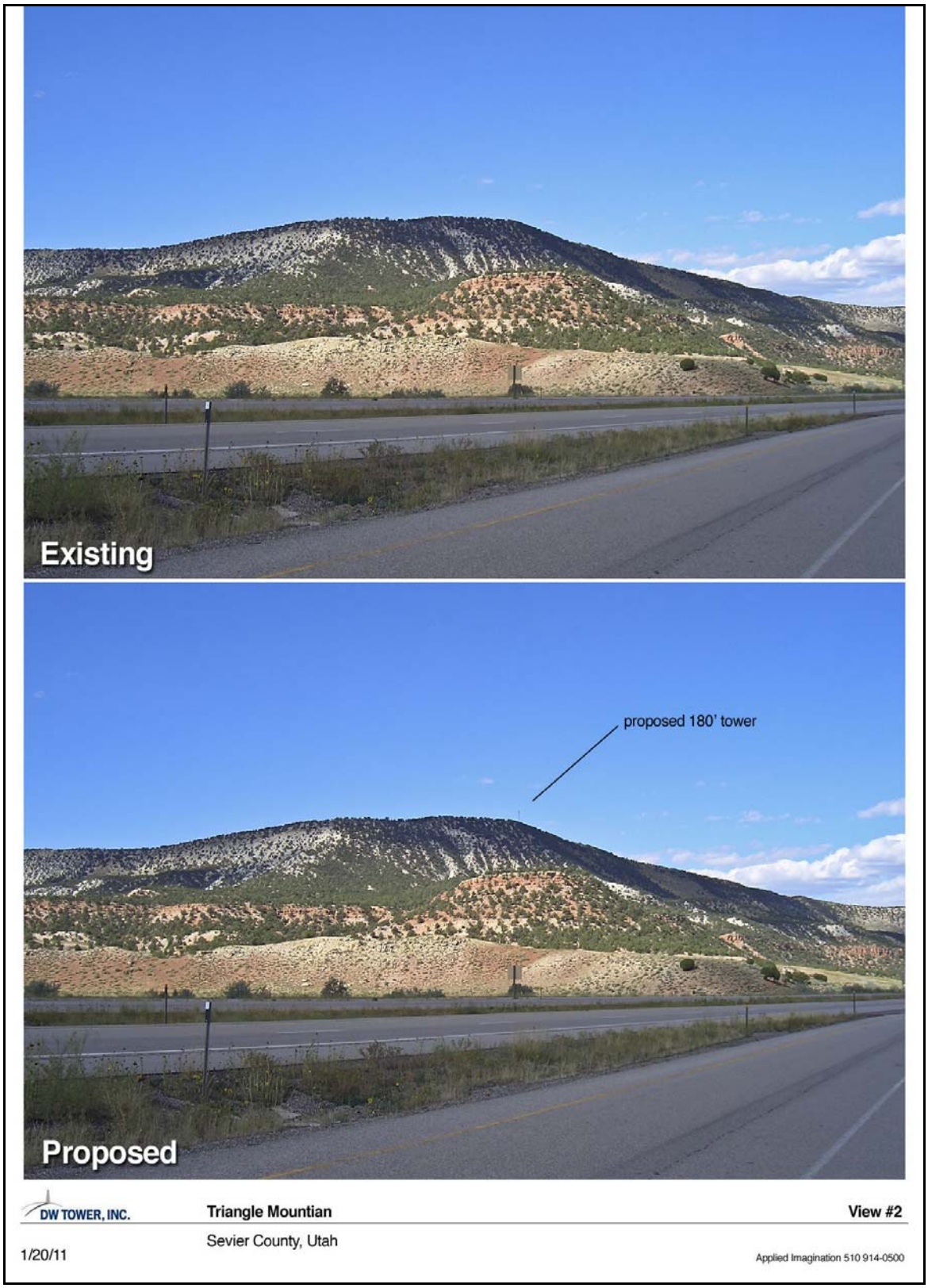

Figure 10. View from Photo Location 2.

Earth and Water Resources

General Geology

The project begins at an elevation of 5,274 feet above mean sea level where the new power line starts reaching a maximum of 6,880 feet at the proposed tower location. Surface geology consists of Quaternary alluvium and collorium deposits at the tower location. The top of Triangle Mountain is part of the Green River Formation (deposited during the upper Paleocene to Eocene Era). The underground portion of the powerline is within the Quaternary alluvium. The staging area along I-70 is located on the Flagstaff Limestone.

Soils

A soils report was prepared for the project area. A copy of this report can be found in the project record. "Most of the wildland soils mapped in close proximity to Triangle Mountain on the Richfield Ranger District of the Fishlake National Forest were derived from the Green River Shale / Geologic Formation – meaning, lake sediments with interbedded limestone, sandstone, mudstone and siltstone along with having some saline evaporate deposits and small areas of the secondary mineral dolomite. This formation has been known to develop into soil resources which have 1) carbonatic mineralogy … meaning, the ground has > 40 % $CaCO_3$ in the subsoil horizons and substratum layers and 2) the surface pH is strongly alkaline."

Water

Salina Creek, a perennial water, is located in the project area near I-70 where the overhead utility line will cross. Soldier Canyon Dam is located on private land. There is limited to no water storage due to siltation.

Environmental Consequences

Soils

Impacts to soil resources from the proposed action are expected to be minimal. The proposed tower site is on a flat location, minimizing cut and fill that will be required to build the site. Direct soil impacts would occur on 8.35 acres of National Forest System lands with another 0.70 acres of indirect impact on private and State Trust lands as displayed in Figure 3.

Soil disturbance will be kept to a minimum by using existing access roads, placing the underground portion of the electric line within the road prism, and utilizing a previously disturbed area for pole staging. Disturbance to steep slopes is minimized by using a helicopter for pole installation. Bare ground on steep slopes would be confined to the pole location and would not substantially increase erosion potential.

During construction and maintenance, soil erosion would be minimized by implementing standard construction erosion-control measures and mitigation measures and restricting activity during moist or wet soil conditions.

Table 4. Total Acres of soil disturbance for the Project and Proposed Action

Source of Soil Disturbance	Acres of soil disturbed by Land Ownership			
	Private	State	**NFS (Proposed Action)**	TOTAL
Tower/buildings	0	0	**0.3**	0.3
Utility trenching	0.5	0	**1.7**	2.2
Utility poles along roadways	<0.1	<0.1	**<0.1**	<0.3
Utility poles on steep slopes	0	0	**<0.1**	<0.1
Temporary Construction Access	0	0	**2**	2
Setting Poles along ROW on top of Triangle Mountain	0	0	**2.65**	2.65
Temporary pole staging and Helicopter staging	0	0	**1.5**	1.5
Total area of disturbance	0.6	0.1	**8.35**	9.05

Water

No impacts to Salina Creek are anticipated because construction will occur adjacent to but not within the water, riparian area, or slope of the creek. No construction will occur within the high water mark of Soldier Canyon Dam as the utility will be place underground along the road. Adjacent construction is not expected to produce sediment that would move into any water resources.

Cumulative Effects

Other past, present, and reasonably foreseeable actions that could result in impacts to soil include any earth-moving related developments in the project vicinity. Past soil disturbance is primarily associated with forest road development and channel erosion. Recent road closures under the Travel Management Rule have reduced soil disturbance by obliterating roads that will eventually re-vegetate. Erosion control dams, possibly of the Civil Conservation Corps era, are present in Soldier Canyon. Minor soil disturbance from livestock grazing is expected to continue. There are no other known or reasonably foreseeable activities that would cause soil disturbance, although construction projects could occur on private lands in the vicinity. Therefore, implementation of the proposed

action, along with past, present, and reasonably foreseeable actions, would have minimal cumulative effects to soil resources.

Biological Resources

This section provides a general description of the existing environment with respect to: vegetation; riparian habitat; invasive plant species; threatened, endangered, and sensitive species; management indicator species; and migratory birds. Information is summarized from the Wildlife Specialist Reports located in the project record.

Vegetation

The project passes through a variety of vegetation types as displayed on Figure 11. The private and State land portions are in semi-desert vegetation. The Forest Service portion (Proposed Action) passes through semi-desert, riparian, pinyon juniper-black sagebrush, and pinyon juniper big sagebrush. Vegetation manipulation (removal of pinyon-juniper and grass seeding) to improve livestock forage has occurred on the top of Triangle Mountain.

Riparian Habitat

The overhead portion of the power run will pass over riparian habitat along Salina Creek.

Invasive Plants

Projects analyzed since 2003 require consideration of the provisions of the Plan Amendment for Noxious Weed Management on the Fishlake National Forest, specifically incorporation of best management practices.

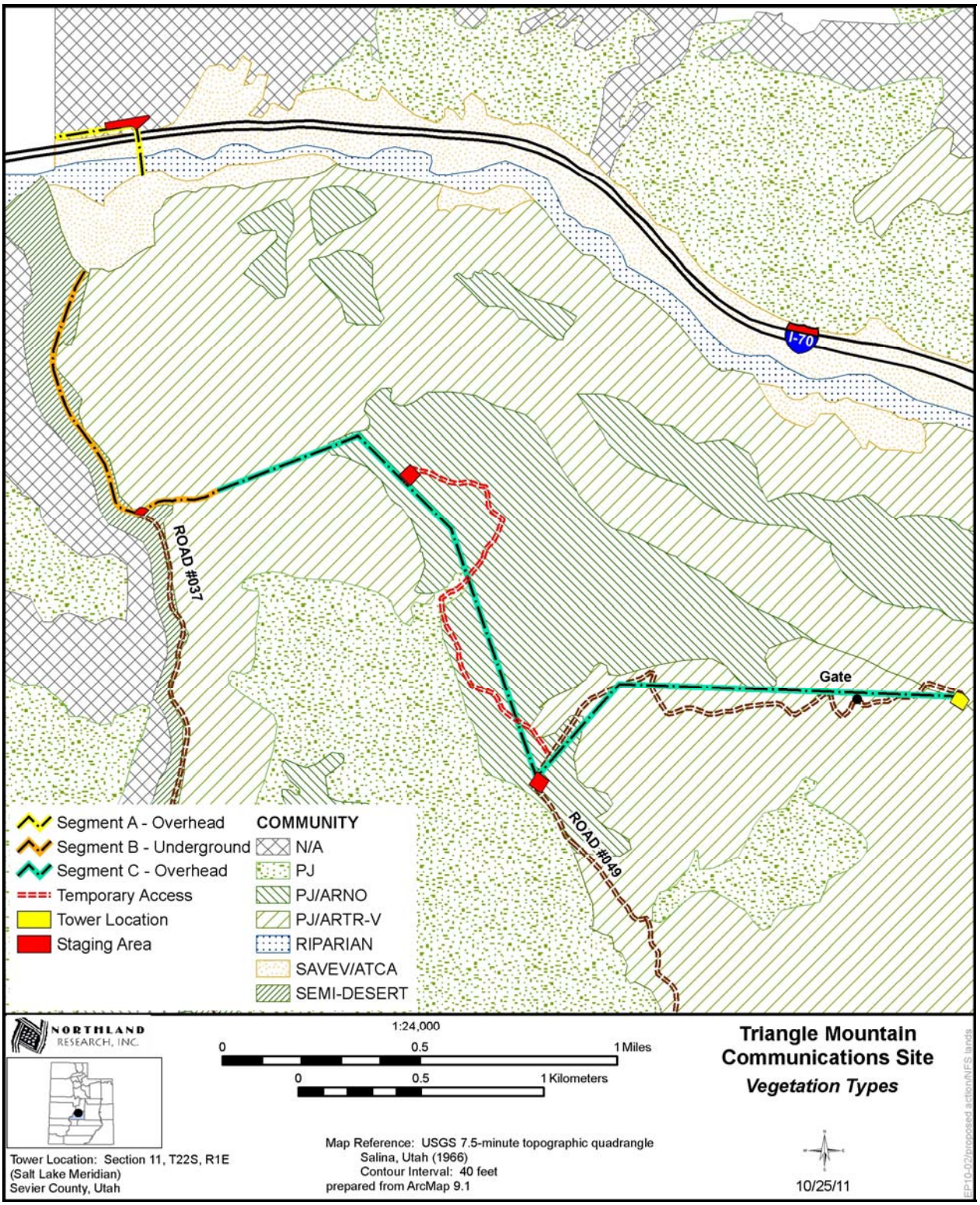

Figure 11. Map of vegetation types along the proposed action.

Environmental Consequences – Proposed Action

Vegetation

Vegetation would be impacted on the areas of soil disturbance 9.05 acres associated with utility installation and facility construction. Trenching for underground utility installation would temporarily impact vegetation by digging it up or covering it with soil. The trenching disturbance is primarily roadside. Surrounding vegetation is likely to re-seed this area. An estimated six acres of sagebrush will be impacted on Triangle Mountain. Impacts to sage brush are primarily short term from equipment crushing plants. Permanent loss of sage brush is limited to the small areas actually occupied by the power poles. Permanent loss of trees (approximately 20 pinyons and 10 junipers) would occur on the 0.25 acres at the lease location where trees will be cut.

Riparian Habitat

No riparian habitat would be impacted because no power poles will be placed within the riparian area. The overhead power line will span the riparian area. Poles will not be located on slopes of the creek and appropriate installation techniques will ensure that sediment from disturbed ground will not flow into the creek.

Invasive Plants

The incorporation of the Best Management Practices (cleaning construction equipment and using certified weed free seed mixtures) will prevent the introduction of new noxious or invasive weed populations, therefore the proposed action would not contribute to the spread of invasive species and/or noxious weeds.

Cumulative Effects

Past, present, and reasonably foreseeable actions considered for cumulative effects for vegetation include any project that has or will remove vegetation including: maintenance clearing of nearby powerline and road right of ways, livestock grazing, and potentially pinyon juniper fuel wood cutting. Vegetation impacts on 9.05 acres are primarily short-term. The permanent vegetation loss from the area occupied by power poles and the clearing within the 0.25 lease area is a minor cumulative effect when combined with other vegetation removal projects on the Richfield Ranger District.

Threatened and Endangered Species

The following information is summarized from the Wildlife and Botany Specialist Report located in the project record.

Affected Environment

No species listed as Threatened or Endangered under the Endangered Species Act occur in or near the project area.

The California condor is classified as endangered under the Endangered Species Act. In 1996 a nonessential experimental population of California condors was designated in northern Arizona and southern Utah under section 10(j) of the Endangered Species Act.

The project is located within that nonessential experimental population area. Endangered species within nonessential experimental populations on National Forest System Lands are treated as a species proposed for listing. The project area is located near the northern boundary of the experimental area. Condor use is focused on the North and South rims and river corridor of the Grand Canyon, the Kaibab Plateau, and the Kolob region area of southern Utah (AZ Condor Review Team 2007). No California condors have been documented from the project vicinity.

Environmental Consequences – Proposed Action

No species listed as Threatened, Endangered, or Proposed for listing under the Endangered Species Act will be impacted because none occur within the project area or affected project vicinity.

Forest Service Sensitive Species

Affected Environment

All Sensitive species known to occur on the Fishlake NF or Richfield Ranger District were considered. Detailed analysis is located in the Wildlife and Botany Specialist Report located in the project record.

Surveys were conducted for the following plant species that may occur in or near the project based on soil, vegetation, and elevation characteristics of the area: Ward's penstemon (*Penstemon wardii),* Elsinore buckwheat *(Eriogonum ostulundii),* and Sigurd townsendia (*Townsendii jonesii* var. *lutei).* Only *Penstemon wardii* was found and will be further discussed in this document.

Sensitive bird and mammal species that may occur in or near the project area based on habitat conditions include: peregrine falcon, bald eagle, greater sage grouse, pygmy rabbit, Bonneville cutthroat trout, spotted bat, Pale Townsend's big-eared bat, and yellow billed cuckoo. Only species that may occur in or near the project area are further discussed in this document.

Peregrine falcon

The peregrine falcon is dependent on steep cliffs for nesting and expansive open areas for hunting. Peregrines are sensitive to human disturbance, particularly when it occurs above the nest or on the cliff face (such as rock climbing, rappelling activities). Nesting peregrines are also sensitive to loud construction noises such as blasting. Peregrines forage at great distances, up to 14 miles, from eyries.

No eyries are known from the project vicinity; however, suitable habitat is located in the project vicinity in Soldier Canyon. A peregrine falcon was observed flying into a cliff ledge on June 29, 2011. No young were observed and it is unknown if this is an eyrie location. The cliff ledge and other suitable nesting sites are evaluated as suitable habitat. An eyrie could be present or established in the future. Due to the expansive foraging distances of peregrines, it is possible that falcons could forage in the project area.

Bald eagle

The bald eagle is found as a winter migrant in proximity to water for hunting waterfowl or fishing. They may also be found feeding on carrion. Critical winter habitat components include communal night-time roosts, generally groups of large conifer trees in drainages or on slopes. Bald eagles cover expansive areas during the winter as they search for prey that is influenced by weather conditions. As water freezes over, they continue south in search of open water to hunt waterfowl or fish or search for terrestrial carrion.

Bald eagles could be found foraging in the project area during the winter, either along Salina Creek or on Triangle Mountain. There are no suitable night-time roosts in or near the project area.

Greater sage grouse

Greater sage grouse inhabit sagebrush plains, foothills and mountain valleys. Important areas of sagebrush rangeland for sage grouse include: strutting grounds, water sources (springs, seeps, creeks, and livestock water developments), wet meadows, forb-dominated meadows, and south and west-facing ridges and slopes where grouse are known to winter (Beck and Mitchell 1997). The Utah Division of Wildlife Resources Natural Conservation Data Center identifies the nearest important brood habitat as 12 miles distant from the project. However, as sagebrush is present it is assumed that greater sage grouse may be present or could be at some time in the future.

Pygmy rabbit

Pygmy rabbit habitat is usually characterized by relatively taller and denser big sagebrush *(Artemisia tridentata)* and deep soils. Generally, pygmy rabbits burrow in loamy soils deeper than 20 inches. Soil composition needs to be able to support a burrow system with numerous entrances, but also must be soft enough for digging.

The site characteristics of areas inhabited by pygmy rabbits in Utah vary considerably. Rabbits occur both in alluvial deposits and in favorable microsites on bench tops. The project area, with the exception of the steep slope and woodland lease area, is potentially suitable habitat.

Bonneville cutthroat trout

Salina Creek is considered historic habitat for this trout. Salina Creek is a tributary to the Sevier River where Bonneville cutthroat trout are present. It is unknown if this trout is currently present in Salina Creek.

Spotted bat

Spotted bats roost singly in crevices along high cliff ledges across a range of elevations and habitat types. Spotted bats could roost in the rock ledges of Solider Canyon and could forage in the project area.

Pale Townsend's big- eared bat

Townsend's big-eared bat can occur in many types of habitat, but the species is often found near forested areas. Caves, mines, and buildings are used for day roosting and winter hibernation.

This bat could forage in the project area and potentially roost in Soldier Canyon, local abandoned buildings, or the explosive storage caves located near I-70 that were used for highway construction.

Yellow billed cuckoo

Yellow-billed cuckoos are considered a riparian obligate and are usually found in large tracts of cottonwood/willow habitats with dense sub-canopies. Salina Creek provides suitable habitat for the yellow billed cuckoo.

Ward's penstemon- *Penstemon wardii*

Ward's Penstemon is found in Ephedra, rabbitbrush, shadscale, mountain mahogany, sagebrush, and pinyon juniper communities on semi-barren, white to gray, fine-textured (often calcareous or gypsiferous) substrates (mostly the Arapien Shale Formation), at 5,500 to 6,800 feet elevation. Field surveys were conducted on June 28-29, 2011. (See Rare Plant Survey Report) *Penstemon wardii* was found in Soldier Canyon and on Triangle Mountain. A small group of *Penstemon wardii* occurs at the base of the slope where the overhead powerline will come out of Soldier Canyon and climb the slope to the top of Triangle Mountain. *Penstemon wardii* was also found adjacent to the access road on Triangle Mountain.

Environmental Consequences– Proposed Action

Table 5 summarizes impacts for Sensitive Species (Detailed analysis in project record).

Table 5. Summary of Findings for Sensitive Species

Species	No Impact	[1]May Impact Individuals Or Habitat, But Will Not Trend Towards Listing	[2]Will Impact Individuals Or Habitat and Trend Towards Listing
Peregrine falcon	**X**		
Bald eagle	**X**		
Greater sage grouse		**X**	
Pygmy rabbit		**X**	
Bonneville cutthroat trout	**X**		
Spotted bat	**X**		
Pale Townsend's big-eared bat	**X**		
Western yellow billed cuckoo	**X**		
Ward's penstemon *Penstemon wardii*	**X**		

Peregrine falcon

Trenching and underground power installation would occur at the base of and parallel to approximately 0.4 miles of suitable nesting cliff habitat. Timing restrictions for wintering big game (January 1-April 15) and golden eagle nesting (February 1- June 15) would prevent disturbance to any nests that might be present or established within this suitable habitat. Construction and maintenance access traffic will use FRs 0037 and 0039 to access the communication site, passing under approximately 1.3 miles of suitable nesting cliffs. This traffic would not disturb any nesting peregrines because there is an existing road open to traffic and the road is located below nesting habitat. The small acreage of vegetation and soil disturbance would not affect the availability of food (birds).

Bald eagle

Construction, operation, and maintenance activities associated with the proposed Triangle Mountain Communication Site will not impact the bald eagle because: construction will

[1] **May impact individuals or habitat, but will not likely contribute to a trend towards federal listing or cause a loss of viability to the population or species.**

[2] **Will impact individuals or habitat with a consequence that the act ion will contribute to a trend towards federal listing or cause a loss of viability to the population or species.**

not occur during the winter when bald eagles may be present, operation and maintenance activities during the winter are infrequent, and power line pole structure design includes raptor protection.

Greater sage grouse

Timing restrictions for wintering big game and golden eagles will prevent any disturbance to any possible greater sage grouse breeding. Some sagebrush plants may be crushed when vehicles drive along the utility alignment to place powerpoles and string the electric wires. The total area of short-term sagebrush disturbance is estimated at six acres. A few individual sage brush plants could be destroyed where power poles are installed. The remainder of the plants are expected to recover. Because the area is not identified as a lek or important habitat area, impacts will be none to minor.

Pygmy rabbit

Ground disturbing activities could crush burrow entrances. Short term impacts would occur on approximately six acres of pygmy rabbit habitat. Long term habitat loss would occur where power poles are placed.

Bonneville cutthroat trout

No activities will occur within the aquatic habitat. The powerline will be overhead across Salina Creek. Poles will not be located on slopes of the creek and appropriate installation techniques will ensure that sediment from disturbed ground will not flow into the creek. The Bonneville cutthroat trout and its habitat would not be impacted.

Spotted bat

No potential roost sites are affected by the project.

Although 45 species of bats inhabit North America, only nine have been documented fatalities at human-made structures. Until recent reports of mortality at windfarms, bat collision mortalities have been reported at tall buildings, lighthouses, communication towers, barb wire fences, power lines, and vehicles. Bat fatalities reported at three types of tall structures (building, lighthouse, and communication tower) were comprised of nine species: red bat (Lasiurus borealis;), silver-haired bat (Lasionycteris noctivagans;), hoary bat (L.cinereus;), Seminole bat (L. seminolus;), northern yellow bat (L. intermedius;), Mexican free-tailed bat (Tadarida brasiliensis), big brown bat (Eptesicus fuscus), little brown bat (Myotis lucifugus;), southeastern bat (M. austroroiparius). (Fiedler 2004). No spotted bat collisions at communication towers have been reported. A multi-year monitoring of six similar communication towers (un-guyed, unlit towers) in northern Arizona reported no bat mortalities. (Derby 2006). No mortalities of spotted bats are expected.

Pale Townsend's bat

No potential roost sites are affected by the project. No Townsend's bat collisions at communication towers have been reported (see spotted bat section) and no mortalities are expected.

Yellow billed cuckoo

The project will not impact any riparian vegetation and therefore will not impact the yellow billed cuckoo or its habitat.

Ward's penstemon- *Penstemon wardii*

This grouping of plants located underneath the overhead powerline alignment would not be impacted by any ground disturbance. The plants are in an area that will be spanned by the powerline. No ground disturbance will occur in this location as a helicopter will set the poles on the steep slope. *Penstemon wardii* locations adjacent to the access road on Triangle Mountain would not be impacted because project activities in this area are confined to construction traffic on the existing road. Acres of suitable habitat impacted were not calculated because a complete survey of the project area was conducted. A complete survey provides more accurate information regarding actual impacts to plants. There are no direct or indirect impacts to *Penstemon wardii*.

Cumulative Effects

Cumulative Effects are evaluated for the species that are directly or indirectly affected by the Proposed Action which are the greater sage grouse and the pygmy rabbit. Other projects that could impact these species include ground disturbing activities that impact sage brush which could include prescribed burning and construction projects. The project effects of six acres of habitat for the greater sage grouse and the pygmy rabbit would result in a minor cumulative effect when added to other possible sage brush impacts on the Richfield District.

Management Indicator Species Affected Environment

Management Indicators are: "Plant and animal species, communities, or special habitats selected for emphasis in planning, and which 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" (FSM2620.5).

The Fishlake National Forest Plan identifies the following Management Indicator Species associated with the indicator habitat and vegetation types found in the project area:

Mule deer and elk – Winter range

Hairy Woodpecker, Western Bluebird, Mountain Bluebird – Snags

Lincoln's Sparrow, Yellow Warbler, MacGillivray's Warbler, Song Sparrow –Riparian

Brewer;s Sparrow, Sage Thrasher, and Vesper Sparrow - sagebrush

Resident Trout and Macroinvertebrates – Streams

Bonneville cutthroat trout- Cool clear water with high oxygen content

The Bonneville cutthroat trout is evaluated under the Sensitive Species Section.

Deer and Elk

Triangle Mountain is a key wintering area for deer and elk.

Hairy Woodpecker, Western Bluebird, and Mountain Bluebird

These three birds are obligate cavity nesters. The hairy woodpecker may be found along Salina Creek where the overhead powerline would span the creek. The remainder of the project area is not suitable. Western and mountain bluebirds have similar habitat requirements. Both species occur between 5,000 to 12,000 feet in elevation in open forest meadow habitat. They may be found on the top of Triangle Mountain in the areas where juniper has been pushed.

Lincoln's Sparrow, Yellow Warbler, MacGillivray's Warbler, and Song Sparrow

These birds are riparian dependant species. They may be found along Salina Creek where the overhead powerline would span the creek.

Sage Thrasher, Vesper Sparrow, Brewer's Sparrow

These three birds use sagebrush as nesting cover and foraging habitat. Suitable habitat is on top of Triangle Mountain with the exception of the lease area which is pinyon juniper.

The sage thrasher primarily breeds in semiarid sagebrush plains. Their main source of food is insects which they glean from the sagebrush. The vesper sparrow is common in fields, pastures, and roadsides, but breeds in sagebrush and other shrub habitat. Their diet is about half insects and half grasses and forbs.

The Brewer's sparrow is a sagebrush obligate species and is primarily an insectivore but will feed on grasses and forbs in winter.

Trout and Macroinvertebrates

Salina Creek is suitable habitat for trout. Macroinvertebrates are an important component of aquatic habitat.

Environmental Consequences – Proposed Action

A detailed analysis for Management Indicator Species is located in the Wildlife and Botany Specialist Report located in the project record.

Deer and Elk

The project construction would create minor short term forage loss in the two staging areas (total one acre) on top of Triangle Mountain. Some vegetation could also be crushed where vehicles travel overland to install poles and pull the line (approximately six acres). Crushed vegetation is expected to recover. Minor permanent forage loss will occur where power poles are set and from within the approximate 0.3 acre lease area. Wintering deer and elk will not be disturbed because the project design includes a timing restriction of January 1 – April 15.

Operation and maintenance activities are expected to be infrequent and would normally be scheduled outside of the wintering period. Only emergency maintenance would occur during the January 1 – April 15 period and would most likely involve one truck traveling to and from the communication site and several hours of one person on site. This low

level of vehicular traffic and human presence is not expected to be detrimental to wintering deer and elk.

The project may impact forage for deer and elk and involve vehicular access/human presence for emergency maintenance in wintering habitat, but it would not adversely affect population numbers or viability because the amount of forage loss is small and the emergency maintenance infrequent.

Cumulative Impacts to Deer and Elk

Other past, present, and reasonably foreseeable actions that could result in impacts to deer and elk include prescribed burning, implementation of travel management, and livestock grazing. Key deer and elk winter range on the Fishlake National Forest is managed to reduce disturbance impacts. The small amount of forage loss and the infrequent possible disturbance during the winter for emergency access would be an indiscernible addition to other impacts.

Hairy Woodpecker, Western Bluebird, Mountain Bluebird, Lincoln's Sparrow, Yellow Warbler, MacGillivray's Warbler, and Song Sparrow

There would be no effect to the Forest-wide population or habitat trend for these Management Indicator Species because no indicator habitat (snags and riparian habitat) will be impacted.

Sage Thrasher, Vesper Sparrow, Brewer's Sparrow (Sage Nesters)

Short term impacts to sagebrush include crushing of plants on Triangle Mountain at pole staging areas, the temporary construction access, and vehicles driving along the utility alignment to place powerpoles and string the electric wires. The total area of sagebrush disturbance is estimated at six acres. A few individual sage brush plants could be permanently destroyed where power poles are installed. An estimated 40 power poles will be installed in the suitable sagebrush habitat on top of Triangle Mountain. Each power pole occupies a small area, estimated at 2 square feet of habitat. The sagebrush that are crushed are expected to recover.

Project construction will not occur until after June 15 and will not impact these spring breeders.

The proposed action may affect individuals or habitat, but would not adversely affect population numbers or viability because

- sagebrush will be crushed or lost, removing potential nesting habitat
- insect production associated with the sagebrush may be temporarily reduced.

No loss of viability to the population or species is anticipated because:

- only a minor amount of sagebrush would be removed/impacted (6 acres)
- crushed sagebrush is expected to survive
- permanent loss of sagebrush is minimal
- there are no long term adverse cumulative effects of this project on these species

Cumulative Impacts to Sage Nesters
Other past, present, and reasonably foreseeable actions that could result in impacts to the sage nesters includes prescribed burning or any other project that removes sagebrush. The small impact of six acres is a minor cumulative effect when added to other projects on the Fishlake National Forest that may impact sage brush.

Trout and Macroinvertebrates
No activities will occur within the aquatic habitat. The powerline will be overhead across Salina Creek. Poles will not be located on slopes of the creek and appropriate installation techniques will ensure that sediment from disturbed ground will not flow into the creek. There will be no effect to trout or macroinvertebrates.

Migratory Birds

Affected Environment

Executive Order 13186 (January 10, 2001) requires federal agencies to consider management impacts to migratory birds to further the purposes of the Migratory Bird Treaty Act. This analysis considers effects on: 1) Priority species identified in the Utah Partners in Flight Aviation Conservation Strategy; 2) Important Bird Areas (IBA's); and 3) effects to important over-wintering areas.

Species identified in the Utah Partners in Flight Avian Conservation Strategy as priority species for the project location (Utah Mountains Physiographic Region) and vegetation types include: Virginia's warbler, gray vireo, black-throated gray warbler, broad-tailed hummingbird, sage grouse, yellow-billed cuckoo, and Brewer's sparrow. Species addressed under other sections of this document are not repeated here: see Sensitive Species Section for the sage grouse and yellow-billed cuckoo and the Management Indicator Species Section for the Brewer's sparrow.

Virginia's warbler primary breeding habitat in Utah is oak. The secondary breeding habitat – pinyon juniper – is found in the project area on top of Triangle Mountain. Virginia's warbler is a ground nesting species.

The gray vireo nests on open, steep-sloped pinyon juniper woodlands. Suitable habitat for the gray vireo is on the steep slope of Triangle Mountain.

The majority of broadtail hummingbird nests in Utah occur at 6,000 to 8,000 ft elevation in stream side habitat. Broadtails may nest along Salina Creek in the project area and vicinity (5,500 ft).

The black-throated gray warbler is an above ground nester in the pinyon juniper type and occasionally in large shrubs such as mountain mahogany.

The project is not located within a designated Important Bird Area (IBA). No important over-wintering areas are located within or near the project.

Environmental Consequences

Project activities that could result in incidental take include:

1. Ground disturbing activities (trenching for buried powerline, installation of power poles, equipment crushing vegetation, temporary construction access, staging areas for pole/materials, helicopter staging area, and construction of tower, equipment buildings, and fence) that could impact ground or shrub nesting birds.
2. Cutting a tree that a bird is nesting in.
3. Installation of man-made structures that birds may strike when in flight.

Effects of ground disturbing activities:
Ground disturbing activities could result in incidental take of Virginia's warbler, however the size of habitat impacted that may contain nests is small (estimated at 6 acres). Ground disturbing effects are not expected to result in incidental take to the tree nesting species (gray vireo, broad tailed hummingbird, black-throated gray warbler).

Effects of Tree Cutting:
Approximately 20 pinyons and 10 junipers will be cut on 0.25 acres at the lease location for the tower. There is a small possibility that tree cutting could result in incidental take for the black-throated gray warbler. It is unlikely that more than one nest could occur in this small area based on bird territory sizes. However, the small amount of unintentional take from vegetation removal will not have a measurable negative effect on migratory bird populations. Tree cutting activities will not occur within suitable habitat for the gray vireo or broadtailed hummingbird; therefore no unintentional take will occur for those species.

Effects of Man Made Structures:
Birds can collide with any man made structure when in flight including buildings, towers, fences, cars. The project meets USFWS communication tower guidelines to minimize impacts to birds including: 1) design: self supporting (no guy wires) towers; 2) height: less than 199 feet AGL and unlit; 3) co-location of facilities: designed to accommodate four carriers, and 4) location: is not within known habitat of threatened or endangered species.

The facility will be fenced. All reasonable measures to minimize the possibility for bird mortality have been incorporated. A multi-year monitoring of six similar communication towers (un-guyed, unlit towers) in northern Arizona reported zero to a small fraction of fatalities per tower per year. (Derby 2006). The extremely low anticipated death of less than one bird per year is considered as no impact in this analysis.

Summary of Environmental Consequences for Migratory Birds

Minor impacts could occur to the gray vireo and the black throated gray warbler through vegetation removal that may support nests. The amount of possible incidental take is so minor that it will not have a measurable effect on migratory bird populations. No other priority migratory bird species are expected to be impacted. No IBAs or important overwintering areas would be impacted because none are present.

Land Use

This section provides a general description of the existing environment with respect to a variety of land uses, recreation, range, and Forest Plan land use designations.

Affected Environment

Land Jurisdiction and Ownership

The proposed action is located on land under the jurisdiction of the United States Department of Agriculture, Forest Service, Fishlake National Forest, Richfield Ranger District. State and private land are located in the Salina Creek Valley to the north and west of the project area. There are no land exchanges or other forms of major land ownership adjustment planned by the FS in the general vicinity of the project. Portions of the project located on private and state lands were considered in cumulative impacts.

Residences, Businesses

The proposed facility is located on National Forest System lands with a consistent land ownership pattern. Very little private land exists in this area. The closest large block of private land is located at the community of Salina, Utah, over 5 miles northwest of the proposed tower. The nearest businesses and residences are located in Salina. Richfield, Utah located approximately 25 miles to the southwest serves as a major economic center for the area. Richfield offers hotel rentals, general stores, and restaurants. Coal mines are located east of the project area.

Utilities

Rocky Mountain Power would provide electrical power to the proposed facility. Service to the proposed Triangle Mountain tower would come from extending an existing distribution line approximately 5.9 miles to the proposed facility.

Wireless Communications

Wireless personal communication services are currently not available and/or reliable in the area east of Richfield Utah along the Interstate 70 corridor. Interstate 70 is a major travel route across Utah and consequently experiences heavy traffic by tourists and commerce and the lack of wireless service impacts the safety and convenience of the traveling public and limits the ability of public safety agencies and UDOT to respond to emergencies on the highway.

Propagation studies and wireless users complaints show that the area on the highway corridor near Triangle Mountain is currently not receiving adequate or reliable wireless service.

Transportation

Interstate 70 is located approximately .5 miles north of the project area. Interstate 70 is a major east/west transportation corridor and experiences heavy traffic from commerce and tourism. Maintaining visual quality along this highway corridor is an objective of the Fishlake National Forest.

Access to the project area for the proposed Triangle Mountain Communications Site is via the I-70 frontage road east of Salina to Forest Road 037 to FR 049.

Recreation

The adjacent Forest Service land provides opportunities for camping, OHV use, picnicking, hiking, horseback riding, mountain biking, hunting, and scenery viewing. Current recreation use in this area is moderate and primarily associated with hunting and OHV use.

Range Resources

The project is located within a grazing Allotment. The project area represents undeveloped open space.

Existing Forest Plan Land Use Designations

According to the FNF Land and Resource Management Plan the project is in the area managed for "Improved Watershed", Management Prescription 9F. However, the FNF manages the area under Management Prescription 5A"Big Game Winter Range". The forest composition of the project area is woodland vegetation dominated by pinyon pine, with juniper, and sagebrush.

Environmental Consequences

Wireless Communications – In Alternative 1, the facilities are designed to accommodate anticipated wireless communications needs for the next 10 years so there would be no additional communication sites needed for the I-70 corridor from Salina to a point approximately 10 miles to the east. Implementing the proposed action will improve the wireless personal communication services along the Interstate 70 corridor including more high speed internet opportunities for the travelers and community of Salina and surrounding rural area. Communications with emergency services will be enhanced on the I-70 corridor which will improve the safety of the traveling public. The proposed action also responds to the goals and objectives of the Telecommunications Act of 1996, and helps move the area towards desired conditions. Under the no action alternative the I-70 corridor east of Salina would continue to have unreliable wireless communications. The lack of wireless communications on this portion of the I-70 corridor will result in delays in emergency response to accidents and emergencies which creates safety problems and inconvenience for the public traveling on I-70 and visitors on the Forest.

Transportation – Existing access roads would be used during project construction and operational activities. A temporary construction access route will be used on top of Triangle Mountain. Existing roads would not be upgraded beyond the current Forest Service road level designation nor impeded. The section of road from FR049 to the facility would be gated and limited to administrative and communications site access only.

Recreation Uses – Alternatives 1 does not represent any adverse change in the existing condition of recreation resources and activities. The improvement of wireless communications service in the area will improve safety for recreation users in this area.

Grazing – Alternatives 1 and 2 would have no impact on grazing operations and would not reduce livestock numbers on the grazing allotment because only a small acreage (less than one acre) would be removed from forage availability.

Fishlake National Forest Land and Resource Management Plan – The proposed action is consistent with the management direction, standards, and guidelines of the FNF land and Resources Management Plan and will specifically comply with Management Prescriptions 9F and 5A. Alternative 1 would result in a non-significant management plan amendment and the designation of a new (Triangle Mountain) communication site in the Fishlake NF Land and Resources Plan.

Cumulative Effects

There are no direct or indirect effects to land uses, therefore there would be no cumulative impacts because there are no effects from the proposed action that would accumulate with the effects of other past, present, or reasonably foreseeable actions

Air Quality

Affected Environment

The Clean Air Act required the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) for six criteria pollutants (ground level ozone [O3], carbon monoxide [CO], nitrogen dioxide [NO2], sulfur dioxide [SO2], particulate matter, and lead). According to the EPA website (http://www.epa.gov/region8/air/), the project area meets all NAAQS; therefore, air quality in the project area is good.

Short-term and temporary air quality impacts would result from construction-related activities and would include fugitive dust and exhaust emissions from construction vehicles and the helicopter. Construction would be of relatively short duration and the air-pollutant emissions would be dispersed relatively quickly; therefore, air quality standards would not be approached or exceeded. The proposed project would not generate any air pollutants after completion of the construction activities other than occasional dust from operational/maintenance traffic on the access roads, which would not be distinguishable from other forest road use, and occasional use of a backup generator.

Because fugitive dust may be generated during soil disturbance associated with construction the proposed project will be subject to Air Quality rule R307-205-5 for Fugitive Dust. The rule requires that measures be taken to minimize fugitive dust such as watering or other stabilization techniques if needed. Although the project impacts several acres in total the soil impacts at any given time will be limited to the area where they are working at that time. For example, soil disturbing activities for constructing the tower and associated buildings will be limited to an area approximately 100 feet by 100 feet and will likely not occur at the same time the underground power line is being constructed. The construction methods used for installing underground conduit does not leave open trenches and exposed overburden for extended periods. The conduit is buried, the overburden returned to the trench and the ROW graded as progress is made each day. The largest generator of fugitive dust will be associated with construction access using the existing forest roads. Overall construction access will not be discernable from typical or historical use of the roads; therefore impacts from fugitive dust generated on the roads will be of short duration and will not change existing conditions. Because the impacts to soil will be of short duration and limited on a daily basis during construction specific mitigation measures are not anticipated to be needed for air quality to be in compliance with Air Quality Rule R30 7-205-5.

Cumulative Effects

Other activities considered for cumulative air quality effects include any other project that would produce dust, smoke, or emissions during the four to six week construction period. These could include construction on private land in Salina and smoke from prescribed fires. The small amount of dust and emissions produced by the project combined with these other foreseeable actions would have minimal cumulative effects on air quality and air quality standards would not be exceeded.

Noise

Affected Environment

The project area is located in open space. Ambient noise includes I-70 traffic which can be heard at the proposed facility location and partly up Soldier Canyon where the underground electric power would be installed. The noise-scape for construction activities is estimated at one-half mile. There are no sensitive human receptors (such as residences or churches) located in the anticipated noise-scape for construction activities. The primary wildlife species sensitive to noise in the area is wintering deer and elk, golden eagles, and possible peregrine falcon.

Environmental Consequences

Noise levels resulting from the proposed project would be almost entirely due to construction related activities, which would result in a temporary increase in noise levels during daytime hours. The total estimated construction period is four to six weeks. Construction noise levels would be audible to any recreationists that may be within the noise-scape. The loudest noise would be from the helicopter and would occur for several days. Wildlife may temporarily be displaced by construction noise but would return to

the area after construction is completed. Wintering big game (January 1-April 15) would not be impacted because of a timing restriction for construction during January 1 to June 15. Golden eagle nesting, and potentially peregrine falcon nesting, would not be impacted because construction would not occur until after June 15th. Noise associated with operational or maintenance activities would be infrequent and be primarily from vehicle traffic to access the site, and not discernible from other vehicular use in the area. Operational and maintenance activities during the winter are expected to be limited to emergency situations and would be infrequent.

Cumulative Effects

Other activities considered for cumulative noise effects include any other project that would produce noise during the four to six week construction period within the 0.5 mile noise-scape. No highway construction projects are known. Highway traffic noise would continue at the current levels. There are no cumulative noise impacts because there are no other past, present, and reasonably foreseeable actions noise generating projects that will coincide with the construction period resulting in increased noise levels.

Cultural Resources

Affected Environment

A qualified environmental consultant conducted a Class III cultural resources survey and records check of 68 acres of privately owned land and public lands administered by the State of Utah and the Fishlake National Forest. The Area of Potential Effect (APE) for the Triangle Mountain Wireless Communications Tower Project was defined as the actual cell tower site, and all utilities and infrastructure that would be required for the construction, maintenance and utilization of the site. The project area lies within portions of Sections 3, 4, 10, 11, 14, 22 and 23, T22S, R1E and portions of Sections 31-33, T21S, R1E (Salt Lake City Meridian), map reference: USGS Salina, Utah 1966 7.5' series topographic map. The proposed Right-of-Way follows a frontage road (SR 10) along the northern lanes of Interstate 70 until crossing under the Interstate and continuing along the Soldier Canyon Road and onto Triangle Mountain.

The records review revealed that portions of the project area had been crossed by previous linear surveys, but no complete coverage of any segment had been conducted. In addition, one previously recorded historic site, the Soldier Canyon Road (42SV2917), had been documented within the project area. During the pedestrian survey, two additional historic aged archaeological sites – a trash scatter (42SV3495) and a previously undocumented segment of State Route 10 (42SV3496) – were also recorded. None of these sites are recommended as being eligible for inclusion on the National Register. Further, none of these sites will be directly impacted by the construction of power lines for the proposed wireless communications facility, and impacts to the view shed are negligible. The archaeological survey report for this proposal, project number Project Number U-11-NJ-0597 completed by Northland Research Inc., recommends that no further work is necessary to mitigate the impacts of the proposed undertaking.

Environmental Consequences and Cumulative Effects

The proposed action would not cause direct or indirect effects to cultural resources because no sites eligible for listing on the National Register of Historic Places are present. There would be no cumulative impacts because there are no effects from the proposed action that would accumulate with the effects of other past, present, or reasonably foreseeable actions.

Socioeconomics

This section describes the demographic and economic characteristics found in the project vicinity and potential changes that could result from the proposed project.

Affected Environment

The nearest economic and employment opportunities are found in the Sevier Valley and the communities of Richfield and Salina. The area can be best described as "rural diversified" due to the convergence of agricultural, retail and industrial activities. One of Richfield's regional roles is that it lies on the Interstate freeway almost precisely halfway between Los Angeles and Denver. Many travelers between the two cities stop in Richfield to eat, get fuel, or spend the night. As of the census of 2010, there were 7,551 people living in Richfield. The racial makeup of the city was 94.41% White, 0.39% African American, 3.29% Native American, 0.26% Asian, 0.07% Pacific Islander, 0.55% from other races, and 1.02% from two or more races. Hispanic or Latino of any race were 2.35% of the population. The population of Salina is estimated to be around 2,400 full time residents. The primary economic influences of Salina are farming, livestock coal mining and trucking.

Environmental Consequences

The proposed telecommunication tower sites are unmanned and therefore the probable effects on the population in the area long-term, would be negligible. There will be short-term benefits to the local and regional economy resulting from construction-related expenditures and employment related to building the facility. Local businesses would not suffer any appreciable adverse short or long-term economic impacts from any of the alternatives, and no businesses would be closed or eliminated as a result. The impact to the local population and local economy would be short-term and positive from construction related expenditures (purchase of gas, food, lodging, construction materials) by workers). A longer tem positive impact to the local economy would be reliable and consistent wireless internet service to the residents. Reliable internet service would expand opportunities for economic activities in this isolated area.

Environmental Consequences – No Action Alternative

The No Action Alternative does not meet the Purpose and Need for the project. Wireless personal communication services along the Interstate 70 corridor are currently unavailable and/or unreliable. Implementing the No Action Alternative will result in continued poor wireless communication services in the area which could result in longer

response time to emergency services and limited internet/cellular opportunities to the traveling public, the community of Salina, and the surrounding rural area.

Cumulative Effects – Socioeconomics

Implementation of the proposed action would result in an increase in wireless personal communication services. Alternative 1 is designed to accommodate all of the licensed wireless carriers in the area as well as future technologies that require vertical real estate. When considered with other past, present, and foreseeable projects in this area, there are no other projects that will have a similar effect and therefore no cumulative effects associated with the proposed action.

Environmental Justice

Pursuant to Executive Order 12898 on Environmental Justice, Federal agencies are to make the achievement of environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations, low-income populations, and Indian tribes and allowing all portions of the population a meaningful opportunity to participate in the development of, compliance with, and enforcement of Federal law, regulations, and policies affecting human health or the environment regardless of race, color, national origin, or income.

No minority or low income communities have been identified in or near the project.

Environmental Consequences

The proposed action would not result in disproportionate impacts to low-income populations, nor would it impact minority populations. The Richfield, and Salina areas, including its low income and minority populations, are strongly tied to agriculture and tourism industry, with cellular companies having a very small percentage of the overall economy. Minority and low income populations would not be directly or indirectly affected.

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:

ID TEAM MEMBERS:

Dave Christensen, Lands Staff, Richfield Ranger District
Kreig Rasmussen, Biologist, Richfield Ranger District
David Tait, Botanist, Richfield Ranger District
Bob Leonard, Archeologist, Fishlake National Forest
Michael D. Smith, Soil Scientist, Fishlake National Forest
Sandra Nagiller, Biologist/Planner, Northland Research, Inc.
Ken Jacobs, Land Use Permitting Specialist, Northland Research, Inc.

Scoping letters requesting comments were sent to the following federal, state, local agencies; Tribes, and organizations.

FEDERAL, STATE, AND LOCAL AGENCIES:

Public Lands Policy & Coordination Act, Utah Governor's Office
City of Salina
Utah Navajo Commission
Division of Forestry, Fire, and State Lands
Sevier County Commission
EPA, Region 8
Utah Division of Wildlife Resources
Utah Geological Survey
Senator Orrin Hatch
Senator Bob Bennett

TRIBES:

The Hopi Tribe
The Ute Tribe
Paiute Tribe

OTHERS: **(see mailing list in project record for individuals)**

Back Country Horseman of Central Utah
Browns Holes Grazing Association
Rocky Mountain Elk Foundation
Southern Utah OHV Club
Wilderness Society

Wild Utah Forest Campaign
Sierra Club
Forest Guardians
Utah Native Plant Society

CHAPTER 5 – REFERENCES

Derby, C. 2006. Bird and Bat Fatality Monitoring of Six Un-guyed, Unlit Cellular Telecommunication Towers within the Coconino and Prescott National Forests, Arizona: 2006 Season Results. Western EcoSystems Technology, Inc. Cheyenne, Wyoming 82001.

Northland Research, Inc. 2011. A Cultural Resources Survey for the Proposed Triangle Mountain Communications Site, Fishlake National Forest, Utah. Northland Research, Inc. Tempe, Arizona.

Northland Research, Inc. 2011. Rare Plant Survey for the Proposed Triangle Mountain Communication Tower. Flagstaff, Arizona.

Northland Research, Inc. 2011. Underground Power Cost Analysis for the Proposed Triangle Mountain Communication Tower. Flagstaff, Arizona.

Northland Research, Inc. 2011. Visual Analysis for the Proposed Triangle Mountain Communication Tower. Flagstaff, Arizona.

Northland Research, Inc. 2011. Wildlife and Botany Specialist Report for the Triangle Communications Site. Flagstaff, AZ.

Parrish, J. R., F. P. Howe, R. E. Norvell. 2002. Utah Partners in Flight Avian Conservation Strategy Version 2.0. Utah Partners in Flight Program, Utah Division of Wildlife Resources, 1594 West North Temple, Salt Lake City, UT 84116, UDWR Publication Number 02-27. i–xiv + 302 pp.

USDA. Fishlake National Forest. 2011. Soil Resources located on Triangle Mountain. Prepared by Michael Smith.

USDA. Forest Service Southwestern Region. 1985. Fishlake National Forest Land and Resource Management Plan (as amended).