

**BIOLOGICAL EVALUATION FOR THE  
AT&T FIBER OPTIC LINE  
FROM VICTORVILLE, CALIFORNIA TO  
NEVADA STATE LINE**

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**August 2007**

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## SECTION 1 - INTRODUCTION

### PROJECT DESCRIPTION AND PURPOSE OF BIOLOGICAL EVALUATION

The purpose of this biological assessment by Chambers Group, Inc. (Chambers) is to provide the necessary information to the U.S. Fish and Wildlife Service (USFWS) for the issuance of a biological opinion to the Bureau of Land Management (BLM) for the proposed AT&T fiber optic line maintenance activities on its approximately 190-mile cable route running from Las Vegas, Nevada to Victorville, California (the "**Project**"). The objective of this biological assessment is to determine the effect of the proposed action upon the threatened desert tortoise, *Gopherus agassizii*, and its designated critical habitat. No other state or federally listed species or habitats are known to occur within the area of the proposed action. This biological evaluation is prepared in accordance with legal requirements set forth under Section 7 of the Endangered Species Act (16 U.S.C 1536 (c)).

## SECTION 2 - PROPOSED ACTION

This section provides a detailed description of the proposed action, including the project description, project components, construction methods and processes, operations and maintenance.

### 2.1 PROJECT LOCATION

Maintenance activities are targeted at portions of the AT&T cable route along 93.3 miles between the intersection of Warm Springs Road and Las Vegas Boulevard in Las Vegas, Clark County, Nevada, to the Victorville Central Office near 6<sup>th</sup> and Union Street in the City of Victorville, County of San Bernardino, California. The cable route follows a linear path through the Victorville, Apple Valley North, Turtle Valley, Stoddard Well, Solomons Knob, Valley Wells, Mescal Range, Mineral Hill, and Ivanpah Lake California U.S. Geological Survey (USGS) 7.5 minute quadrangles and Roach, Jean, Sloan, and Las Vegas SW Nevada USGS 7.5 minute quadrangles. Approximately 14.64 miles lies between the Las Vegas and Sloan regeneration station, approximately 23.76 miles lies between the Sloan and Halloran Summit regeneration stations, and approximately 16.48 miles of buried conduit exists between the Victorville Central Office and Slash X regeneration location. New fiber cable will be installed in the newly constructed segments and in about 38.42 miles of existing conduit system, as shown in Figures 1-5 located in Appendix A. The focus of this biological evaluation is for maintenance activities targeted in California only (Table 2-1), starting from the California-Nevada state line moving southwest towards Victorville. Maintenance activities will take place in existing rights of way, consisting of County roads or previously disturbed access roads. Detailed route descriptions are included in Section 2.4 in this report.

**Table 2-1  
California Cable Route Segments**

<b>Segment</b>	<b>Length (miles)</b>	<b>Existing Conduit (miles)</b>	<b>New Build (miles)</b>
SEGMENT B	21.43	14.43	7
SEGMENT C	25.6	9.12	16.48
SEGMENT D	10.35	2.73	7.62
SEGMENTS B – D	57.38	26.28	31.1

### 2.2 DESCRIPTION OF THE PROPOSED ACTION

AT&T Corp. (AT&T) proposes to perform fiber optic cable maintenance activities on its approximately 190-mile cable route running from Las Vegas, Nevada, to Victorville, California, (the "**Project**"). Constructed in 1988-89 pursuant in part to Bureau of Land Management ("**BLM**") Right-Of-Way Grant CA-21604/NV-48572 ("**BLM Grant**"), the Project route contains a 1/2-inch diameter fiber optic cable that is either "directly buried" in the ground or otherwise enclosed within existing buried conduit. Ancillary facilities along the route consist of eight (8) regeneration stations, several short segments of electrical distribution line, splice boxes, marker poles, marker ribbon and manhole access.

The focus of this Project consists of replacing fiber optic cable that is nearing the end of its useful life. This document focuses on certain portions of the overall route that have been targeted for maintenance activities at this time. As further discussed below, in some instances maintenance activities consist of pulling the replacement cable through already existing conduit systems. In the "direct bury" portions of the route, maintenance activities will include installation of new conduit into which the replacement cable will be installed ("**New Build**"). Due to the impending need for replacement of the existing cable in the targeted portions, maintenance activities are proposed to begin in late summer/early fall 2007 and are

expected to be completed by January 2008. Following maintenance activities, cable marker poles will be replaced where necessary, and the Project area will be restored to its original condition. Erosion control measures originally installed for the route will not be altered.

Maintenance activities will take place in existing rights-of-way ("**ROW**"), consisting of County roads or previously disturbed access roads that were permitted by the BLM Grant. Disturbance of any off-ROW desert habitat is not anticipated. In addition, the proposed maintenance activities will not alter or remove existing communications systems such as regeneration systems, cables or other similar facilities. No impacts to any other existing above-ground facilities or structures are proposed.

### **2.3 PROJECT PURPOSE**

Cable route segments targeted by the proposed Project need to be replaced by January 2008 because AT&T lab technicians have identified these particular segments as being susceptible to damage by the upcoming 2008 winter conditions. Only those segments identified in the proposed Project are at risk at this time; the remaining segments along the Las Vegas-Victorville route are not scheduled to be replaced at this time and are not threatened by the upcoming winter conditions. Thus, the purpose of the proposed Project is to maintain the functionality of the original cable route by replacing certain segments that are quickly nearing the end of their useful life. The overall fiber optic telecommunication transmission capacity of this cable from Las Vegas to Victorville will not be changed.

Maintenance of the Las Vegas-Victorville cable route is a high priority for AT&T. Like the other major fiber optic cable lines that together constitute AT&T's nationwide and global network of cable communication links, this fiber optic cable carries voice, data, and streaming video that is critical to uses ranging from the household personal computers to businesses, universities, hospitals, emergency responders, and government institutions.

### **2.4 ROUTE DESCRIPTION**

The portions of the route targeted for maintenance activities at this time include the following segments: (1) beginning at the intersection of Dean Martin Boulevard (Industrial Road) and E. Warm Springs Road, east along E. Warm Springs Rd. to the intersection of Las Vegas Blvd. (SR604/County Rd.); thence southerly and westerly along Las Vegas Blvd. to approximately 3.5 miles south of Jean, concluding at the end of Las Vegas Blvd. near I-15 (Segment A); (2) Nipton regeneration station (near Nipton Rd.) to Halloran Springs regeneration station (near Halloran Springs Rd.) (Segment B); (3) Slash X regeneration station (near SR 247) to the Victorville Central Office (in the City of Victorville) (Segment C); and (4) the end of Las Vegas Blvd. (approximately 3.5 miles south of Jean, NV) to Nipton regeneration station (near Nipton Rd. (Segment D). These segments are further depicted in Figures 1-5 located in Appendix A. Maintenance activities targeted for California include Segment B, Segment C, and the California portion of Segment D. The areas targeted for maintenance in California are summarized in Table 2-1.

All New Build within BLM jurisdiction will occur within AT&T's existing BLM Grant. This ROW Grant is located entirely within existing roads (e.g., Stoddard Wells Road near Victorville) or utility access roads (e.g., the utility access road corridor that crosses Ivanpah Lake in Segment D). No undisturbed desert habitat is proposed to be impacted by the proposed Project.

AT&T's existing direct buried cable will continue to be in service until such time as the replacement cable proposed in this Project has been installed and is fully operational. At that time, AT&T will decommission the replaced cable segments and will abandon them in place.

## **2.5 CONSTRUCTION SPECIFICS**

### **2.5.1 Fiber Optic Cable**

Fiber optic cable resembles a traditional copper conductor telephone cable in outward appearance. Instead of copper conductors, however, it contains multiple glass fiber strands used to transmit pulses of highly concentrated light. The glass fibers are protected by various internal cable components, including buffer tubes, mylar tape, an inner polyethylene sheath, a steel shield and a waterproof outer polyethylene sheath. The total outside diameter of the cable is approximately 0.7 inches.

### **2.5.2 Fiber Optic Cable Conduit**

The New Build portions of the Project (approximately 30 miles of the cable route in California) will consist of three 1½ inch diameter high-density polyethylene (HDPE) conduits, buried at a depth of approximately 4 feet. After the conduits are installed, the replacement fiber optic cable will be pulled through one of the empty conduits. There are no current plans for use of the other two conduits. However, like all other current-day cable projects, AT&T proposes to install the two extra conduits so that the ROW does not have to be disturbed again when another need for a spare conduit arises in the future.

### **2.5.3 Manholes and Access Vaults**

Additional underground components include buried access vaults, buried 18 inches from the existing ground surface. Within the New Build portions of the route, vaults will be placed approximately every 2,500 feet to provide access for future fiber optic cable maintenance. The buried access vaults measure 3.0 by 5.0 by 3.0 feet and are not visible from the surface. For those portions of the route where cable will be installed in existing conduit, most vaults and manholes are already in place. Some new vaults will be placed as needed for cable pulling purposes.

Buried access vaults will be made of polymer concrete and will be designed to withstand H-20 highway live loading impact. Vault covers will be 18 inches below the ground surface. Whenever possible, pre-cast, rather than cast in-place structures, will be used.

### **2.5.4 Subsurface Warning Tape**

A continuous ribbon of Buried Cable Warning Tape will be placed 18 inches above, and parallel to, the New Build conduit. The warning tape will be imprinted with a warning message at 2-foot intervals. This tape serves as a final warning to excavators that fiber optic cable is buried below. The high-density tape is 6-inch wide, 6-ply, co-polymer, and is impervious to soil acid, alkali and/or other natural soil agents.

### **2.5.5 Marker Posts**

Above-ground warning marker posts currently exist along the entire cable route at intervals of approximately 500 to 700 feet. Posts are installed to provide visible evidence of the presence of buried cable, identify the owner of the cable, and provide a telephone number for emergency notifications. All existing marker poles will be maintained or replaced as necessary. Any replaced marker posts will be installed securely, to a minimum depth of three (3) feet, as close as is practicable to the edge of the ROW without impeding visibility.

## **2.5.6 Distance From Other Utilities**

Placement of the new conduits for the replacement cable will all occur within the existing BLM Grant within 5 to 6 feet of AT&T's existing direct buried cable. The new conduit will not, however, be any closer than two (2) feet to the existing direct buried cable or to any other existing underground utility line. This proximity limitation does not apply where the replacement cable will be pulled through segments or portions of segments that already contain existing and available conduit.

## **2.6 INSTALLATION METHODS FOR "NEW BUILD" SEGMENTS**

### **2.6.1 Construction and Cable Installation Methods for "New Build" Segments**

Cable plowing will be the predominate method for the construction of the New Build segments of the Project, although where field conditions dictate, trenching may be required in limited areas. Directional boring is not anticipated at this time, although this method is discussed herein should this method later be deemed necessary in limited areas.

### **2.6.2 Cable Plowing**

Cable plowing is a technique that can be used to install new cable conduits directly into the ground without excavation of a trench. Ground disturbance during plowing is typically limited to a relatively small furrow of earth (approximately 16 inches in width) pushed through by the plow shank. After the conduits are installed, the furrow is compacted back in place by the back end of the plow. This method is typically used in open areas with suitable terrain and no sensitive environmental constraints. Since all work in the proposed Project is planned in existing roads and access roads, conditions are mostly amenable to plow installation.

### **2.6.3 Trenching**

Trenching, if necessary, will be implemented using either backhoes, trenching machines or excavators. Trenching consists of excavating linear ditches, installing fiber optic cable conduit into the ditch, then backfilling and compacting the ditch. Trenching is expected to be limited during the course of construction, and no more trench than can be backfilled on one day will be allowed. Trenches will not be left open overnight unless steel plates are placed on top for safety.

### **2.6.4 Directional Boring**

The directional boring construction method consists of subsurface boring using a guided drill head and installation of fiber optic cable conduit into the bore. Ground surface disturbance is minimized by use of this construction method. Directional boring uses a bentonite/water mixture that is pumped down the drill stem to run the drill head, lubricate the drill pipe, maintain the bore hole, and remove bore cuttings. Bentonite is a fine clay that, when mixed with water, provides the necessary lubricant and operating fluid for the drilling process. Directional bores to be constructed under stream crossings and other points would occur intermittently in conjunction with construction of various phases. The minimum depth of the bore will be 60 inches.

As discussed above, directional boring is not anticipated at this time for the Project. However, in the event that limited directional boring is required under unanticipated circumstances, AT&T will implement the attached Horizontal Directional Drilling Contingency and Resource Protection Plan.

### **2.6.5 Area of Disturbance**

New Build construction will take place in existing ROW, which consists of County roads or previously disturbed access roads that were originally permitted by the BLM Grant. Along the direct bury portions of the proposed cable route in California, the total acreage temporarily affected by the project is 4.86 acres. Within the direct bury portions of the proposed cable route, approximately 1.22 acres of USFWS designated critical habitat for the desert tortoise would be temporarily disturbed. Disturbed portions of County roads or previously disturbed access roads will be restored to their pre-Project condition. In the limited areas where trenching may be used, the trench will be backfilled immediately after the conduits are installed. The native material excavated during installation will be placed back in the trench as backfill and compacted to its pre-construction condition.

### **2.6.6 Soil Compacting and Surface Restoration**

Disturbed portions of County roads or previously disturbed access roads will be restored to their pre-Project condition. In the limited areas where trenching may be used, the trench will be backfilled immediately after the conduits are installed. Any trenches that cannot be backfilled at the end of the working day will be covered with plates overnight. Backfilling will be accomplished with a rubber-tired backhoe/loader, motor graders, vibrator compactors, and small dozers. Backfill material will be compacted to prevent erosion and soil settlement. Backfill material consists of native soil or imported aggregate base. In most cases, the native material excavated during installation will be placed back in the trench as backfill and compacted to its pre-construction condition.

## **2.7 INSTALLATION METHODS FOR EXISTING CONDUIT SEGMENTS**

### **2.7.1 Fiber Optic Cable Conduit “Proving”**

During the process of installing fiber optic cable into the existing conduit, blockages, snags or other problems may occur. To remedy this problem, the applicant will be required to locate the area of blockage and excavate the surrounding area. Once the conduit is exposed, the area of blockage will be cut out and replaced with new conduit. To minimize the potential for these occurrences, the existing conduit will already have been proved to be clear by the carrier that installed it for the applicant prior to the installation of fiber optic cable. The process of proving entails pulling a mandrel (small piece of wood or metal) through the conduit on a line to ensure clear passage of fiber optic cable.

New Build conduit will be “proved” as soon as installation is complete and the pull boxes and splice boxes have been set, but before the fiber optic cable is blown. It is possible that the testing of the conduit may reveal one or more instances of blockage that would require excavation at the point of blockage to repair the conduit.

### **2.7.2 General Installation of Fiber Optic Cable**

Traditionally, the most common method of installing communication cable into a conduit is through a method called “cable pulling.” A limitation of this method is that the maximum force allowed on the cable (tensile strength) restricts the length of installation during a pull. To overcome these limitations, air-assisted installation, “cable blowing” methods have been developed for the installation of lightweight and lower tensile cable (i.e., fiber optic cable). The following sections provide a more detailed description of the general procedures, equipment, and personnel involved in a fiber optic cable pulling (traditional) and air-assisted cable blowing installation process.

### **2.7.3 Pulling of Fiber Optic Cable**

The cable installation process is initiated by accessing the conduit system through opening existing buried vaults or manholes (approximately 2 per mile). Generally, a cable pulling crew only opens the vaults or manholes needed to install a predetermined length of cable. These vaults or manholes are then closed or plated at the end of each day to ensure safety. Access to selected vaults or manholes may be required for approximately 1 to 3 days during the time required to pull each cable segment of approximately 12,500 feet.

The cable pulling process begins by moving the reel of cable and cable placing equipment to an open access point for a section of conduit in which the cable is to be installed. The location of this access point along the section is selected based upon the crew's chosen placement technique. In the placement technique called "figure-eighting," the reel is brought to the first access point along the section of conduit to be pulled and the pulling equipment is moved to the access point at the end of the first section. After threading or blowing the pull line through the first section of conduit and attaching it to the cable, the total length of cable segment is then pulled through the first section. The excess cable is laid out neatly in a figure-eight pattern (approximately 20 feet in length) on the ground at the second vault. The pulling equipment is then moved to the access vault of the next section of conduit. The line is threaded or blown back through the conduit and re-attached to the cable. The figure-eight of cable is then pulled through this second section of conduit. This process is continued from access vault to access vault until the complete section of cable is installed.

Another placement method is called "bi-directional" pulling. Bi-directional pulling involves starting the cable installation process in the middle of the conduit section to be installed. The cable is then threaded or blown in both directions. During this placement method, the cable reel sits at an access vault in the middle of the conduit section, while pulling equipment is placed at each end of the section. This method reduces the length of cable that is pulled and figure-eighted through each access vault.

The placement technique that is selected for a fiber optic cable pulling operation is dependent upon site-specific variables relating to the section of conduit to be installed. Cable installation experts at the time of cable placement make the decision regarding which technique to use. Cable can typically be pulled at a speed of 75 to 200 feet per minute for a length of 1,500 to 3,500 feet. To aid in the speed and length that a cable can be pulled lubricants are manually placed into the conduit during the threading of pull rope and applied to the cable itself during cable pulling. How the operator feeds the lubrication dictates the quantity used. A cable pulling operation typically requires 5 to 10 gallons of lubricant for one 16,000-foot reel of cable. Typical modern lubricants are composed of non-toxic water-based polymer materials.

### **2.7.4 Blowing of Fiber Optic Cable**

As with cable pulling, the cable blowing process is initiated by accessing the conduit system through opening existing buried vaults or manholes. Also like cable pulling, the installation crew begins the cable blowing process by moving the reel of cable and all cable blowing equipment to an access point at either the beginning or middle of the section to be installed. Using either the figure-eighting or bidirectional placement technique the cable is then blown through the conduit using a method such as the high air speed blowing (HASB) or the piston (push/pull) method.

In the HASB method, a large air volume is blown through the conduit during installation. The air suspends the cable in the conduit and a mechanical pusher advances the cable through the conduit. Air suspension of the cable in the conduit reduces friction during the installation process, thus reducing the need for lubrication.

The piston (push/pull) method attaches a piston/missile carrier to the front of the cable. The carrier is pushed through the conduit by air pressure and pulls the cable along with it through the conduit, assisted by the mechanical drive unit. Because the conduit is partially blocked by this carrier, this method does not require as much airflow as the HASB method.

The placement technique and blowing method that is selected for a fiber optic cable blowing operation is dependent upon site-specific variables relating to the section of conduit to be installed. Cable installation experts at the time of cable placement decide which technique and method to use.

Cable can typically be blown at a speed of 200 to 350 feet per minute for a length of 3,000 to 8,000 feet. To aid in the speed and length that a cable can be blown, lubricants are applied to the insides of the conduit walls by blowing a lubricant-soaked sponge through the conduit. To coat the cable itself as it is blown, lubrication is also filled into blocks that are clamped around the cable-blowing machine. The typical quantity of lubricant used in a blowing operation is quite small, only about 12 ounces per reel of cable. As with cable pulling lubricants, modern cable blowing lubricants are comprised of non-toxic water-based polymer materials.

### 2.7.5 Equipment

Because of the variety of equipment which may be employed to accomplish installation of the fiber optic cable in both New Build and existing conduit segments, and because each contractor has a slightly different equipment inventory, it is not possible to provide an accurate list of the type and quantity of engine driven equipment that will actually be used on this Project. However, based on the size of the job and past experience, AT&T has prepared the following list of equipment likely to be used during the construction process (refer to Table 2-2). All equipment will stay within the confines of the road or access road in which the Project cable ROW is located.

**Table 2-2  
Typical Equipment List**

Construction Activity	Number	Crew Size
<b>Conduit Installation</b>		
D-9 Caterpillar	1	10-13
Backhoe	2	
10-wheeler truck	1	
Semi-trailer truck	1	
¾ Ton pickup truck	5	
Excavator	1	
Trencher	1	
Dozer/Plow	1	
Loader	1	
Water Truck	1	
<b>Cable Placing</b>		
One-ton truck (tows cable trailer)	1	6-9
Cable reel trailer	1	
Cable reel	1	
¾ Ton pickup truck (tows air compressor)	1	
Semi-trailer truck	1	
Air blower device	1	
Mechanical pusher/puller	1	
Pull line	1	
Backhoe	1	

### **2.7.6 Restoration Activities**

Final restoration is the last phase of the Project and includes detailed grooming of all disturbed road areas to pre-Project contours and conditions, removal of construction debris, and repair of culverts and fences, water bars, and other erosion control devices.

### **2.7.7 Operation and Maintenance**

Operation and maintenance activities will be implemented along the fiber optic cable ROW over the life of the Project. Construction will take place in the existing ROW consisting of County roads or previously disturbed access roads that were originally permitted by the BLM Grant. No new access roads will be constructed for operation and maintenance activities. Ground-disturbing activities associated with ongoing operation and maintenance procedures are normally minor. These activities will consist mainly of repair of erosion control devices or cable conduits in the event of storm damage, landslides, or other emergencies. In most emergency situations, review of damaged areas would be accessed via public roads, railroad right-of-way and route access roads.

### **2.7.8 Staging Areas**

Staging areas will be established along the route to provide the locations to store material and large equipment and to conduct fueling and maintenance work on the equipment. The contractor, when selected by AT&T, will generally locate the staging areas on paved and fenced commercial property.

### **2.7.9 Compliance With All Laws**

AT&T contractually requires its contractors to comply with all laws (including all statutes, ordinances, regulations, orders and codes).

## **2.8 CONSTRUCTION TIMELINE AND SCHEDULE**

### **2.8.1 Construction Timeline**

Construction of the proposed Project is estimated by AT&T to occur within a 5-month period. The applicant proposes construction activities beginning September 14, 2007, and ending January 31, 2008. During this time, various aspects of construction will be occurring simultaneously, including the following: conduit plowing; trenching; cable pulling; and final restoration of the roads and access roads that constitute the BLM Grant ROW for this Project.

### **2.8.2 Schedule**

Construction crews would generally work a minimum 5-day workweek and an 8- to 10-hour workday. Saturday work will be allowed in certain areas. Unless required by specific restrictions, workdays typically begin at 6:00 a.m. and end at 4:00 p.m. (daylight to dusk).

## **2.9 PROTECTION MEASURES**

Chambers Group proposes preconstruction surveys for sensitive species and on-site monitors to be present for the duration of the project during all construction activities to minimize impacts to sensitive species that may have a potential to occur on site. Direct and indirect impacts can be avoided or minimized by instituting the following general measures.

### **2.9.1 Project Biologist**

A Project Biologist will be retained to oversee all aspects of construction monitoring that pertain to biological resources protection, and to ensure compliance with avoidance and minimization measures. The Project Biologist will be responsible for the contractor education program (Section 3.1.3) and will monitor all construction activities in areas supporting listed and/or proposed species and critical habitats. The Project Biologist will be responsible for scheduling and/or implementing pre-construction surveys, and will have the authority to stop construction activities that threaten significant biological resources for which no avoidance, minimization, or compensation procedures have been established in this document. The Project Biologist will serve as the liaison between AT&T and the contractor and will act in AT&T's interest in resolving conflicts between resource protection and Project implementation. An authorized biologist for this Project must be approved by the USFWS and the BLM.

### **2.9.2 Biological Constraints**

Provisions will be made to inform the construction contractor, prior to beginning of construction, of the biological constraints associated with this Project.

### **2.9.3 Contractor Education Program**

A contractor education program will be implemented to ensure that contractors and all construction personnel are fully informed of the biological resources and constraints associated with this Project. The education program will focus on:

- the purpose for resource protection;
- the identification of sensitive resources involved in the Project;
- construction practices to be employed to protect sensitive resources;
- protocol to resolve conflicts that may arise during the construction process; and
- ramifications of noncompliance.

This program will be conducted by a qualified biologist, preferably the Project Biologist/construction monitor, and will be required of all construction personnel.

### **2.9.4 Conservation and Avoidance Measures**

Desert tortoises would be handled only by the authorized Project Biologist and only when necessary. AT&T would submit the names of proposed authorized and qualified biologists to BLM, which would submit them to the USFWS for review and approval at least 15 days prior to the onset of activities. No activities would begin until an authorized Project Biologist is approved under the auspices of the Section 7 consultation. The Project Biologist would follow the "Guidelines for Handling Desert Tortoises During

Construction Projects” Desert Tortoise Council, 1994 (revised July 1999), when moving tortoises. All construction activities would be required to be monitored by the Project Biologist, if construction sites are not fenced with tortoise-proof enclosures.

Workers would inspect for desert tortoises resting in the shade under vehicles and equipment prior to moving. If a desert tortoise is present, the worker(s) would carefully move the vehicle only when necessary and if the desert tortoise would not be injured by moving the vehicle. If this is not possible, the worker(s) would wait for the desert tortoise to move out from under the vehicle before moving the vehicle, or the Project Biologist would carefully move the desert tortoise using the previously mentioned protocol methods.

All desert tortoise burrows/pallets within the proposed project areas and zone of influence (ZOI) (as defined in USFWS survey protocol) would be marked in such a manner so as the equipment operators would be able to identify and avoid such burrows. Flagging these locations would be performed prior to initiation of the proposed Project.

Operators of heavy equipment (such as plow trucks conducting surface-disturbing activities) would be accompanied by the Project Biologist when working in desert tortoise habitat during construction activities. The Project Biologist/monitor would walk in front of the equipment during its operation and would have the responsibility and authority to halt all Project activity should danger to a desert tortoise arise. Work would proceed only after hazards to the desert tortoise are removed, the desert tortoise is no longer at risk, or the desert tortoise has been moved from harm’s way by the Project Biologist. The construction monitor will be present throughout to ensure compliance with construction Best Management Practices and to be present in the event a tortoise is found within the Project areas.

The Project Biologist would remove any desert tortoises that would be threatened to a nearby location in accordance with the protocol (Desert Tortoise Council, 1999). The proponent would submit a post project report identifying all activities affecting the desert tortoise to USFWS Ventura Office and to the BLM Needles Field Office.

Encounters with desert tortoises would be reported to an authorized or qualified biologist. These biologists would maintain a record of all desert tortoises handled. This information would include for each desert tortoise:

- The location(s) (narrative and maps) and dates of observations;
- General condition and health, including injuries and state of healing and whether animals voided their bladders;
- Location moved to and from;
- Diagnostic markings (identification numbers or marked lateral scutes); and
- Photographs of each handled desert tortoise.

Upon locating a dead or injured desert tortoise resulting from Project activities, the BLM would notify the USFWS by telephone within three days of the finding. Written notification would be made within five days of the finding. The information provided would include the date and time of the finding or incident (if known), location of the carcass or injured animal, a photograph, cause of death, if known, and any other pertinent information.

Any injured desert tortoise discovered within the Project area would be transported by the Project Biologist to the nearest qualified veterinarian for treatment. Costs incurred for treatment will be paid for by AT&T. If the animal recovers, the Ventura office of the USFWS would be contacted for final disposition of the animal.

If a death should occur, the BLM would place the remains of intact desert tortoise carcasses with educational or research institutions holding the appropriate State and Federal permits. If the remains are in poor condition, the information noted above would be obtained and the carcass left in place. If left in place, the Project Biologist/monitor would mark the carcass to ensure that it is not reported again.

### **2.9.5 Prohibited Activities**

No pets or firearms (excluding law enforcement personnel) would be permitted on Project sites.

All trash and food items would be contained within vehicles using the right-of-way and not left on the roadside or out in the open. Trash would be regularly removed from the Project site to reduce the attractiveness of the areas to ravens and other desert tortoise predators.

Equipment access, off road travel, use of staging areas, and disposal or temporary storage of excess fill are prohibited activities in drainages outside of the identified construction zone.

### **2.9.6 Vehicle Use**

All vehicles will use existing roads. No access routes or construction corridors exist outside of existing roads.

### **2.9.7 Excavation and Trenching**

All excavations will take place directly within existing dirt roads. Best Management Practices will be incorporated to prevent the soil from becoming airborne or being washed away as sediment. Stockpile areas, if warranted, shall be reviewed and approved by the Project Biologist. If necessary, changes in location shall be incorporated into the construction contract.

Any trenches temporarily created would be sloped at the end of each workday in such a manner as to allow wildlife to escape. All trenches would be inspected for desert tortoise occupancy before work begins the following day. Any desert tortoises found in the Project area would be relocated by the Project Biologist according to the protocol measures.

### **2.9.8 Staging Areas**

Within the authorized surface use areas, disturbances, such as temporary staging areas or parking areas for equipment, would be confined to the smallest practical location, considering topography, placement of facilities, location of burrows, public health and safety. Such areas would be marked to minimize surface disturbance associated with vehicle straying. Special habitat features, such as burrows, identified by the Project Biologist would be avoided. To the extent possible, previously disturbed areas within the right-of-way would be utilized for the above activities.

Staging areas are prohibited in sensitive biological areas. Staging areas will be reviewed and approved by the Project Biologist. If necessary, changes in location will be incorporated into the construction contract.

### **2.9.9 Fueling Equipment**

Fueling of equipment will not occur adjacent to or in drainages. "No-fueling zones" will be designated on construction maps and will be a minimum of 50 feet (15 meters) from drainages. No wetlands exist along the proposed route.

## **SECTION 3 - STATUS OF THE DESERT TORTOISE IN THE PROJECT AREA**

While the entire segment of the fiber optic line is within the known range of the desert tortoise, some areas occur within USFWS Critical Habitat for the desert tortoise.

### **3.1 DESERT TORTOISE RECOVERY PLAN**

The Desert Tortoise (Mojave Population) Recovery Plan (Recovery Plan) was published in June 1994 by the USFWS (USFWS 1994). This document identifies the current status and habitat requirements of the tortoise, recovery objectives and delisting criteria, recovery strategy and actions to achieve recovery, and potential costs and schedules for recovery. After analysis of the proposed Project area, a portion of the Project in the Eastern Mojave Recovery Unit – Ivanpah, lies adjacent to critical habitat for desert tortoise. In 1980, desert tortoise critical habitat was designated for three areas of 80,000 acres (Ivanpah Valley) by the California Desert Conservation Plan. Much of the Ivanpah Valley crucial habitat units are now in the Mojave National Preserve. Focused surveys for desert tortoise have been conducted along the proposed cable route (Chambers Group, 2007b). Consultation with USFWS will be required for project implementation.

The desert tortoise is a federally listed as threatened species. The desert tortoise ranges from southern Nevada and extreme southwestern Utah south through southeastern California and southwestern Arizona into northern Mexico. In California, the historic range of this species includes northeastern Los Angeles, eastern Kern, eastern San Diego, and southeastern Inyo Counties, as well as most of San Bernardino, Riverside, and Imperial Counties.

The desert tortoise inhabits river washes, rocky hillsides, slopes, and flat deserts with sandy or gravelly soils. Soil conditions must be friable for burrow and nest construction. Creosote bush, burrobush, saltbush, Joshua tree, Mojave yucca, and cacti are often present in the habitat along with other shrubs, grasses, and wildflowers. It is entirely herbivorous and forages on a variety of plants, including cactus species and annual vegetation.

The desert tortoise is a medium-sized tortoise with an adult carapace length of about 8-14 inches. Males, on average, are larger than females and are distinguished by a more concave plastron, longer gular horns, larger chin glands on each side of the lower jaw, and longer tails. Carapace color varies from light yellow-brown (horn color) to dark grey-brown. Besides range, a composite of characteristics often is necessary to distinguish the desert tortoise from other species of gopher tortoise, but its most unique feature is its very large hind feet. Desert tortoise populations are declining due to habitat loss, predation, illegal collecting, and off-highway vehicle (OHV) use.

Tortoises seek shelter in burrows or rock crevices where temperatures are more favorable and store and conserve water to help reduce stress. They obtain water primarily from their herbivorous diet, but will drink huge quantities of water when available. They can store water in their large urinary bladders (up to 40 percent of their body weight in water and urinary waste). The water in their urinary bladders can be extracted when needed. Wild tortoises should never be touched due to the fact that they often void the water out of their urinary bladder when handled. To conserve water, they excrete their nitrogenous wastes in the form uric acid, which contains very little water compared to the urea humans eliminate.

## SECTION 4 - ENVIRONMENTAL BASELINE

### 4.1 DATA HISTORY

#### 4.1.1 Literature Review

Prior to the initial site visit for the section from the Nevada state line to Halloran Summit, current available reports of the California Natural Diversity Database (CNDDDB) and the California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPSEI) were referenced for the following USGS quads: *Halloran Springs, Turquoise Mountain, Granite Spring, Solomons Knob, Valley Wells, Mescal Range Mineral Hill, Ivanpah Lake, and Desert*. Prior to the initial site visit for the section from Slash X to Victorville, current available reports of the CNDDDB and the CNPSEI were referenced for the following 7.5-minute USGS topographic quadrangle maps (quads): *Victorville, Apple Valley North, Turtle Valley, Stoddard Well, West Ord Mountain, Dagget, and Barstow SE*.

These databases contain records of reported occurrences of both state and federal proposed, threatened, and endangered species, California Species of Special Concern (CSC), and otherwise sensitive species or habitats that may occur in the Project area. Additional literature reviews were conducted with field guides including the *Peterson Field Guide to Western Birds Third Edition* (Peterson 1990), *Peterson Field Guide to Western Reptiles and Amphibians Third Edition* (Stebbins 2003), and *Peterson Field Guide to Mammals* (Burt and Grossenheider 1980) to gain a more complete picture of the animal species that may be present in the Project area.

### 4.2 INITIAL SITE VISIT

An initial site visit was conducted on April 25 and 26, 2007, by Chambers representatives Larry Freeberg, Kris Alberts, Nichole Cervin, and by attorney Steven B. Imhoof of Allen, Matkins, Leck, Gamble, Mallory, and Natsis LLP. The purpose of this site visit was to gain an overview of the Project area as it relates to plant, wildlife, and waterway issues.

These representatives drove the entire length of the Project site and took site photographs at regular intervals (Appendix B). All washes were examined for riparian indicator plants and/or the presence of water. Observed species notes and areas of potential occurrence for plants and animals were also documented in field notes. All habitats were assessed for their potentials to harbor sensitive species.

### 4.3 EXISTING VEGETATION

The fiber optic cable line is located directly under existing dirt roads. The vegetation found along the route include the following communities:

#### 4.3.1 Developed

Developed areas are areas that have been altered by humans and now display man-made structures, such as houses, paved roads, buildings, parks, and other maintained areas. Developed areas are found throughout the site, primarily in the southern portion along the southern portion Stoddard Wells Road.

#### **4.3.2 Disturbed**

Disturbed and Ruderal areas are often a result of disturbances caused by humans. Ruderal areas are typically characterized by heavily compacted or frequently disturbed soils. Plant species occurring in ruderal areas are adapted to survive in these conditions and readily colonize disturbed ground. Areas of disturbance are often devoid of vegetation or exhibit sparse vegetation comprised of colonizing species or large amounts of mostly non-native colonizing species. The vast majority of the cable line rests directly under or within ten feet of dirt roads (disturbed). Ruderal areas within the Project site exhibit varying degrees of past surface disturbance. The plant species that occur in ruderal areas within the Project areas include Russian thistle (*Salsola tragus*), Mediterranean grass (*Schismus barbatus*), rubber rabbitbrush (*Chrysothamnus nauseosus*) and red-stemmed filaree (*Erodium cicutarium*),

#### **4.3.3 Allscale Series**

The Allscale Series (Sawyer and Keeler-Wolf 1995) occurs on flats, lower slopes, playas, and valleys at elevations between –75 and 1,500 m in habitats with carbonate-rich soils. This community type generally contains two or more saltbush species, neither of which are the sole or dominant species. The allscale series occurs throughout the Project area. The saltbush species observed to occur in this community type within the Project area included: allscale (*Atriplex polycarpa*), four-wing saltbush (*Atriplex canescens*), and/or spiny saltbush (*Atriplex confertiflora*). Additional species observed growing in this community type included: cheesebush (*Hymenoclea salsola*) and bladderpod (*Isomeris arborea*).

#### **4.3.4 Creosote Bush Series**

The Creosote Bush Series (Sawyer and Keeler-Wolf 1995) commonly occurs on alluvial fans, bajadas and upland slopes at elevations between –75 to 1,000 m where soils are well-drained. Creosote bush (*Larrea tridentata*) is the sole or dominant shrub in the canopy of this series. The ground layer is typically open, with annuals seasonally present. Additional plant species found onsite included: four-wing saltbush, brittlebrush (*Encelia farinosa*), pencil cholla (*Opuntia ramosissima*), cheesebush, big galleta (*Pleuraphis rigida*), desert marigold (*Baileya pleniradiata*), apricot mallow (*Sphaeralcea ambigua* var. *ambigua*), and desert dandelion (*Malacothrix glabrata*).

#### **4.3.5 Creosote Bush-White Bursage Scrub Series**

Creosote Bush-White Bursage Scrub (Sawyer and Keeler-Wolf 1995) typically has well-drained secondary soils with very low available water-holding capacity on slopes, fans, and valleys at elevations between –75 to 1,000 m. This community type is dominated by creosote bush (*Larrea tridentata*) and burro bush (*Ambrosia dumosa*), which are normally widely spaced with bare ground between them. Many species of ephemeral herbs may flower in late March and April if the winter rains are sufficient. This series was common throughout the length of the site. The common shrub species in the community included: Nevada ephedra (*Ephedra nevadensis*), rubber rabbitbrush (*Chrysothamnus nauseosus*), desert trumpet (*Eriogonum inflatum*), brittlebush (*Encelia farinosa*), desert thorn (*Lycium brevipes* var. *brevipes*), button brittlebush (*Encelia frutescens*), cheesebush, hairy prairieclover (*Dalea mollis*), chia (*Salvia columbariae*), desert peppergrass (*Lepidium fremontii*), and allscale. Succulent species identified included: beavertail cactus (*Opuntia basilaris*), jumping cholla (*Opuntia bigelovii*), golden cholla (*Opuntia echinocarpa*), and pencil cholla (*Opuntia ramosissima*).

#### **4.3.6 Desert Wash Series**

Dry wash habitats are characterized as sandy or gravelly drainages and arroyos of the lower Mojave and Colorado deserts (Holland 1986). Desert washes and playas are ephemeral drainage features (i.e., features that convey waters only during and immediately following storm events) with no downstream connectivity to other receiving waters. Most desert washes and playas have a sandy substrate and are therefore predominantly unvegetated. Most water which accumulates in desert washes and playas ultimately infiltrates this sandy substrate and enters the groundwater table, although some waters evaporate at the surface or are evapotranspired by the sparse vegetation present in the drainage. Desert wash environments generally support large canopy trees as well as a large variety of forbs and grasses. While several dry intermittent desert washes were observed within and adjacent to the Project site, none of them supported wetland indicator species. The dry wash habitats within the Project area were dominated by creosote bush, cheesebush, and Mediterranean schismus (*Schismus barbatus*). Other species observed included desert peppergrass and button brittlebush.

#### **4.3.7 Joshua Tree Woodland Series**

Joshua Tree Woodlands (Sawyer and Keeler-wolf 1995) usually occur at elevations from 750-2,300 m on well drained alluvial or rock slopes in the Mojave Desert. They are characterized as open canopy woodlands of widely scattered Joshua trees growing among a lower canopy of deciduous shrubs. This habitat type exists within the Halloran Springs area of the Project site. The common species observed included: Joshua tree (*Yucca brevifolia*), pygmy-cedar (*Peucephyllum schottii*), desert thorn, bladderpod, Nevada ephedra, rattlesnake weed (*Chamaesyce albomarginata*), white rhatany (*Krameria grayi*), desert trumpet, chia, California buckwheat (*Eriogonum fasciculatum*), bladder sage (*Salazaria mexicana*), Mojave yucca (*Yucca shidigera*), Thurber's sandpaper plant (*Petalonyx thurberi* ssp. *thurberi*), blackbrush (*Coleogyne ramosissima*), and Mediterranean schismus.

### **4.4 SPECIAL STATUS WILDLIFE**

#### **4.4.1 Terrestrial and Freshwater Wildlife**

Terrestrial wildlife encountered during the initial site visit by Chambers Group, the jurisdictional delineation (2007a), and during focused surveys for desert tortoise (2007b) include desert tortoise (*Gopherus agassizii*), Great Basin whiptail (*Cnemidophorus tigris tigris*), Mojave sidewinder (*Crotalus cerastes cerastes*), Gambel's quail (*Callipepla californica*), common raven (*Corvus corax*), black-throated sparrow (*Amphispiza bilineata*) and black-tailed jackrabbit (*Lepus californicus*), desert woodrat (*Neotoma lepida*), American badger (*Taxidea taxus*), and wild burro (*Equus asinus*). Additional information on wildlife species found and information on the federally listed desert tortoise can be found in the report for desert tortoise surveys (Chambers Group, 2007b).

#### **4.4.2 Federally Listed Wildlife**

According to a search of the California Natural Diversity Database, a total of 57 sensitive species have the potential to occur within the project area. Based on habitat requirements and project site surveys, there is one federally listed wildlife species, the desert tortoise (*Gopherus agassizii*), that is found within the Project vicinity (Chambers Group, 2007a and 2007b).

- California red-legged frog (*Rana aurora draytonii*) – FT, CSC. Considered absent due to lack of aquatic habitat required for this species;
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) – FC, SE. Considered absent due to lack of riparian habitat required for this species;

- Southwestern willow flycatcher (*Empidonax traillii extimus*) – FE. Considered absent due to lack of riparian habitat required for this species;
- Least Bell's vireo (*Vireo bellii pusillus*) – FE, SE. Considered absent due to lack of riparian habitat required for this species;
- Golden eagle (*Aquila chrysaetos*) (nesting and wintering) – CSC, FPS. Considered to be absent within the project area since no nesting habitat needed to support the species exists within the project area;
- American peregrine falcon (*Falco peregrinus anatum*) (nesting) – SE, FPS. Considered to have a low potential to occur within the project area since no records exist of the species occurring within the project site or its immediate vicinity and/or habitats for nesting and wintering needed to support the species are of poor quality;
- Nelson's bighorn sheep (*Ovis canadensis nelsoni*) – US Forest Service Sensitive. Considered to have a low potential to occur within the project area since no records exist of the species occurring within the project site or its immediate vicinity and/or habitats needed to support the species are of poor quality;
- Desert tortoise (*Gopherus agassizii*) – FT, ST. Considered present along the project route.

#### 4.5 SOILS

Topographic features along the cable route include mountain ranges and alluvial fans, terraces, plains, playas, and basins. Rapid runoff and high rates of erosion are common among areas of steep mountainous slopes, which stunt soil development. Among the moderate slopes of terraces and alluvial fans, runoff is moderate to slow, and erosion is moderate to low and may exhibit more developed soils. Alluvial plains and playas exhibit very slow to no runoff and typically no erosion, and soils are generally poorly developed with high salt content. Wind has removed the fine soil particles from old alluvium in many areas, creating a surface that is known as “desert pavement”.

Soils along the cable route belong primarily to the Aridisol and Entisol U.S. Department of Agriculture (USDA) taxonomic soil orders. Aridisols exhibit a low content of organic matter in the A horizon, salt or silica accumulations at depth, and low soil moisture. Entisols are recent deposits with little or no development. Both have an aridic or torric moisture regime meaning that they are dry more than half the year and never moist for longer than 90 consecutive days. Along the foothills, mesas, and alluvial fans the soils are shallower, slightly coarser material deposited by either wind or water from adjacent uplands. Detailed soil surveys by the USDA have not been completed for most of the cable route, which is located in remote areas. Data is available for the western and eastern portions of the study area.

The following soils were identified along the cable route: Cajon-Arizo Complex, 2 to 15 percent slopes; Helendale-Bryman Loamy Sands, 2 to 5 percent slopes; Nebona-Cuddeback Complex, 2 to 9 percent slopes; Mirage Sandy Loam, 2 to 5 percent slopes; Mirage-Joshua Complex, to 5 percent slopes; Sparkhule-Rock Outcrop Complex, 15 to 50 percent slopes; Copperworld association, 30 to 60 percent slopes; Typic Haplosalids, 0 to 2 percent slopes (<http://websoilsurvey.nrcs.usda.gov>).

Chambers Group queried the Natural Resources Conservation Service (NRCS) soils database to identify any and all soils listed as hydric. None of the soils were listed as hydric on a state federal or local list. No hydric soils were identified by Chambers Group during the delineation surveys.

## 4.6 HYDROLOGY

All of the drainages within the Mojave Desert are ephemeral due to the arid climate, with the exception of the Mojave River. The origin of the Mojave River is in the San Bernardino Mountains, and it flows north through Victorville, east through Barstow, and terminates at Soda Lake. This subsurface river exhibits surface flow only in areas where the channel is restricted. Stream flow generally occurs immediately after rainfall events, and only a small fraction of the total precipitation results in surface runoff due to evapotranspiration and infiltration. Arid basins, such as dry lakebeds found in this area, may collect substantial quantities of rainwater only after major storm events; however, this occurs very infrequently. Drainages identified during surveys originate in the local hills and mountains along the cable route and result from runoff to lower basin areas. Depth to ground water within the Mojave Desert is generally between 0 to 300 feet below the surface. Along the cable route, shallow ground water may be present only within the lowest portions of the desert basins and playas (generally of poor quality due to salt content), and near the Mojave River. However, the direct bury portions targeted for maintenance activities are not within close proximity to the Mojave River. Maintenance activities on existing conduit, which crosses the Mojave River by bridge attachment and continues along City roads to the Victorville Central Office near 6th and Union Street, will have no impact on the Mojave River.

## 4.7 LAND USE

The route from the California-Nevada state line, crosses Ivanpah Lake along existing utility powerline ROW to the Nipton Regeneration site. The route continues through the Clark Mountain range crossing at Mountain Pass, and continues west parallel to, and north of, I-15 to Halloran Summit Road. The route primarily extends through BLM lands, State Lands Commission, and a small portion of privately owned lands.

From the southern portion of the route, the cable begins near the Slash X Regeneration site near Hwy 247 and travels southwest along a utility powerline ROW to Stoddard Wells Road. The cable route continues along Stoddard Wells Road and Outer I-15 down to Hwy 18, crossing the Mojave River by bridge attachment. The route continues along City roads to the Victorville Central Office near 6<sup>th</sup> and Union Street. The route primarily extends through open desert and BLM lands, in addition to City, residential, industrial, and commercial land uses.

## 4.8 JURISDICTIONAL DELINEATION

Jurisdictional delineations (Chambers Group, 2007a) were conducted in areas where plowing or trenching is required to replace existing buried fiber cable. The areas delineated are within San Bernardino County, California, from the Nevada state line to Nipton Road (Section 1)<sup>1</sup>, from Cima Road to Halloran Summit (Section 2)<sup>2</sup>, and from Slash X regeneration station (just west of HWY 247) to the Victorville Central Office (Section 3)<sup>3</sup>. All other areas along the cable route contain existing conduit line, in which plowing will not be required for cable replacement.

Prior to beginning the field delineation, scaled aerial photographs and USGS topographic maps of the Project alignment were examined to determine the locations of potential areas of U.S. Army Corps of Engineers (USACE)/California Department of Fish and Game (CDFG) jurisdiction. Boundaries and dimensions of jurisdictional features were recorded from field observations. The measurement of

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<sup>1</sup> Section 1, as specified in the Jurisdictional Delineation Report and the Desert Tortoise Survey Report (Chambers 2007a,b) for the AT&T project, is in reference to the California section of Segment D (Table 2-1).

<sup>2</sup> Section 2, as specified in the Jurisdictional Delineation Report and the Desert Tortoise Survey Report for the AT&T project (Chambers 2007a,b), is in reference to Segment B (Table 2-1).

<sup>3</sup> Section 3, as specified in the Jurisdictional Delineation Report and the Desert Tortoise Survey Report for the AT&T project (Chambers 2007a,b), is in reference to Segment C (Table 2-1).

drainages that crossed the Project area was recorded on data sheets. Each of the drainages were numbered consecutively in the field and marked on aerial photographs to ensure an accurate inventory. Photographs of the drainages were also documented. The results are summarized below and Full details of this study are provided in the attached desert tortoise report (Attachment 3).

#### **4.8.1 Wetlands**

No wetlands were found within the study area.

#### **4.8.2 USACE Jurisdiction**

Within the study area there is **0.45 acre** of waters of the U.S., consisting of the Project section crossing the dry Ivanpah Lake and the ephemeral drainage features tributary thereto. Within Section 2 and Section 3, there are no USACE jurisdictional features. Within Section 1, there is a total of 0.024 acre for ephemeral drainage crossings and 0.429 acre for the section through Ivanpah Lake. The total area of non-wetland waters of the U.S. is **0.45 ac**.

#### **4.8.3 CDFG Jurisdiction**

Within the study area, **0.47 acre** have habitat associated with streambeds or lakes (the dry Ivanpah Lake) and are regulated by the CDFG's Streambed Alteration program. These drainage features are not all tributary to another water body. Within Section 2 and Section 3, there is a total of 0.007 acre and 0.008 acre for ephemeral drainage crossings, respectively. Within Section 1, there is 0.024 acre for ephemeral drainage crossings and 0.429 acre for the section through Ivanpah Lake. No jurisdictional wetlands or riparian habitat was identified within the study area.

The limits of CDFG jurisdiction, which would require Fish and Game Code Section 1600 permitting if impacted, are identical to those of SWRCB. The total area of waters of the State is **0.47 ac**.

#### **4.8.4 SWRCB Jurisdiction**

Within the study area, there is **0.47 acre** of waters of the State subject to regulation by the State Water Resources Control Board (SWRCB). Within Section 2 and Section 3, there is a total of 0.007 acre and 0.008 acre for ephemeral drainage crossings, respectively. Within Section 1, there is a total of 0.024 acre for ephemeral drainage crossings and 0.429 acre for the section through Ivanpah Lake.

The limits of SWRCB jurisdiction, which would require waste discharge requirements and a 401 Certification (in the case of the required USACE permit) if impacted, are identical to those of the CDFG in this case. The total area of waters of the State for SWRCB purposes is **0.47 ac**.

### **4.9 RESULTS OF THE DESERT TORTOISE FOCUSED SURVEYS**

A protocol focused survey to determine the presence or absence of desert tortoise sign (live tortoises, burrows, carcasses, scat, etc.) on and in the vicinity of a project site was conducted following the Field Survey Protocol for any Non-federal Action that may Occur Within the Range of the Desert Tortoise (USFWS 1992). The current USFWS policy acknowledges a limitation that recognizes the validity of the survey for a period of one year. Even though the presence of the desert tortoise is acknowledged in the vicinity of the Project site, based on recommendations by Charles Sullivan (personal communication with Charles Sullivan, BLM, July 2007), Chambers Group conducted focused desert tortoise surveys along the proposed cable route that included a modified ZOI of 100 and 300 feet on either side of the project

boundary. Coordination with the Wildlife Agencies will be required prior to project implementation. A 100 percent coverage survey was conducted over the entire project site using parallel belt transects 30 feet wide.

The property boundaries are equal to 16 inches, the width of the plow/trench required for the maintenance activities targeted for the direct bury segments of the fiber optic cable route. The surveys were conducted on foot throughout the project area and the ZOI. Habitat conditions for each transect were documented, and included dominant perennial and annual vegetation, soil types, landscape usage, topography, weather conditions, and the amount of existing human-caused disturbance. All diagnostic signs of desert tortoise were recorded, measured and categorized according to condition using an index provided by the USFWS (1992). Desert tortoise sign was documented by photograph and locations of burrows and sign were recorded using a Garmin 72 Global Positioning System. Photographs were taken of transect habitat characteristics. If a burrow was observed, a mirror was used to reflect sunlight into the burrow to determine if desert tortoise were present. Full details of this focused study are provided in the attached desert tortoise report (Attachment 4).

Desert tortoise sign was observed, including active and inactive burrows, fresh and old scat, and one marginal scute. No desert tortoise was directly observed. Table 4-1 identifies the type and number of sign found in each section and transect.

**Table 4-1  
Desert Tortoise Sign Encountered**

<b>Section</b>	<b>Transect Line</b>	<b>Burrows</b>	<b>Scat</b>	<b>Shell</b>
Section 1: CA/NV State Line to Nipton Regeneration Station	100A	13		
	300A	18	2	
	100B	5	6	
	300B	9		
<b>TOTALS FOR SECTION 1</b>		<b>45</b>	<b>8</b>	<b>0</b>
Section 2: Cima Road to Halloran Summit Road	100A	2		
	300A	5	2	
	100B	1		
	300B			
<b>TOTALS FOR SECTION 2</b>		<b>8</b>	<b>2</b>	<b>0</b>
Section 3: Stoddard Wells Road to Slash X Regeneration Station	100A	6	1	
	300A	11	4	
	100B			
	300B	3		1
<b>TOTALS FOR SECTION 3</b>		<b>20</b>	<b>5</b>	<b>1</b>

Section 1, from the California-Nevada state line to the Nipton regeneration station, demonstrated the highest number of potential burrows and scat. Forty-five potential desert tortoise burrows were identified within Section 1. Desert tortoise scat was found in conjunction with three burrows along transect 100B. Two desert tortoise burrows were identified with scat, but lacked signs of recent use (their corresponding scat was old and dried). A third burrow was classified as a currently active desert tortoise burrow, and contained both fresh and relatively new scat. Fresh scat was found along transect 300A close to the Nipton regeneration station. The area was thoroughly searched for burrows and desert tortoise, but no sign or tortoises were located.

Section 2, from Cima Road to Halloran Summit Road, demonstrated the least amount of potential burrows and tortoise sign identified during the surveys. Eight potential desert tortoise burrows were identified within Section 2. Two tortoise scat were identified within transect 300A only for this section. The scat was dry but recent, and was not found within an existing burrow.

Section 3, from Slash X regeneration station towards Victorville along Stoddard Wells Road, demonstrated the second highest number of potential burrows and tortoise sign of the three sections surveyed. Twenty potential desert tortoise burrows were identified within Section 3. A total of five tortoise scat of varying classifications were found along transect 100A and 300A, within close proximity to the Slash X regeneration station area. Fresh, dry scat was found in conjunction with two burrows along the 300a transect. These burrows were classified as currently active desert tortoise burrows and both contained relatively fresh, dry scat. A marginal scute from the carapace of a desert tortoise was found in transect 300B in an open area that had been disturbed by OHV recreation among creosote bushes (*Larrea tridentata*). The scute was in good condition, although weathered, and appeared to be from an individual 10-12 years of age. No sign was identified near the southern portion of Section 3.

While all desert tortoise sign serves as evidence of past occupation, active burrows and fresh scat demonstrate that desert tortoise are currently occupying habitat along the project route. It is likely, due to the number of desert tortoise sign found, that sections 1 and 3 have higher desert tortoise densities than section 2. Even though section 2 was a shorter survey of 6.76 miles, as compared to 8.36 miles for section 1 and 17.1 miles for section 3, the habitat of sections 1 and 3 are more characteristic of desert tortoise habitat within the Mojave Region. Section 2 is characterized by a rockier substrate with the more dominant vegetation being *Yucca* sp. and fewer creosote and *Atriplex* sp. Sections 1 and 3 are predominantly characterized by creosote scrub vegetation.

## **SECTION 5 - EFFECTS OF THE ACTION**

### **5.1 ANALYSIS OF EFFECTS OF THE ACTION**

The proposed Project would avoid temporary and permanent impacts to all desert habitats along the proposed cable route. The desert scrub habitat found along the proposed cable route is a regionally important wildlife habitat for many species, including the desert tortoise. Maintenance activities will occur only within existing roads. Impacts associated with the installation the fiber optic cable would be contained within the existing dirt and paved roads. Installation activities would require very little maintenance, and may include driving the line periodically to inspect the line, and very occasionally repair the isolated problems that may be caused by unusual events (e.g., exposure of small segment of the line caused by a 100-year water event). All repair activity would abide by the same “protective measures” applicable to the installation of the cable. No removal of adjacent habitat during construction activities is anticipated. No impacts outside of the existing roads are anticipated. After the end of its useful life, the cable will be abandoned in place in the utility ROW corridor, unless directed otherwise at the time by the BLM.

### **5.2 DIRECT AND INDIRECT EFFECTS**

Vehicular travel on the right-of-way could result in injury or death to desert tortoises. Depending upon the time of year, hatchlings are more at risk because they are more difficult to spot from moving vehicles.

Desert tortoise eggs could be damaged and nearby burrows could be collapsed by vibration from road maintenance equipment.

Moving desert tortoises from the road or from underneath parked vehicles could result in injury or mortality (especially if bladder is voided by the moved tortoise).

### **5.3 CUMULATIVE EFFECTS OF THE ACTION**

Although the maintenance activities will occur only within existing dirt roads, the biological resources within the general Project area have been affected by past actions not associated with the proposed current Project. Heavy OHV use in the area has resulted in a number of dirt roads, widening of drainages, and destruction of native vegetation. Campsites are littered throughout the area (especially along Stoddard Wells Road), and trash, dumpsites, shotgun shells, etc. are commonly found along the proposed cable route. In addition, hiking trails and domestic dogs associated with campers are frequently found. Although these activities are not related to the proposed Project nor are they controllable by AT&T, their cumulative effects are continued injury, harassment, and/or death of desert tortoise from vehicles traveling along and performing maintenance on the proposed right-of-way. Proposed Project activities, as described and conditioned herein, are not expected to contribute to these cumulative effects.

### **5.4 POTENTIAL PROJECT IMPACT**

*The proposed project is not likely to adversely affect the desert tortoise.*

The proposed project is not likely to adversely affect the desert tortoise or its habitat because the Project will be located entirely within previously disturbed lands (roads and access roads) and is designed to avoid and minimize impacts to the species.

*The proposed project is likely to temporarily affect desert tortoise critical habitat.*

The proposed project is likely to temporarily effect desert tortoise critical habitat because approximately 1.22 acres of USFWS designated critical habitat for the desert tortoise would be temporarily disturbed for new build segments along the proposed cable route, all of which are located in existing dirt roads. The disturbed portions of County roads or previously disturbed access roads will be promptly restored to their pre-Project condition. In the limited areas where trenching may be used, the trench will be backfilled immediately after the conduits are installed. The native material excavated during installation will be placed back in the trench as backfill and compacted to its pre-construction condition.

*The proposed project is not likely to jeopardize the continued existence of the desert tortoise.*

The proposed project is not likely to jeopardize the continued existence of the desert tortoise because conservation measures proposed would reduce impacts to the species and its habitat, and all maintenance activities would occur within existing roads.

## **SECTION 6 - LIST OF PREPARERS**

- Mike McEntee, Chambers Group, Biology Group Manager, 13 years experience
- Paul Morrissey, Chambers Group, Staff Biologist, 7 years experience

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Victorville, Apple Valley North, Turtle Valley, Stoddard Well, Solomons Knob, Valley Wells, Mescal Range, Mineral Hill, and Ivanpah Lake USGS 7.5-minute topographic quadrangles, and Roach, Jean, Sloan and Las Vegas SW Nevada USGS 7.5-minute topographic quadrangles.