IMPACTS

INTRODUCTION

This section provides a description of the potential impacts to the human environment that would occur as a result of the action alternatives. No continued operations are proposed in any of the action alternatives; thus, many of the impacts only relate to the construction period itself. Some of the removal and/or rehabilitation actions included in the action alternatives would have long-term environmental impacts.

Impacts discussed in this section relate most directly to the disturbance of the coaxial cable right of way due to cable removal, disturbance of the repeater hut sites due to structure removal and site rehabilitation, and disturbance of the access corridor due to rehabilitation. Table 29 presents a summary of areas, by state, likely to be disturbed along the project route.

SCOPE AND ORGANIZATION OF ANALYSIS

This section discusses those project-related impacts that may have significant environmental impacts. The discussion of the No Action Alternative establishes a baseline for evaluating the affects of the action alternatives. Impacts of the action alternatives above the baseline condition are compared to significance criteria developed for each particular resource area. Relevant regulations and policies are discussed in Appendix E. Significance criteria used for analyzing impacts are in Appendix F. Mitigation is presented in Appendix G to reduce or avoid all significant impacts. A summary of impacts, significance, mitigation, and residual significance for the Proposed Action is presented in Table 30. Cumulative impacts of the Proposed Action are evaluated in the context of the cumulative impact baseline presented below. Conclusions by alternative are provided for each resource area.

IMPACT TOPICS DISMISSED FROM FURTHER ANALYSIS

Geologic Hazards

The coaxial cable is not currently in use, and the intent of the cable and equipment removal activities is to remove the system. Therefore, the potential impact of geologic hazards, such as earthquakes or volcanic eruptions, on the non-operating system is not an issue. Most of the topography along the project route is gently to moderately sloped and no additional cut and fill or grading is anticipated. While earthquakes may occur at peak ground accelerations greater than 0.4 g (the force exerted by gravity on a resting body), project activities would not create or exacerbate ground motion.

Vandalism

Scoping comments were received about the possibility that any cable or equipment left in place could be subject to acts of vandalism, such as unauthorized removal of buried cable or equipment, or defacement of property. Limited accounts of vandalism of aboveground telephone poles in the Mojave Desert have been reported and evidence of bullet holes can be observed at many of the P140 repeater huts along the

route. Possible impacts associated with unauthorized removal of cable and equipment could include the unmitigated disruption of soil, vegetation, and sensitive species. No documentation exists regarding unauthorized removal of buried equipment, such as cable or other structures. Given the labor and specialized equipment necessary to accomplish a removal effort, the time required, and the visible nature of such an activity, it is unlikely that an unauthorized removal of cable or belowground structures would be attempted.

Groundwater

There are no significant groundwater resources beneath the project route in New Mexico. Much of the terrain crossed is bedrock, and those areas with more than 5 feet of alluvium do not retain water very well. Along the project route in California and Nevada, groundwater occurs at depths greater than 20 feet below ground surface (bgs) due, primarily, to the arid climate. Although beneficial uses of deeper groundwater exists, project activities are not expected to affect these resources. Potential spills or leaks of fuels or lubricants that could seep into the ground and contaminate groundwater resources would be avoided or reduced through construction practices (see Appendix C).

Energy Requirements and Conservation Potential

Equipment and vehicles used to implement the proposed action would require gasoline and diesel fuel for operation. Fuel consumption for these activities would not significantly affect overall supply of these products or create a local shortage. As part of the mitigation required for air quality impacts, workers would be encouraged to carpool to the construction site and the use of discretionary vehicles in the construction area would be limited.

Natural Resource Requirements and Conservation Potential

The project route does not cross any known mineral resources or forests. Because any removed cable would be recycled for the copper content, implementation of the proposed project or action alternatives would involve varying amounts of recovery of this natural resource. It is not expected that recovery efforts associated with the project would affect the copper markets or mining activities.

DEFINITIONS AND ASSUMPTIONS USED FOR IMPACT ANALYSIS

Temporary impacts are impacts that occur only during the construction phase. *Short-term impacts* are impacts with a duration of less than 5 years after construction. *Long-term impacts* are impacts with a duration longer than 5 years. Duration alone does not determine the significance of an impact. Some temporary impacts may be significant while some permanent impacts may be less than significant.

Significant impacts are adverse affects that exceed the significance criteria for an affected resource or issue. The significance of affects is determined based on the duration, intensity, and extent of particular affects and the sensitivity of the affected resource or receptor. Adverse, but less than significant impacts are adverse affects that negatively affect a resource or a recipient, but at a level below the significance threshold. Beneficial impacts are positive affects of the Proposed Action or alternatives.

Direct impacts are impacts caused solely by proposed activities. For example, construction activities could result in the direct mortality of a special-status species.

Indirect impacts are impacts that occur as a secondary result of direct impacts to the affected environment. An example of an indirect impact would be a decline in the population of a special-status species due to habitat loss.

CUMULATIVE IMPACT BASELINE

NEPA Requirement

NEPA requires that the cumulative impact of the Proposed Action be evaluated. Cumulative impact occurs when the affects of two or more individual, closely related past, present, or reasonably foreseeable future actions compound to cause or increase environmental affects, even though the impact of any one action may not be significant by itself.

Projects Included in the Cumulative Baseline

The cumulative baseline includes past, present, or reasonable foreseeable future actions in the area in which the proposed project affects would be felt and could influence similar resources as the Proposed Action. These actions are described briefly below.

California Desert Protection Act of 1994 (CDPA). The CDPA designated new wilderness areas, expanded and reclassified the Death Valley and Joshua Tree National Monuments as National Parks, and created the Mojave National Preserve. Among its many provisions, the Act also maintained the rights to certain multiple uses (e.g., grazing, mining, recreation) and retains specified rights of way for utilities.

The CDPA mandates the development of a general management plan (GMP) for the Mojave National Preserve, and this plan is in progress. This plan will affect activities within the Preserve in the project area as they relate to resource conservation and protection. Because the GMP is under development, specific impacts cannot be estimated at this time within the Mojave National Preserve.

Western Mojave Land Tenure Adjustment (LTA) Project. The LTA Project was initiated by BLM to consolidate land uses and management as a means of advancing and improving resource protection. It is a voluntary land exchange project and a partnership between the BLM, U.S. Air Force, and private land owners. The project would allow development in the desert, while consolidating protected areas to enhance the resource protection value of lands under BLM management. In the project area, the LTA project would exchange BLM lands primarily west of U.S. 395 for private

parcels primarily east of U.S. 395, if fully implemented. The intent of this project is to allow more consolidated BLM management of higher-priority resource protection areas primarily east of U.S. 395, while allowing more consolidated desert development in areas primarily west of U.S. 395.

West Mojave Coordinated Management Plan (WMCMP). The proposed WMCMP is a multi-agency planning effort intended to provide for continued use and development within a 9.4-million-acre area of federal, state, and private lands in the western Mojave Desert. The WMCMP goals are to provide recovery of federal- and state-listed plant and animal species as viable wild populations; conserve critical elements of supporting habitats; allow resource use and community expansion; and simplify and reduce the regulatory burden of permitting processes for projects on public and private lands (Chambers 1996). Similar to the GMP for the Mojave National Preserve, the specific environmental consequences of the WMCMP cannot be estimated at this time, because the plan is currently being prepares.

Northern and Eastern Mojave Coordinate Management Plan (NEMCMP). The NEMCMP includes all of the expanded Death Valley National Park, the Mojave National Preserve, and approximately 2.4 million acres of BLM lands between and around these units. There are also state, local, and private lands within the plan area, but the plan does not address them. With the exception of the "Nevada Triangle" area of Death Valley, all lands are within California. (BLM 1996). Similar to the WMCMP, this plan is currently under development and specific environmental consequences cannot be estimated at this time.

U.S. Army Fort Irwin National Training Center (NTC) Expansion Project. The Army proposes to acquire approximately 331,217 acres adjacent to Fort Irwin to support the NTC mission. Over 310,000 acres of the proposed acquisition would come from land currently managed by the BLM. Proposed activities at the NTC include personnel and equipment (e.g., tanks) mobilization and live-fire exercises. While the proposed acquisition does not include any lands along the cable right-of-way or access corridor, it does include lands that are nearby.

Private Parcel Development. Development within Clark County in Nevada and San Bernardino and Kern counties in California on private lands has led to rapid population growth in many communities in the desert. Future plans, such as the proposed prison in California City, which could generate 375 jobs in a community of 8,000, as well as other small and large-scale developments could fuel additional growth. New development on private lands could also affect resources in the project area.

Past Linear Utility Projects. Due to the slow pace of desert vegetation recovery and the long-term impacts on desert tortoise and tortoise habitat, among other species, several past utility projects are included in the cumulative baseline. These include the All-American Pipeline and the Mojave Pipeline/Kern River Pipeline, both of which are located in the general vicinity of the P140 route west of U.S. 395.

GEOLOGIC RESOURCES

Impacts of the No Action Alternative

No construction disturbance would occur, thus no subsurface disruption would occur along the cable right of way, at the repeater hut sites, or along the access corridor. AT&T would continue maintenance patrols along the access corridor that may, in combination with other users of the access corridor, result in limited erosion that could affect significant fossils, if present.

Conclusion. No impacts to landslide potential would occur with the No Action Alternative. Impact to paleontological resources would be limited to the potential impacts of vehicle traffic.

Impacts of the Proposed Action

Landslide Potential. A potential for landslides to occur exists where steep slopes are present in cable removal areas. These areas are the eastern side of the Piute Range, through the Mid-Hills Range, and over Desert Butte near California City. During construction of the original right of way through these areas, some grading likely occurred to lay the cable. Because the Proposed Action would be limited to the existing right of way, no additional cut and fill, grading, or blasting is anticipated. No cable removal is proposed over Desert Butte. Cable removal in the Piutes and the Mid-Hills would result in newly disturbed soils. Subsurface disturbance during cable removal would be limited to an area 2.5 feet wide by 5 feet deep when plowing, and 2.5 to 10 feet wide by 5 to 10 feet deep when trenching. The cable furrow is likely to collapse back in on itself, while the open trench would be backfilled and compacted to 85 percent of maximum density below 24 inches. Compacting of the trench would be accomplished by vibration as well as other methods (see Appendix C). Plowing is not expected to result in any increased slope instability. Trenching would disturb a greater portion of any encountered steep slopes, but backfilling, compaction, and the use of trench plugs, where appropriate, are expected to reduce the likelihood of any induced slope instability.

After equipment is removed from the repeater huts and manholes, the top portions of these structures would be collapsed into the bottom, and the underground portions would be filled with on-site sand and gravel if possible and off-site fill would only be used if necessary. Because of the limited size and relatively flat topography of the vaults, placement of uncompacted fill in the residual vaults is not expected to increase the potential for a local landslide.

Rehabilitation of the repeater hut sites is not expected to affect slope stability due to the limited amount of subsurface disturbance (i.e., the top 12 inches). The other rehabilitation actions such as chain dragging and grading of berms would not affect subsurface material or large amounts of surface soil that might result in increased slope instability. Rehabilitation of most of the access corridor is also not expected to affect slope stability for similar reasons. Most of the access corridor and dual track to be eliminated is on mild to moderate slopes. There are several steeper segments, particularly the 0.5 mile segment in the Mojave Wilderness in the Mid-Hills and the segment from MP 7473 to MP 7487. Ripping of the access corridor in these areas could result in some minor collapse of soil from adjacent slopes, but the extent of collapse would be limited.

Paleontological Resources. No literature search or field investigation has been conducted to identify the potential presence of significant paleontological resources in the areas potentially affected by removal or rehabilitation actions. Based on signs present in the field placed by the BLM, the area near Fossil Canyon may be an area with a higher potential for fossil formations. (Fossil Canyon, which contains significant fossil formations, is approximately 1 to 2 miles north of the cable right of way.) Thus, it is currently unknown whether any such resources are present and could be affected by the Proposed Action. The removal and rehabilitation actions included in the Proposed Action would only occur in areas previously disturbed by cable or structure installation or access corridor construction, maintenance, and traffic. Thus, if paleontological resources were present, they are likely to be in a highly disturbed state.

The removal of the cable and structures could disturb previously disturbed paleontological resources, if they are present. Rehabilitation actions could also disturb previously disturbed paleontological resources, but only if present in the first 12 inches below grade, where decompaction ripping would occur. Several segments of dual track near the Fossil Canyon would be rehabilitated. The other rehabilitation actions would only affect surface soil and would not be expected to affect any potential paleontological resources.

Cumulative Impacts. Cumulative impacts concerning landslide potential and paleontological resources are discussed below.

Landslide Potential - The Proposed Action would only affect steep slopes directly disturbed by cable removal or access corridor rehabilitation. Thus, cumulative impacts would only occur if other developments result in increased landslide potential directly along the project route (i.e., cumulative impacts are only local). Increased landslide potential at other off-site locations would be a separate impact that would not exacerbate landslide potential along the project route. There are no current plans or policies to develop any of the federally owned lands under the right of way or access corridor. It is possible that private development could occur along the right of way or access corridor that could disturb soils on steep slopes. If this occurred, landslide potential could be greater than for the Proposed Action alone. Because of the limited areas affected, this cumulative impact is not expected to be significant.

Paleontological Resources - The Proposed Action could affect paleontological resources if significant resources are present and damaged by removal or rehabilitation actions. Damage or loss of paleontological resources due to other projects could result in cumulative impacts, whether the resources damaged were in the areas disturbed by the Proposed Action or in off-site areas (i.e., cumulative impacts occur regionally). The loss of paleontological resources is a loss of the potential information that might be gained from intact significant fossil remains. While there are no current plans or policies to develop any of the federally owned lands under the right of way or access corridor, private development or federal development at off-site locations (such as the proposed Fort Irwin expansion) could damage paleontological resources, where present, and result in cumulative impacts. However, since the Proposed Action will primarily disturb previously disturbed areas and soils, the likelihood of it contributing significantly to this cumulative impact is low.

Conclusion. No significant increase in landslide potential is expected as a result of the Proposed Action. Although unlikely, it is possible that removal or rehabilitation actions could disturb significant paleontological resources, if present. Mitigation (see Table 30 and Appendix G) would be expected to reduce any potential impacts to less than significant.

Impacts of Alternative B

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Landslide Potential. Only 114 miles of cable would be removed in this alternative, compared to 175 miles in the Proposed Action. Thus, this alternative should disturb fewer steep slopes overall than the Proposed Action. Cable removal would still occur over much of the Piute Range and the Mid-Hills; thus, the potential for slope instability is similar to the Proposed Action because of cable removal in these areas.

This alternative would include 12 more miles of access corridor rehabilitation than the Proposed Action. Most of the additional access corridor rehabilitation segments are in mildly sloping areas of the Piute Valley, and west of Rainbow Basin, and thus the potential for increased landslide potential due to access corridor rehabilitation is only slightly greater than the Proposed Action. Overall, rehabilitation actions should not result in any significant increase in landslide potential.

Paleontological Resources. The smaller amount of cable removal in this alternative should result in a lower chance of disturbing any significant paleontological resources. In particular, this alternative does not include removal of cable from the federal lands near Fossil Canyon (removal would still occur on private lands in the vicinity).

The greater amount of access corridor rehabilitation would result in a slightly greater chance of disturbing paleontological resources than the Proposed Action. This alternative includes rehabilitation of several segments of the access corridor across federal lands near Fossil Canyon.

Conclusion. Overall, this alternative would include 61 fewer miles of cable removal and 12 more miles of access corridor rehabilitation. Similar to the Proposed Action, no significant increase in landslide potential is expected and significant impacts on paleontological resources are possible only in the unlikely event of encountering significant intact vertebrate or invertebrate fossils. If this occurred, mitigation as noted for the Proposed Action would reduce the impact to less than significant.

Impacts of Alternative C

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Landslide Potential. Only 72 miles of cable would be removed in this alternative compared to 175 miles in the Proposed Action. Thus, this alternative should disturb fewer steep slopes overall than the Proposed Action. Cable removal would not occur over the Piute Range, and it would occur over far fewer miles in the Mid-Hills than the Proposed Action. Therefore, impacts to slope stability would be less than the Proposed Action.

Rehabilitation of the access corridor would include 34 fewer miles than the Proposed Action. The only steep segment of access corridor rehabilitation would be in the Mojave Wilderness in the Mid-Hills. Overall, rehabilitation actions should not result in any significant increase in landslide potential.

Paleontological Resources. The smaller amount of cable removal in this alternative should result in a lower chance of disturbing any significant paleontological resources. In particular, this alternative does not include removal of cable from the federal lands near Fossil Canyon (removal would still occur on private lands in the vicinity).

The fewer miles of access corridor rehabilitation would result in a significantly lower chance of disturbing paleontological resources than would the Proposed Action.

Conclusion. Overall, this alternative would include 102 fewer miles of cable removal and 34 fewer miles of access corridor rehabilitation than the Proposed Action. No significant increase in landslide potential is expected and significant impacts to paleontological resources would only occur in the unlikely event that significant intact fossils are encountered. If this occurred, mitigation as noted for the Proposed Action would reduce the impact to less than significant.

SOIL RESOURCES

Impacts of the No Action Alternative

Soils would be essentially unchanged from present with the No Action Alternative, except for continued erosion along the access corridor due to ongoing maintenance patrols and other vehicle passage. Natural wind and rain-related erosion would continue to affect soils in the project area. The soils at the repeater hut sites and along the access corridor and dual track segments would be expected to remain in their present compacted state.

Where the access corridor provides a route of access, the potential for soil impacts at off-site locations would remain. For example, although vehicle travel is prohibited in Soda Lake where it is in the Mojave Wilderness, the access corridor currently provides an unimpeded route of travel onto the open playa from east and west. If the No Action Alternative is implemented, unauthorized vehicles could continue to use the access corridor to reach the open playa for vehicle recreation, and the soil conditions on the open playa could be affected. Similar soil impacts could be expected where the access corridor provides continuing access to other sensitive areas.

Conclusion. The impacts to soil resources as a result of the No Action Alternative are continued vehicle-related erosion along the access corridor and at selected sites reached by the access corridor, such as Soda Lake.

Impacts of the Proposed Action

Soil Erosion. Cable removal would result in some erosion due to the disruption of soils by cable removal and vehicle traffic on the right of way. Crushing and churning of the vegetation on the right of way by construction equipment could result in an increase in erosion until recovery of vegetation to present conditions occurs, which could take 20 to 50 years. Removal of the repeater huts and manholes would affect only previously disturbed soils and would not significantly promote erosion. The open vaults would be filled in with adjacent soil if possible, and off-site fill would only be used if necessary.

Rehabilitation actions, such as grading, ripping, and chain-dragging, would also cause some erosion. The access corridor and the repeater hut sites are essentially void of vegetation. Some vegetation would be lost during grading of the repeater hut site and access corridor berms. Rehabilitation actions overall, should promote the long-term revegetation of these areas, which would have a beneficial impact on soil erosion. The elimination of 39.8 miles of access corridor would also reduce wind erosion in the long-term due to the elimination of vehicle traffic in these areas.

The proposed rehabilitation actions do not include the removal of erosion control structures along the right of way. Because these structures are set into washes and often have substantial vegetation growing in and around them, removal of the structures could substantially disrupt the affected washes and promote wash erosion.

Soil Compaction. Compaction of soils along the right of way could result from the passage of cable removal vehicles. The types of equipment anticipated on the right of way include bulldozers, backhoes, and chop-trucks. Other support vehicles would probably remain on the access corridor, except where the cable right of way and access corridor significantly diverge, thus minimizing compaction on the right of way. Structural removal should not result in any additional compaction of soil around the huts and manholes because these areas were already compacted during the original installation.

Rehabilitation actions would have a beneficial impact by decompacting soil. Soil would be decompacted at the repeater hut sites, along the 40 miles of eliminated access corridor and 4 miles of eliminated dual track. This decompaction would increase the potential for revegetation.

Soil Productivity. Removal of the coaxial cable could cause some loss in soil productivity along the right of way, due to compaction by the removal equipment, wind erosion as the soils are exposed, and mixing of topsoil with the less productive subsoil. Minimal mixing of topsoil with subsoil would occur using the plowing method due to no removal of topsoil. In areas where trenching is used, some mixing of the subsoil with the topsoil could occur, but this would be limited by the use of double-trenching. Topsoil will be segregated from subsoil so that the original soil profile can be maintained when backfilling the trench. Repeater hut and manhole vaults would be filled with on-site soil and gravel excavated during the original installation, which may result in some further soil mixing. Ripping of the access corridor across Soda Lake could alter unique soil conditions.

Rehabilitation actions would overall result in a long-term increase in soil productivity. Decompaction by ripping would enhance soil productivity at the repeater hut sites and along the access corridor. Grading of the hut site and access corridor berms into the ripped areas would provide some topsoil. The elimination of 40 miles of the access corridor could also decrease potential vehicle impacts at off-site sensitive locations such as Soda Lake.

Cumulative Impacts. Cumulative impacts for soil erosion, compaction and productivity are discussed below.

Soil Erosion - The Proposed Action would promote long-term erosion along the right of way due to soil disturbance and vegetation loss, while reducing long-term erosion by promoting eventual revegetation at the repeater hut sites and along the access corridor. Cumulative impacts to soil erosion are possible where other projects disturb soils or vegetation in the areas affected by the Proposed Action, but would not occur due to projects that only affect soil erosion at off-site locations (i.e., the cumulative impacts are local). There are currently no federal plans or proposals to develop the lands directly affected by the Proposed Action, but it is possible that private development could further disturb soils and vegetation along the project route, resulting in significant cumulative soil erosion impacts.

Soil Compaction - Similar to soil erosion, cumulative impacts related to soil compaction would only occur in a local context (i.e., compaction at one location has no relation to compaction at another, non-connected off-site location). The Proposed Action would result in less than significant compaction of the right of way, while decompacting soils at the repeater hut sites and along the access corridor. There are no federal plans or policies to develop the right of way. It is possible that private landowners could use the former right of way in such as way, such as driving on it, that would further compact soils along the right of way. Concerning the access corridor, provided access control is effective, there should be no further travel along the eliminated segments (all of which are on federal land), and no recompaction of soils.

Soil Productivity - The Proposed Action would decrease soil productivity on the right of way in the short- to long-term due to erosion, compaction, and limited soil mixing, while enhancing productivity in the long-term through rehabilitation of the repeater hut sites and access corridor. Cumulative impacts to soil productivity would only occur in a local context if other actions further degraded soil productivity in areas affected by the Proposed Action. There are no federal plans to develop the right of way, eliminated access corridor, or former repeater hut sites but private development is possible along the right of way or at privately owned hut sites. In these areas, private development could degrade soils adversely affected by the Proposed Action or reduce the gains to productivity from rehabilitation actions.

Conclusion. Removal actions would result in short- to long-term significant impacts on soil erosion and productivity and less than significant impacts on compaction. Mitigation (see Table 30 and Appendix G) would not reduce the erosion and productivity impacts on the right of way to less than significant due to the long-term duration for desert vegetation recovery.

The rehabilitation actions overall would decrease erosion and compaction and improve soil productivity at the repeater hut sites, 39.8 miles of the access corridor, and 4 miles of dual track in the long-term.

Impacts of Alternative B

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

For this alternative, no cable removal would occur over 61 miles where removal would occur in the Proposed Action. In these areas, there would be no soil impacts.

Soil Erosion. Along the 114 miles of cable removal, soil erosion impacts would be similar to the Proposed Action.

Rehabilitation of 12 more miles of the access corridor would result in more construction erosion than in the Proposed Action due to additional ripping, grading, and chain-dragging. In the long-term, the rehabilitation actions should promote revegetation of these portions of the access corridor and reduce erosion.

Soil Compaction. Overall, less compaction of the right of way would occur in this alternative due to less cable removal than in the Proposed Action.

Rehabilitation actions would include greater amounts of the access corridor being decompacted, which is a beneficial impact of this alternative.

Soil Productivity. Because fewer miles of cable removal would occur, there would probably be less trenching overall than in the Proposed Action, and thus less potential for soil mixing and loss of soil productivity due to cable removal.

In the long-term, rehabilitation of 12 more miles of access corridor than the Proposed Action would enhance soil productivity in these areas.

Conclusion. This alternative would result in similar soil impacts where cable or structures are removed, and similar beneficial impacts where rehabilitation actions occur as the Proposed Action. There would be fewer soil impacts overall due to cable removal, and improved soil conditions along 12 more miles of the access corridor compared to the Proposed Action. Mitigation measures would be the same as the Proposed Action. Residual impacts to soil erosion and productivity on the right of way would still be significant after mitigation due to the long-term duration of desert vegetation recovery.

Impacts of Alternative C

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions are the same as the Proposed Action.

For this alternative, no cable removal would occur within 102 miles where removal would occur in the Proposed Action. In these areas, there would be no soil impacts.

Soil Erosion. Along the 72 miles of cable removal, soil erosion impacts would be similar to the Proposed Action. Overall, erosion impacts would be less than in the Proposed Action due to less cable removal.

Rehabilitation of 34 fewer miles of the access corridor, compared to the Proposed Action, would result in less construction disturbance. In the long-term, far fewer segments of the access corridor would be rehabilitated, compared to the Proposed Action, and vehicle-related erosion impacts would continue along these 34 miles.

Soil Compaction. Overall, less compaction of the right of way would occur in this alternative due to less cable removal than in the Proposed Action.

Rehabilitation actions would include decompaction of 5 miles of the access corridor and 4 miles of dual track, which is a beneficial impact of this alternative, but a smaller beneficial impact than in the Proposed Action.

Soil Productivity. Because fewer miles of cable removal would occur, there would probably be less trenching overall than in the Proposed Action, and thus less potential for soil mixing and loss of soil productivity due to cable removal.

In the long-term, rehabilitation of the 5 miles of the access corridor and 4 miles of the dual track would enhance soil productivity in these areas.

Conclusion. This alternative would result in similar soil impacts where cable or structures are removed, and in similar beneficial impacts where rehabilitation actions occur as the Proposed Action. This alternative would result in fewer soil impacts overall due to cable removal; however, it would improve soil conditions along only 5 miles of the access corridor compared to 40 miles in the Proposed Action. Mitigation would be the same as the Proposed Action. Residual impacts to soil erosion and productivity along the right of way would remain significant after mitigation due to the long-term duration of desert revegetation recovery.

AIR QUALITY

Impacts of the No Action Alternative

There are no construction air impacts of the No Action Alternative. Maintenance patrols and other vehicle travel along the access corridor would result in vehicle emissions, including PM10 generation.

Conclusion. The only air quality impacts from the No Action Alternative are related to PM10 emissions from vehicle travel on the access corridor.

Impacts of the Proposed Action

Construction Emissions. Removal and rehabilitation actions would both result in temporary construction impacts caused by vehicle and equipment engine emissions, and fugitive dust emissions from vehicle travel and soil disturbance.

Air emissions from construction activities will result from travel to and from the site, and from removal and rehabilitation activities along the right of way and access corridor. Travel would occur along paved roads, unpaved roads, and the access corridor. Vehicle travel, including delivery vehicles and construction equipment, along all roads would produce carbon monoxide (CO), volatile organic compounds (VOCs), nitrogen oxides (NO_x), and particulate matter (PM10) related to engine emissions. Travel along unpaved roads (including the access corridor) would produce additional PM10 emissions from fugitive dust generation.

The MDAQMD is the only air district within the project area that requires a quantitative estimate of construction emissions (Parson 1996, Nelson 1996, Miles 1997). The project area in San Bernardino County is within MDAQMD jurisdiction, and emissions were calculated only for activities that would occur in San Bernardino County. The construction emissions were calculated based on the Proposed Action, using the methodology and assumptions noted in Appendix H. It should be noted that the assumptions in Appendix H are not an exact representation of the actions envisioned under the Proposed Action. One parameter, the routes of travel vehicles would follow to and from the work site, is a key determinant of the amount of PM10 emissions. The hypothetical scheme presented in Appendix H is based on the use of the nearest junctions with paved roads to the project site, and not on the use of routes that would minimize travel time or distance to the project site. Thus, it is possible, depending on the actual routes of travel used in the Proposed Action, that unpaved road emissions could be different, and possibly greater, than those calculated.

The results of the emission calculation are presented in Table 31 in tons per year for comparison to the MDAQMD thresholds of significance. Because the calculations show that the thresholds for PM10 would be exceeded, MDAQMD would need to review the project to determine if all feasible mitigation has been incorporated in the dust control plan.

The estimates show PM10 emissions in San Bernardino County would be approximately 95 tons. No estimates were made for construction emissions in Kern County because they are not required by Kern County APCD. Construction actions in Kern County would include removal of approximately 26 miles of cable, removal and rehabilitation of 6 repeater hut sites, and removal of 6 vaults. These actions would also result in PM10 emissions. Using a rough approximations from the analysis in Appendix H, the Kern County emissions would clearly exceed 5 tons. The Kern County and San Bernardino County portions of the project are both within the Southeast Desert Intrastate Air Quality Control Region (ACQR 33), which is in nonattainment for PM10. When PM10 emissions in both counties are combined they would clearly exceed the conformity *de minimus* level of 100 tons for emissions in a nonattainment area. Thus, a conformity analysis would be required for the Proposed Action.

Permanent Emissions. The elimination of maintenance and patrols over 175 miles of the project route would reduce vehicle-related engine emissions and fugitive dust emissions in the long-term. Given the minimal amount of maintenance and patrols, this is not expected to have a significant beneficial impact on air quality.

It is difficult to estimate if the access corridor elimination would result in a decrease in traffic along unpaved roads, or if it would merely divert traffic to other nearby dirt roads. A small reduction in traffic is expected if there is a paved road nearby. This beneficial impact would be minimal, however, because the access corridor has very minimal traffic.

Cumulative Impacts. Cumulative impacts for construction and permanent emissions are discussed below.

Construction Emissions - The Proposed Action would result in significant PM10 emissions during construction. In the Mojave Desert setting, where pollutant transport, including particulates, can affect areas at great distance from a pollutant source, cumulative air quality impacts can occur due to projects separated by distance as well as projects in close proximity. Air quality problems associated with PM10 are further exacerbated in the Mojave Desert due to wind transport of particulates from

natural sources. Other construction projects, ongoing activities (such as mining), and private development in affected counties that occurs during the Proposed Action construction period, could contribute to significant temporary cumulative PM10 emissions, depending on weather patterns and conditions.

Permanent Emissions - The Proposed Action would not result in any permanent emissions and may result in a small reduction of PM10 generation as a result of the elimination of patrols and portions of the unpaved access corridor. If implemented, some actions within the cumulative impact baseline, in particular, the Fort Irwin expansion or ongoing private development in the affected counties, could involve significant permanent increases in PM10 emissions. It is possible that some of the current planning efforts affecting the project area could also include management actions that might reduce PM10 emissions (such as development restrictions). Since the draft versions of these plans have not been issued and the positive affect of the these plans could be offset by the adverse affects of other developments or actions, the cumulative permanent impacts cannot be estimated. The Proposed Action would not contribute to this cumulative impact.

Conclusion. The proposed removal and rehabilitation actions would result in significant temporary emissions of PM10, but less than significant temporary emissions of other air pollutants. The required mitigation measures (see Table 30 and Appendix G) would reduce the level of emissions, but not below the levels of significance. Thus, there will be residual air impacts after mitigation. These impacts would be most severe in San Bernardino and Kern counties, which are classified as non-attainment for PM10.

An additional mitigation measure—surface treatment of construction areas—has the potential to reduce fugitive dust generation, but it is not recommended at this time because more vehicles would be needed to bring the treatment material to the remote work sites associated with the Proposed Action. Although not recommended in this report, surface treatment could still be required by air control districts based on their review of the dust control plan developed for this project.

By eliminating some vehicle travel along the unpaved access corridor and promoting revegetation of currently non-vegetated areas, rehabilitation actions could provide minimal decreases in PM10 emissions at these locations.

Impacts of Alternative B

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, rehabilitation of 4.0 miles of dual track, and elimination of maintenance patrols. Impacts related to these actions would be the same as the Proposed Action.

Construction Emissions. This alternative would include 61 fewer miles of cable removal compared to the Proposed Action. Emissions for this alternative were estimated based on the percentage of cable removal. The removal of 35 percent less cable should generally result in approximately 35 percent less emissions from cable removal activities than the Proposed Action. Fewer emissions would occur in the non-removal areas, while emissions in removal areas would be similar to those in the Proposed Action. Emissions may not decrease in direct proportion to the reduction in cable removal because vehicles would still travel through some remote areas to get to other cable removal areas.

This alternative would include rehabilitation of 12 more miles of access corridor, which would increase vehicle and equipment engine emissions and the generate more PM10. On a gross level, emissions related to access corridor rehabilitation would increase approximately 27 percent over the Proposed Action.

Overall, using the rough estimates noted above, this alternative could result in approximately 27 percent fewer emissions overall, including PM10. PM10 emission levels would still be above the MDAQMD significance thresholds, indicating a significant impact.

Permanent Emissions. In the long-term, the elimination of 52 miles of the access corridor could result in some decrease in unpaved road emissions in San Bernardino County. It is difficult to estimate if the access corridor elimination would result in a decrease in traffic along unpaved roads, or if it would merely divert traffic to other nearby dirt roads. A small reduction in traffic is expected if there is a paved road nearby.

Conclusion. This alternative would result in approximately 27 percent fewer emissions than the Proposed Action. Mitigation would be the same as the Proposed Action. Overall emissions after mitigation are expected to exceed the MDAQMD thresholds and be significant.

The elimination of 12 more miles of the access corridor could result in slightly greater decreases in permanent PM10 emissions on unpaved roads than the decreases estimated in the Proposed Action.

Impacts of Alternative C

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, rehabilitation of 4.0 miles of dual track, and elimination of maintenance patrols. The impacts related to these actions would be the same as the Proposed Action.

Construction Emissions. This alternative would include 102 fewer miles of cable removal compared to the Proposed Action. While emissions were not calculated for this alternative, on a gross level, the removal of approximately 59 percent less cable should generally result in emissions that are 59 percent less than the Proposed Action related to cable removal. Fewer emissions would occur in the non-removal areas, while emissions in removal areas would be similar to those for the Proposed Action. Emissions may not decrease in direct proportion to the reduction in cable removal because vehicles would still travel through some remote areas to get to other cable removal locations.

Rehabilitation actions in this alternative would include rehabilitation of 34 fewer miles of access corridor than the Proposed Action, which would substantially decrease vehicle and equipment engine emissions, as well as PM10 generation. On a gross level, emissions related to access corridor rehabilitation would be approximately 22 percent of those for the Proposed Action.

Overall, using the rough estimates noted above, this alternative could result in approximately 53 percent fewer emissions, including PM10. PM10 emission levels would still be above the MDAQMD significance thresholds, which would be considered a significant impact.

Permanent Emissions. Because vehicle traffic is currently prohibited in the Mojave Wilderness units where access would be eliminated, there would be no long-term reductions in PM10 emissions related to access elimination.

Conclusion. This alternative would result in approximately 53 percent fewer emissions than the Proposed Action because of the reduction in cable removal and access corridor rehabilitation. PM10 emissions levels would still exceed MDAQMD thresholds and be significant. Mitigation would be the same as the Proposed Action. Emissions after mitigations are expected to exceed MDAQMD thresholds and be significant.

NOISE

Impacts of the No Action Alternative

Impacts. There are no construction-related noise impacts of the No Action Alternative. Maintenance patrols and other vehicle traffic would continue to generate noise along the access corridor.

Conclusion. The only noise impacts of the No Action Alternative are related to ongoing vehicle traffic along the access corridor.

Impacts of the Proposed Action

Impacts.

Construction Noise — Noise-sensitive areas along the right of way would experience increased noise levels during the removal of both the cable and the aboveground structures (i.e., repeater huts and manholes). People and wildlife within an estimated 150 feet of the right of way and 1,000 feet of aboveground structures would experience the highest levels of noise (generally in excess of established noise standards) if all equipment operates at the same time. When a mounted hammer-cutter is used during removal of the aboveground structures, noise levels would be higher than those generated during removal of the cable. The noise level from the construction equipment would attenuate to 55 dB(A) at about 150 feet perpendicular to the right of way and 1,000 feet from an aboveground structure. These calculations do not take into account the affects of meteorological conditions, intervening structures, or vegetation on attenuation (Smith *et al.*, undated). Calculations are also based on the assumption that all construction equipment would be used simultaneously by the crews, which is not likely to occur. Most of the noise impacts would be caused by the hammer-mounted cutter used to dismantle the concrete below-ground vaults at the hut and manhole sites.

No businesses have been identified along the project area. Based on topographic maps, approximately 80 single-family residences (SFRs) are located within 1,000 feet of cable or structure removal areas in the Proposed Action, but only four are within 150 feet. Almost all of the potential single-family residences are located in either the Yermo or Aerial Acres area. Users of wilderness and other remote desert recreation areas could also be affected by noise generated by the Proposed Action. Wildlife could also experience stress due to noise and stress/harassment impacts are discussed separately for common wildlife and animal species of concern later in this document.

These impacts would be temporary and would be reduced by the length of time that removal activities occur within proximity to any noise sensitive area or receptor. Cable and structure removal would proceed at 1 mile to 5 miles per day and would usually occur only in daylight hours, when noise sensitivities for SFRs are at their lowest. Noise sensitivities during the day would be higher than at night for recreational users and some wildlife.

Rehabilitation activities would generate noise similar to that of the cable removal equipment, and the noise would attenuate quickly from the access corridor or repeater hut sites. No SFRs are located within 150 feet of any proposed access corridor rehabilitation locations, but wilderness, recreational users, and wildlife could be affected.

Cumulative Impacts. Cumulative noise impacts would be limited to potential receptors located in areas where noise from the Proposed Action could exceed noise standards, which generally is within 1,000 feet of the right of way. There are no known federal plans for construction on federal lands along, or adjacent to, the right of way. It is possible that private development might occur along or adjacent to the right of way at the same time as the project. Thus, it is possible that there could be cumulative noise impacts to receptors in close proximity to the right of way. There are no permanent noise impacts of the Proposed Action, and thus no contribution of this project to any permanent cumulative noise impacts resultant from other actions.

Conclusion. Construction-related noise could temporarily exceed the noise threshold levels at some of the single-family residences, wilderness areas, and open desert recreation areas near areas of proposed removal actions. Noise generation would be limited by the expected pace of removal actions and exposures would be temporary for human and wildlife receptors. Noise levels are expected to exceed the significance criteria and construction practices are not expected to reduce the noise levels below the criteria. No mitigation is available to reduce noise emissions below the criteria, short of not using the construction equipment necessary for removal and rehabilitation actions, and residual impacts would thus be significant.

Impacts of Alternative B

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, rehabilitation of 4.0 miles of dual track, and elimination of maintenance patrols. Impacts related to these actions would be the same as the Proposed Action.

Impacts.

Construction Noise — This alternative would include 61 fewer miles of cable removal compared to the Proposed Action. Most of the SFRs are located in areas where cable or structures would still be removed; thus, noise impacts to SFRs are expected to be the same as the Proposed Action. In particular, this alternative would include cable and structural removal near potential SFR receptors in Yermo and Aerial Acres. Impacts on wildlife, wilderness, and recreation areas would be less than the Proposed Action due to fewer miles of cable removal.

This alternative would include rehabilitation of 12 more miles of access corridor, but none of the additional rehabilitation areas are near any of the SFRs identified along the project route. Noise impacts of access corridor rehabilitation would affect wilderness, recreational areas, and wildlife.

Conclusion. This alternative would result in noise impacts similar to the Proposed Action.

Impacts of Alternative C

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, rehabilitation of 4.0 miles of dual track, and elimination of maintenance patrols. Impacts related to these actions would be the same as the Proposed Action.

Construction Noise. This alternative would include 102 fewer miles of cable removal compared to the Proposed Action. Most of the SFRs are located in areas where cable or structures would still be removed; thus, noise impacts to SFRs are expected to be the same as the Proposed Action. In particular, this alternative would include cable and structural removal near potential receptors in Yermo and Aerial Acres. This alternative would have less noise impacts on wilderness, recreational areas, and wildlife due to less cable removal.

Rehabilitation actions for this alternative would include rehabilitation of 5 miles of access corridor within the Mojave Wilderness and 4 miles of dual track in other remote areas. No noise impacts to SFRS are expected related to access corridor rehabilitation because of the lack of receptors. Access corridor rehabilitation would still affect wilderness areas and any wildlife present.

Conclusion. Noise impacts to SFRs would be similar to the Proposed Action for SFRs, but impacts on wilderness, recreational areas, and wildlife would be lower due to less overall cable removal and access corridor rehabilitation.

WATER RESOURCES

Impacts of the No Action Alternative

No construction-related impacts on water resources would occur with the No Action Alternative. The P140 system would remain in place as it exists. Ongoing maintenance patrols and vehicle traffic along the access corridor could affect desert washes where traffic departs from the access corridor. Natural drainage flows would continue to be impeded/diverted in locations by the cable furrow, hut berms, access corridor berms, and erosion control measures.

Conclusion. There are ongoing affects of the P140 system features where they divert natural drainage flows. Wash disturbance is also possible if the access corridor is used by vehicles to reach and drive in washes.

Impacts of the Proposed Action

Sedimentation, Streambed Erosion, and Riparian Vegetation. Plowing or trenching the cable could alter the contours of the desert washes, dislodge channel bed sediments, and damage existing vegetation. None of the washes crossed by the Proposed Action supports a perennial flow, and removal activities would not occur when floodwaters are present.

Sedimentation impacts are limited to the disturbing of sediments during removal that would later be resuspended by high flows and potential wash bank erosion. When water is present in desert washes, it typically consists of high volumes of flood runoff that are highly turbid and sediment-laden. Disturbing the sediments during cable removal could accelerate streambed erosion caused by the intense floodwaters. In addition, plowing or trenching through wash banks could promote bank erosion by altering contours and damaging vegetation. These potential impacts are reduced by the infrequency of flows. Where vegetation is damaged, erosion potential would be increased until recovery of vegetation to present conditions take place, which could take 20 to 50 years.

Removal of the cable across the Soda Lake playa would disturb the lake bed. Desert washes and the Soda Lake bed were originally disturbed by the installation of the cable in the early 1960s, and cable removal should not affect previously undisturbed sediments.

Removal of the aboveground structures themselves, where found in the floodplain of any desert washes, would only cause minor disturbance of wash sediments. The removal is not expected to have any significant impact.

Rehabilitation of the repeater hut sites includes the removal of the site berms, where present, and the grading of the site to an approximate natural contour. These actions will alter the present flow around those huts with substantial earthen berms, and promote a change in runoff patterns from the present. Grading of these berms should return the local site conditions to an approximation of drainage patterns prior to the original installation of the huts. Some loss in vegetation on these berms would occur. In the long-term, rehabilitation actions at the repeater hut sites, including improvements in drainage, should result in revegetation of these currently barren areas, including the growth of riparian vegetation where the sites are in wash floodplains.

Rehabilitation of 40 miles of the access corridor and 4 miles of dual track would include the grading of any berms. Similar to the repeater hut sites, this would result in some direct loss of vegetation, where present, on the berms, including possible riparian vegetation where the access corridor crosses washes. In the long-term, the elimination of the access corridor and the barriers to natural drainage should allow the recovery of vegetation in the access corridor and the surrounding areas. Berms along segments of the access corridor that are not being eliminated would be cut periodically to allow for drainage off the access corridor. This activity should enhance nearby vegetation off the access corridor by channeling runoff that would otherwise travel the length of the access corridor.

Ripping, chain-dragging , and grading of berms during rehabilitation actions could also affect streambed erosion and riparian vegetation, but only where hut sites or access corridor segments are in wash areas. The Proposed Action includes ripping of the access corridor in the Soda Lake open playa which could create permanent indentations to the lake bed that could collect water and promote erosion of the lake bed.

Spills. Removal and rehabilitation actions would require the use of machinery that operates on gasoline and diesel, and the use of maintenance fluids to service these vehicles. All staging of equipment would be on the right of way or at repeater hut sites. Refueling and maintenance of vehicles would only occur at repeater hut sites. Because of the potential for spill, the Proposed Action includes the development of a spill prevention plan and the use and maintenance of spill prevention kits by each work crew. Engine oil would be collected in appropriate containers for disposal. Because of these construction practices, no significant spill impacts are expected.

Water Quality. The Proposed Action includes measures to reduce the potential for petroleum spills, no perennial bodies of water are crossed, and no spill impacts on water quality are expected. As discussed above, the disturbance of wash sediments, banks, and vegetation could promote limited erosion and sedimentation during periods of high flow. None of the washes are used as drinking water sources and thus increased sedimentation would not degrade water quality of a utilized source. Sedimentation is a significant erosion concern, which was discussed separately above.

Drainage. Rehabilitation of the repeater hut sites includes the removal of the site berms, where present, and the grading of the site to an approximate natural contour. These actions would alter the present flow around those huts with substantial earthen berms, and promote a change in runoff patterns. Grading of these berms should return the local site conditions to an approximation of drainage patterns prior to the original installation of the huts. In the long-term, rehabilitation actions at the repeater hut sites, including improvements in drainage, should result in revegetation of these currently barren areas, including the growth of riparian vegetation where the sites are in wash floodplains.

Rehabilitation of 40 miles of the access corridor and 4 miles of dual track would include the grading of any berms. In the long-term, the elimination of the access corridor and the barriers to natural drainage should allow the recovery of vegetation in the access corridor and the surrounding areas. Berms along segments of the access corridor that are not being eliminated would be cut periodically to allow for drainage off the access corridor. This activity should enhance nearby vegetation off the access corridor by channeling runoff that would otherwise travel the length of the access corridor.

The proposed rehabilitation actions do not include the removal of erosion control structures along the right of way. Because these structures are set into washes and often have substantial vegetation growing in and around them, removal of the structures could substantially disrupt the affected washes, as well as cable removal. One erosion control structure, the rock wall near MP 6333 in Kelso Wash, diverts flow away from a nearby repeater hut, and would continue to divert flow in the Proposed Action.

Cumulative Impacts. Cumulative impacts for sedimentation, streambed erosion, and riparian vegetation; spills; water quality; and drainage are discussed below.

Sedimentation, Streambed Erosion, and Riparian Vegetation - Cumulative impacts are possible where other project also affect desert washes or Soda Lake affected by the Proposed Action. There are no known federal plans to develop the right of way, hut sites, or access elimination segments, but private development is possible along privately-owned portions of the right of way or repeater hut sites that could further dislodge sediments ,wash banks, and vegetation in the immediate vicinity of the project route. Soda Lake, with the exception of the Mojave Road, is within the Mojave Wilderness and, as such, is protected from future development. Development further upgradient from the project route could also result in increased sedimentation, erosion, or loss of vegetation.

Spills - Construction practices are expected to reduce any spill impacts of the Proposed Action to less than significant. Other projects or development might result in spills in desert washes, but impacts would be expected to be limited to sediments in a spill area, and are unlikely to contribute to significant cumulative contamination of wash sediments or flows.

Water Quality - Private or federal development related to other projects or plans along or adjacent to the washes disturbed by the Proposed Action could result in cumulative impacts to water quality due to sedimentation and/or associated spills.

Drainage - The Proposed Action would overall result in improved drainage due to the elimination of barriers and impediments to natural flows and would not contribute to an adverse cumulative impact on drainage.

Conclusion. The proposed removal action will result in some disturbance of wash sediments and banks and the open playa of Soda Lake. Mitigation (see Table 30 and Appendix G) for cable removal should stabilize these sediments and banks so that no large-scale bank erosion or sedimentation would occur. Structural removal should have no significant impacts on water resources. The potential for construction spills to affect surface water resources is considered to be low due to construction practices and prevention plans to minimize spill potential and/or impact, if it were to occur.

Rehabilitation of the repeater huts sites and the access corridor overall should result in an improvement of drainage patterns that enhances the potential for revegetation. Erosion control structures that remain in place along the right of way are not barriers to overland flow, except for the structure in Kelso Wash. This structure will continue to divert flow along a 300-foot section of the wash, but removal is not recommended because it could cause substantial disruption to the wash.

Impacts of Alternative B

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, rehabilitation of 4.0 miles of dual track, and elimination of maintenance patrols. Impacts related to these actions would be the same as the Proposed Action.

Sedimentation, Streambed Erosion, and Riparian Vegetation. This alternative includes 61 fewer miles of cable removal. Thus, cable removal would disrupt fewer desert washes, and the potential for surface water impacts would be lower than in the Proposed Action. Removal could still disrupt the washes crossed where the cable is removed by plowing or trenching. Removal and rehabilitation impacts in Soda Lake are the same as in the Proposed Action.

This alternative includes 12 more miles of access corridor rehabilitation than the Proposed Action. Several washes located in these additional access corridor rehabilitation segments would be disrupted by the ripping and grading of berms along the access corridor.

Spills. Because this alternative includes significantly fewer miles of cable removal, the potential for vehicle fluid related petroleum spills is correspondingly lower than in the Proposed Action. This potential is slightly offset by the greater amount of access corridor rehabilitation.

Water Quality. Similar to the Proposed Action, no significant construction impacts on water quality are expected due to this alternative because of construction practices concerning spill prevention, the fact that no flowing or perennial water bodies are crossed, and because construction actions will not be conducted when washes are flowing. None of the washes are used as drinking water sources and thus increased sedimentation would not degrade water quality of a utilized source. Sedimentation is a significant erosion concern, which was discussed separately above.

Drainage. In this alternative, the cable furrow would remain a minor impediment to drainage along the 61 miles where the cable would not be removed in critical habitat. Berms would be removed along 12 more miles of the access corridor than the Proposed Action.

Conclusion. Adverse surface water impacts of this alternative would be similar to, but less than, the Proposed Action due to less construction activity overall. Mitigation would be the same as the Proposed Action and residual impacts would be less than significant. This alternative would improved drainage along 12 more miles of the access corridor than the Proposed Action.

Impacts of Alternative C

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, rehabilitation of 4.0 miles of dual track, and elimination of maintenance patrols. Impacts related to these actions would be the same as the Proposed Action.

Sedimentation, Streambed Erosion, and Riparian Vegetation. This alternative includes 102 fewer miles of cable removal. Thus, cable removal would disrupt fewer desert washes, and the potential for surface water impacts would be lower than in the Proposed Action. Removal could still disrupt the washes crossed, where the cable is removed by plowing or trenching. No removal impacts would occur in Soda Lake because no cable removal in the lake is included in this alternative.

This alternative includes 34 fewer miles of access corridor rehabilitation than the Proposed Action, and fewer washes would be disturbed. Washes would only be disturbed along 5 miles where the access corridor would be rehabilitated and 4 miles where dual track would be rehabilitated. The access corridor across Soda Lake would be rehabilitated in this alternative, so ripping would still affect the lake bed.

Spills. Because this alternative includes significantly fewer miles of cable removal and access corridor rehabilitation, the potential for vehicle fluid related petroleum spills is correspondingly lower than in the Proposed Action.

Water Quality. Similar to the Proposed Action, no significant construction impacts on water quality are expected due to this alternative because of construction practices concerning spill prevention, the fact that no flowing or perennial water bodies are crossed, and because construction actions will not be conducted when washes are flowing. None of the washes are used as drinking water sources and thus increased sedimentation would not degrade water quality of a utilized source. Sedimentation is a significant erosion concern, which was discussed separately above.

Drainage. In this alternative, the cable furrow would remain a minor impediment to drainage along the 102 miles where the cable would not be removed on federal lands. Berms would be removed along 34 fewer miles of the access corridor than the Proposed Action.

Conclusion. Adverse surface water impacts of this alternative would be similar to, but less than, the Proposed Action due to less construction activity overall. Mitigation would be the same as the Proposed Action and residual impacts would be less than significant. Because access corridor rehabilitation actions are less than the Proposed Action, fewer areas would have an improvement in drainage.

VEGETATION

Impacts of the No Action Alternative

There would be no construction-related impacts of the No Action Alternative. Ongoing maintenance patrols and vehicle traffic on the access corridor could disturb soils located on the edge of the access corridor or soils at off-site locations reached by the access corridor. The access corridor and the repeater hut sites would remain, for the most part, devoid of vegetation. Vegetation on the right of way would continue to recover from the original 1963 installation.

Conclusion. Impacts of the No Action Alternative on vegetation are limited to potential vehicle disturbance of soils along the access corridor or at off-site locations reached by the access corridor.

Impacts of the Proposed Action

Common Vegetation. Cable removal and the passage of vehicles would disturb the vegetative communities that have begun to reestablish on the existing right of way. Assuming a 20-foot area of disturbance along the right of way in areas of cable removal, approximately 423 acres would be affected. The amount of acreage disturbed, broken down by vegetative communities, is shown in Table 32. In most cases, the vegetative communities of the adjacent areas are not fully represented on the right of way. Few Joshua tree, cactus, and yucca growth have reestablished there. Additionally, shrub densities on the right of way are, in general, noticeably less than on adjacent lands.

AT&T proposes to use the plowing method to remove the cable for most of the length of the right of way. Existing vegetation on the right of way would be crushed and churned by the passage of tracked and wheeled vehicles and equipment. Shallow root structures would be damaged by the churning of near surface soil by vehicle passage. The residual mulch would serve as a seed source. As the cable is extracted, vegetation root structures and herbaceous vegetation immediately above the cable would be uprooted. Subsoil disturbance would be limited to the width of the furrow, approximately 3 feet wide by up to 5 feet deep. Surface soil and vegetation disturbance would be limited to approximately 12 feet, the width of the construction vehicles.

When trenching the cable, surface soil and vegetation disturbance would be limited to approximately 12 feet, the width of the construction vehicles. Topsoil and subsoils would be stockpiled separately, adjacent to the trench. Depending on where soil stockpiles are placed, further vegetation could be damaged during double-trenching. Underlying vegetation adjacent to the trench would be crushed and churned but not removed. Depending on the depth of the trench, subsoil disturbance would reach a maximum of 5 feet wide by 10 feet deep. The trench would be backfilled with original material, and the original soil profile would be maintained.

When pulling the cable, vegetation disturbance would be limited to the immediate area of the small pits excavated to secure and cut the cable. The area between the pits would not be disturbed, except by the passage of construction vehicles only if they use the right of way. Soil disturbance would also be limited to the pit area.

Removal and dismantling of the repeater huts and manholes would not directly damage existing vegetation because there is no vegetation immediately surrounding these structures. In addition to direct damage to existing vegetation, dust generation from removal and rehabilitation actions and associated traffic could inhibit photosynthesis of immediately adjacent plants that become coated with construction dust.

Where dual tracks have developed along the access corridor, the cable is usually located between the two dual tracks. Removal of the cable and damage of vegetation by vehicle passage on the right of way could potentially create a non-vegetated area that includes the two dual tracks and the right of way. In some places, this non-vegetated area could be between 30 to 45 feet wide. Because of the presence of dual tracks, future traffic in these areas (where the access corridor would not to be eliminated), could use the entire non-vegetated area, resulting in a 30- to 45-foot-wide contiguous non-vegetated area (see discussion of rehabilitation of dual track below).

Natural revegetation within a desert ecosystem tends to be extremely slow. Revegetation of the areas disturbed by cable removal along the cable right of way to their preremoval condition could take 20 to 50 years. Figure 19 shows natural vegetation recovery after cable and fiber optic installation on two AT&T rights of way near the Mojave main terminal. This figure shows recovery 4 years and 34 years after installation without any assisted vegetation effort.

Rehabilitation actions would adversely affect the existing vegetation in hut site berms and access corridor berms only. Apart from the berms, the hut sites and the access corridor are, for the most part, devoid of vegetation. Grading of hut site berms and berms would result in the loss of vegetation growing directly in these berms.

A range of measures are being considered for rehabilitation of the repeater hut sites including (1) measures to promote natural revegetation, (2) assisted revegetation actions such as live planting, and (3) land compensation in lieu of some or all of the other measures (see Appendix C). Measures to promote natural revegetation could include the spreading of topsoil from the berms, decompaction, soil/preparation, and access control measure. Live plantings could further accelerate the pace and scale of revegetation at these sites. Land compensation in lieu of some or all of the other rehabilitation measures would be in addition to the tortoise habitat compensation required for mitigation. The precise beneficial affects of rehabilitation land compensation cannot be estimated in this report because no compensation scheme has been established.

A similar range of measures are being considered for the rehabilitation of the access corridor. Measures to promote natural revegetation could include decompaction; spreading of soil from berms; chain-dragging; use of gravel/plant mulch; and access control measures, such as signs, posts, boulders, Joshua trees, and vertical mulch at control points. In relatively flat desert areas with long lines-of-sight and sparse vegetation, absolute access control is not possible. This is due to the continued visibility of the eliminated access corridor after ripping and the ability of 4-wheel-drive, high-clearance vehicles to use alternative cross-country routes of travel to detour around access control points. Despite this difficulty, rehabilitation measures, particularly ripping of the access corridor and the access control measures, should serve to discourage further vehicle travel along the eliminate access corridor segments, thus enhancing revegetation potential. Live plantings could help to camouflage the access corridor at control points and accelerate the revegetation process at these locations. As noted above, the precise beneficial affects of land compensation in lieu of some or all of the access corridor rehabilitation measures on desert vegetation cannot be estimated because no compensation scheme has been established.

The rehabilitation of the 4 miles of dual track would include ripping, grading of berms, and the use of signs, posts, and/or fencing for access control and would increase the potential for revegetation of these areas within critical habitat. As noted above, where cable is removed in dual track areas, the non-vegetated area could extend up to 30 to 45 feet wide prior to revegetation. Absolute access control along several miles of dual track is not possible without elaborate physical barriers (such as a line of rocks) to access, which would have significant visual impacts.

Sensitive Plant Communities. As noted in the Affected Environment section, with few exceptions, the vegetation observed along the project area was typical for the region and was typical of widely distributed community types. Several sensitive vegetation types were identified within the project area. Cable removal would disturb limited portions of two BLM Unusual Plant Assemblages (UPAs): a transitional zone of the Round Valley Sagebrush Assemblage, and portions of the Western Mojave Desert Mojave Saltbush Assemblage. Neither of these UPAs have been designated as sensitive by the BLM. Two other BLM UPAs, Piute Valley Smoke Tree Assemblage and the Lanfair Valley Desert Grassland Assemblage were either not found during field surveys or were found outside the areas that would be disturbed by the project. The UPA in Cronese Valley (honey mesquite and desert willow) is present in the vicinity of the project, but no mesquite or willow are located on the right of way where they might be disturbed. The Mojave Wash scrub areas with microphyllous trees along I-15 south of Baker are in non-removal areas and would not be affected by cable removal. Structural removal would not affect sensitive plant communities.

Rehabilitation of the repeater hut sites and the access corridor would not have any significant impacts on any sensitive plant communities due to the limited amount of vegetation removed during berm grading.

Exotic Species Introduction. As noted in the Affected Environment section, several exotic plant species are widespread and abundant in desert scrub communities crossed by the project area, including red-stemmed filaree, Mediterranean schismus, red brome, cheat grass, and Russian thistle. In past linear projects, new soil disturbance and the loss of native vegetation has often resulted in the spread of locally available exotic species, some of which can outcompete native species in colonization of disturbed areas.

Cable removal would result in a disturbed area up to 20 feet wide along the right of way. Because exotic species are present in adjacent areas, as well as on the right of way itself, it is possible that the overall areal coverage of exotic species could increase where exotics outcompete native vegetation. In addition, removal vehicle and equipment could transport seeds of exotic species along the right of way by coming into contact with crushed exotic plants. Structural removal should not result in further spread of exotic species.

Rehabilitation of the repeater hut sites could, depending on the final measures utilized, provide an opportunity for exotic species to colonize the hut sites. The success or failure of native revegetation could be influenced by colonization of exotic species. If live plantings are used, native seeds would be gathered, grown off-site to maturity, then replanted at the hut sites, with maintenance for exotics up to 2 years after planting. Live plantings and exotics control would reduce the potential for exotic colonization. The use of land compensation (see Appendix C) in lieu of some or all of the hut site rehabilitation measures would only have an positive impact on exotic species introduction if it avoided soil disturbance at the hut sites that could promote exotic species.

Rehabilitation of the access corridor would have similar impacts as at the repeater hut sites. Rehabilitation could benefit exotics as well as, or instead of, native vegetation at certain locations by establishing conditions favorable to revegetation. Live plantings and exotics control rehabilitation would reduce the potential for exotic colonization, but only at the access control points. The use of land compensation (see Appendix C) in lieu of some or all of the access corridor rehabilitation measures would only have an positive impact on exotic species introduction if it avoided soil disturbance along the access corridor sites that could promote exotic species.

Cumulative Impacts. Cumulative impacts for common vegetation, sensitive plant communities, and exotic species introduction are discussed below.

Common Vegetation - The Proposed Action would result in damage and loss of vegetation on the right of way that could take between 20 and 50 years to return to present conditions, while improving the potential for revegetation of the repeater hut sites and parts of the access corridor. Cumulative impacts to common vegetative communities or species would only occur where other projects or development affect vegetation in or directly adjacent to the area affected by the Proposed Action. Cumulative impacts would not arise due to vegetation damage or loss at locations not contiguous to the project area because the affected communities, such as Mojave Creosote Bush Scrub, are commonly found and damage to parts of local populations would not be expected to result in significant damage to regional populations or diversity. There are no current federal plans or policies to develop areas in the project route, but private development could affect vegetation along privately-held parts of the right of way. Where such development occurred, it is possible that significant cumulative impacts could occur above those of the Proposed Action.

Sensitive Plant Communities - The Proposed Action could disturb limited portions of two non-sensitive BLM UPAs during cable removal, but natural recovery is expected. It is possible that other projects or private development could affect UPAs where present, but the contribution of the Proposed Action to this cumulative impact would not be significant.

Exotic Species Introduction - The spread of exotic species is a cumulative impact of past historical development in the Mojave Desert, which has both introduced exotic species and produced disturbed soil conditions that favor some exotic species at the expense of native vegetation. The Proposed Action would disturb soil along the right of way, at repeater hut sites, and along the access corridor and could continue the spread of exotic species. Federal projects, such as the Ft. Irwin Expansion, and private development are also likely to result in some spread of exotic species. Cumulative impacts could be significant and occur on a regional scale because the introduction or spread of exotic species at one location can increase the likelihood of further spread in adjacent areas.

Conclusion. The Proposed Action would result in the loss of approximately 423 acres of vegetation due to cable removal. Recovery to preremoval conditions would be expected to take 20 to 50 years and this is a significant impact. Mitigation measures (see Table 30 and Appendix G) would reduce, but not eliminate, this impact, which would remain significant after mitigation.

Impacts to sensitive plant communities are expected to be less than significant. Both removal and rehabilitation actions could result in a significant spread of exotic plant species due to new soil disturbance. Required mitigation could reduce, but not eliminate, the soil disturbance that may promote the spread of exotics, and residual impacts would be significant.

Rehabilitation actions would result in minor loss of vegetation, while promoting revegetation of currently barren repeater hut sites and access corridor segment.

Impacts of Alternative B

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, rehabilitation of 4.0 miles of dual track, and elimination of maintenance patrols. Impacts related to these actions would be the same as the Proposed Action.

Common Vegetation. This alternative would include the removal of approximately 114 miles of cable and the disturbance of approximately 276 acres of desert vegetation, compared to 423 acres in the Proposed Action.

This alternative would include rehabilitation of 12 more miles of access corridor, which could result in slightly greater vegetation losses related to the grading of berms, compared to the Proposed Action.

Sensitive Plant Communities. Cable removal would affect similar sensitive plant communities to the proposed action, except that fewer impacts would be expected in the BLM Western Mojave Desert Mojave Saltbush Assemblage, due to less plant removal in the western Mojave.

The additional 12 miles of access corridor rehabilitation would not be expected to have any significant impact on sensitive plant communities due to the minimal amount of vegetation that might be removed during grading.

Exotic Species Introduction. This alternative would include disturbing soils along 114 miles of cable removal, along 52 miles of access corridor, and 4 miles of dual track , as well as at the repeater hut sites. As noted for the Proposed Action, newly disturbed soils could assist the spread of exotic species, which can sometimes outcompete native vegetation in disturbed areas.

Conclusion. This alternative would disturb 147 fewer acres of desert vegetation due to cable removal. Rehabilitation actions of this alternative would disturb a slightly greater amount of vegetation than the Proposed Action, but potentially promote recovery of 12 more miles of the access corridor. The potential for spread of exotic species would be less than the Proposed Action because 42 fewer miles of soils along the right of way or access corridor would be disturbed. Mitigation would be the same as the Proposed Action and residual impacts on desert vegetation and exotic species would be significant after mitigation.

Impacts of Alternative C

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, rehabilitation of 4.0 miles of dual track, and elimination of maintenance patrols. Impacts related to these actions would be the same as the Proposed Action.

Common Vegetation. This alternative would include the removal of approximately 72 miles of cable and the disturbance of approximately 175 acres of desert vegetation, compared to 423 acres in the Proposed Action.

Rehabilitation of the access corridor would include rehabilitation of 35 fewer miles, which would result in slightly less vegetation losses related to the grading of berms, compared to the Proposed Action.

Sensitive Plant Communities. Cable removal would affect similar sensitive plant communities to the Proposed Action, except that fewer impacts would be expected in the BLM Western Mojave Desert Mojave Saltbush Assemblage because of less plant removal in the western Mojave.

The rehabilitation actions would not be expected to have any significant impact on sensitive plant communities due to the minimal amount of vegetation that might be removed during grading.

Exotic Species Introduction. This alternative would include disturbing soils along 72 miles of cable removal, 5 miles of access corridor, and 4 miles of dual track, as well as at the repeater hut sites. As noted for the Proposed Action, newly disturbed soils could assist the spread of exotic species, which can sometimes outcompete with native vegetation in disturbed areas.

Conclusion. This alternative would disturb 248 fewer acres of desert vegetation because of cable removal. Rehabilitation actions of this alternative would disturb less vegetation than the Proposed Action and promote revegetation of a smaller portion of the access corridor. The potential for spread of exotic species would be less than the proposed action because 140 fewer miles of soils along the right of way or access corridor would be disturbed. Mitigation would be the same as the Proposed Action and residual impacts on desert vegetation and exotic species would be significant after mitigation.

COMMON WILDLIFE

Impacts of the No Action Alternative

There would be no construction-related impacts on wildlife of the No Action Alternative. Continued maintenance patrols and ongoing vehicle traffic on the access corridor could result in road kill and disturbance of common wildlife species due to visibility and noise.

Conclusion. Impacts of the No Action Alternative on common wildlife species are limited to potential vehicle-related mortality and disturbance.

Impacts of the Proposed Action

Common Wildlife Species. Cable removal would directly impact individual animals through disturbance, displacement, and mortality. Local populations could be affected directly along the right of way and access corridor, but impacts beyond the immediate area of disturbance would be limited, and regional populations are not expected to be affected.

Some mammal dens/burrows are located on, or adjacent to, the mound of loose soil directly above the cable and would be destroyed during cable removal. If animals are present at the time of removal, there could be direct mortality. Many mammals have created multiple entrances and exits that would

allow a considerable number of individuals to vacate the affected area as the construction equipment approaches. Open holes, trenches, and vaults could also potentially trap species.

Increased noise and activity caused by the workers and equipment would disturb wildlife species within the right of way and in adjacent areas. Animal species would be displaced from the mound within the right of way and surrounding areas. Plowing or trenching the cable would damage vegetation, resulting in loss of browse or forage material.

Because of the generally homogenous nature of the habitats in the project area, habitat is available outside the project area where these species can relocate and establish burrows and dens. Cable removal would provide the looser soil suitable for some species for future burrow and den development.

Removal of the repeater huts and manholes would have minimal affects on wildlife, apart from the noise and activity disturbance. The manholes and huts do not presently provide suitable habitat to species found along the project route.

Removal of the marker posts, which are presently utilized by ravens and raptors as perches, would reduce perches present directly over the right of way and access corridor. Due to the common presence of Joshua trees over much of the route, no impacts are expected to raptors. The reduction of raven perches could benefit the desert tortoise (see discussion for animal species of concern below).

Rehabilitation of the cleared area at each repeater hut site would enhance habitat values by allowing for recovery of essentially nonhabitat areas. Animal mortality could occur if mammal dens are located in the hut berms to be graded.

Rehabilitation of segments of the access corridor could result in some temporary disturbance to wildlife habitat, primarily as a result of equipment-related noise and activity. The access corridor bed itself does not constitute high-quality habitat for animal species encountered along the project route, although some species may cross the access corridor at times.

Ripping and chain-dragging of the access corridor would not cause any significant loss of habitat but could affect any burrows directly under the access corridor. The rehabilitation of segments of the access corridor would, in the long-term, increase habitat values by enhancing the revegetation of essentially nonhabitat areas across the bed of the access corridor.

Migratory Animals. The only migratory animal potentially affected by the Proposed Action is the Nelson's Bighorn Sheep. Construction activity could disrupt up to three potential sheep corridors during the day and staging of equipment could disrupt these corridors at night.

Cumulative Impacts. Cumulative impacts for common wildlife species and migratory animals are discussed below.

Common Wildlife Species - The Proposed Action could result in direct mortality of common wildlife species and destruction of mammal dens and burrows. Cumulative impacts to common wildlife species would occur where other projects or development affect local populations of wildlife in, or adjacent to, the area affected by the Proposed Action. There are no current federal plans or policies to develop areas in the project route, but private development could affect wildlife along privately-held parts of the right of way. In addition, private or federal development in adjacent areas could affect

common wildlife populations and habitat, which could result in further cumulative impacts by direct reductions in populations and habitat.

Migratory Animals - The Proposed Action would only affect the three noted sheep corridors during the construction period. There are no current federal plans to develop areas in the project route. Private development within the sheep corridors along the project route or federal or private development along other portions of these sheep corridors that occurs at the same time as the project could result in cumulative disruption to passing bighorn sheep. Since the Proposed Action would not permanently alter or disturb the sheep corridors, it would not contribute to any permanent cumulative impact.

Conclusion. The Proposed Action would disturb common wildlife species and destroy some mammal dens and burrows. The Proposed Action could also result in direct mortality of animals, which could affect local populations. Mitigation (see Table 30 and Appendix G) is required to keep these impacts to a minimum. Residual impacts after mitigation are expected to be less than significant.

Disturbance of vegetation along the right of way will result in a long-term loss of forage and cover until revegetation occurs, which could take between 30 and 50 years. Due to nearby habitat for the common species found along the route, construction is only expected to result in a less than significant loss of habitat. Rehabilitation of the repeater hut sites and the access corridor would, in the long-term, increase habitat values of these currently barren areas.

Impacts of Alternative B

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Common Wildlife Species. This alternative includes 61 fewer miles of cable removal. Thus, there would be less potential for direct mortality, den destruction, and disturbance due to cable removal. Less forage and cover would be lost because of damage to vegetation.

This alternative includes 12 more miles of access corridor rehabilitation. The additional construction activity could disturb common wildlife species, and could affect mammal dens found along or under the access corridor. In the long-term, the rehabilitated 12 miles of the access corridor should provide additional habitat values above those of the Proposed Action.

Migratory Animals. The only migratory animal potentially affected by this alternative is the Nelson’s Bighorn Sheep. Construction activity could disrupt up to three potential sheep corridors during the day and staging of equipment could disrupt these corridors at night.

Conclusion. This alternative would have fewer impacts on common wildlife species than would the Proposed Action because of the overall lower level of construction activity, and a slightly increased benefit to habitat because of 12 more miles of access corridor rehabilitation. Mitigation would be the same as the Proposed Action and residual impacts would be less than significant after mitigation.

Impacts of Alternative C

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Common Wildlife Species. This alternative includes 102 fewer miles of cable removal. Thus, there would be less potential for direct mortality, den destruction, and disturbance because of cable removal. Less forage and cover would be lost due to damage to vegetation.

This alternative includes 34 fewer miles of access corridor rehabilitation and thus less potential for disturbance of common wildlife species, destruction of mammal dens, and direct mortality. There would be less potential enhancement of habitat due to rehabilitation than in the Proposed Action.

Migratory Animals. The only migratory animal potentially affected by the Proposed Action is the Nelson's Bighorn Sheep. Construction activity could disrupt only two of three potential sheep corridors disrupted by the Proposed Action.

Conclusion. This alternative would have fewer impacts on common wildlife species than would the Proposed Action because of less construction activity. Potential gains to habitat from rehabilitation actions would be lower than in the Proposed Action. Mitigation would be the same as the Proposed Action and residual impacts would be less than significant after mitigation.

SPECIES OF CONCERN

Impacts of the No Action Alternative

There would be no construction-related impacts on plant or animal species of concern in the No Action Alternative. Continued maintenance and patrols and on-going vehicle traffic on the access corridor could disturb plant species of concern along the edge of the access corridor and could also result in road kill and habitat disturbance for animal species of concern. Also, use of marker posts as perches by ravens could continue to result in mortality of prey such as the desert tortoise.

Conclusion. Impacts of the No Action Alternative on species of concern include vehicle-related mortality and disturbance and the continued use of marker posts by ravens for possible tortoise predation.

Impacts of the Proposed Action

Plant Species of Concern. As noted in the Affected Environment section and in the Biological Report (E & E 1997), on the basis of agency consultation and review of existing data, 11 plant species of concern in New Mexico, four plant species of concern in Nevada, and 33 plant species of concern in California were initially identified as potentially occurring along the Proposed Action (Abrams and Ferris 1923-1960; Bagley 1993, 1991, 1989, 1987, 1986; Barneby 1977, 1964; Benson 1982; BLM 1980a; CDFG 1996, 1994; CDM&G 1967, 1964, 1962, 1961; Cronquist et al. 1984; Dames & Moore 1993; ENSR 1989; ERT 1988; Hickman 1993; Moe 1988; Munz 1974; Skinner and Pavlik 1994; Thorne et al. 1981; USFWS 1996a, 1996b, 1993, 1988).

Field surveys of the New Mexico portion of the Proposed Action did not identify suitable habitat for any of the 11 species initially identified. Thus, these 11 species are unlikely to be adversely affected by the Proposed Action.

Field surveys of the Nevada portion of the Proposed Action did not identify suitable habitat for any of the four species initially identified. Thus, these four species are unlikely to be adversely affected by the Proposed Action.

Out of the 33 preliminarily identified species of concern in California, 23 species were not observed or expected to occur in the Proposed Action area. Thus, these species are unlikely to be adversely affected by the Proposed Action. Four species (Providence Mountain milk-vetch [*Astragalus nutans*], Clokey's cryptantha [*Cryptantha clokeyi*], Mojave monkeyflower [*Mimulus mohavensis*], and Aven Nelson's phacelia [*Phacelia anelsonii*]) were not observed along the study corridor during either the 1996 or the 1997 field survey. Although potentially suitable habitat was observed along the project area, due to their lack of observation, their potential to occur appears to be low, and project-related impacts are not expected.

The remaining six species of concern in California are the focus of this discussion: purple bird's-beak, desert cymopterus, Mojave indigo bush, Cima milk vetch, sand linanthus, and small-flowered androstephium. The potential impacts to each of these species are discussed next. The status of these species is noted in Table 33.

Purple Bird's-Beak (*Cordylanthus parviflorus*). One individual skeleton of this species was found in the Round Valley, on the east side of the Mid- Hills along the project area in 1996. A population of more than 1,000 plants was observed in the same area in 1997, with at least 94 plants within the cable right of way. Removal of the cable could affect the individuals of this species in the path of disturbance, but natural recovery is expected. Rehabilitation of the access corridor is not proposed in Round Valley.

Desert Cymopterus (*Cymopterus deserticola*). The desert cymopterus is known to occur on one sand dune area traversed by the right of way near Aerial Acres (Bagley 1991). No plants were observed in the 1996 survey at this location. Twenty plants were observed within the survey corridor in 1997, with four plants located close enough to the cable mound to be disturbed by cable removal. Removal of cable could affect individuals of this species that are present in the path of disturbance in the dunes near Aerial Acres. Because the dunes along the project route contain the northernmost known population of this species, and the species is only known from fewer than 20 occurrences in California, the loss of individuals or damage to the local habitat from cable removal could impede natural recovery of the dunes population and is considered a significant impact. Rehabilitation of the access corridor is not proposed near the dunes where this plant is found.

Mojave Indigo Bush (*Psorothamnus arborescens* var. *arborescens*). Eight populations of Mojave indigo bush were identified along the existing coaxial cable right of way in the field surveys in 1996 and 1997, from the Waterman Hills to Water Valley. An extended survey on, and adjacent to, the right of way resulted in population estimates from 10 to hundreds of individuals. Each of these populations was found in washes traversed by the right of way. In all instances, the populations extended off the right of way. Up to 40 individual Mojave indigo bush plants were observed in the path of disturbance for cable removal or access corridor rehabilitation. Removal of cable or grading of access corridor berms could affect individuals of this species in the path of disturbance, but natural recovery is expected.

Cima Milk Vetch (*Astragalus cimae* var. *cimae*). This species was not observed in the 1996 field survey. In 1997, four populations were found along the project area in Round Valley, ranging from 31 to 138 plants. Approximately 80 individual plants are in the probable path of disturbance for cable removal. Removal of cable could affect individuals of this species that are present in the path of disturbance in Round Valley, but natural recovery is expected. No access corridor rehabilitation is proposed in Round Valley.

Sand Linanthus (*Linanthus arenicola*). This species was not observed in the 1996 field survey. In 1997, two large populations were found at either end of Cronese Valley. These populations together had over 120,000 individuals. A small portion of the cable at the extreme west end of the valley would be removed. Approximately 60 plants are in the likely path of disturbance from cable removal. Removal of cable could affect individuals of this species that are present in the path of disturbance in the west end of Cronese Valley, but natural recovery is expected. No access corridor rehabilitation is proposed in Cronese Valley.

Small-Flowered Androstephium (*Androstephium breviflorum*). Although no individuals were identified during field surveys, this species is known to occur in within a quarter-mile north of the study corridor in the west end of Cronese Valley. A small portion of the cable at the extreme west end of the valley would be removed. Removal of cable could affect individuals of this species if present in the path of disturbance in the west end of Cronese Valley.

As noted in Affected Environment section, there is very little or no vegetation growing on the repeater hut sites; thus, it is unlikely that plant species of concern are present, and impacts are not expected due to hut removal or site rehabilitation. Hut site rehabilitation could increase habitat for species of concern, if present nearby.

Animal Species of Concern. The Proposed Action has the potential to impact several animal species of concern. Thirteen animal species of concern were identified as potentially occurring in the vicinity of project, including two mammals (Mojave ground squirrel and Nelson's bighorn sheep); four reptiles (desert tortoise, gila monster, chuckwalla, and Texas horned lizard); and seven raptors and other birds (prairie falcon, Swainson's hawk, burrowing owl, loggerhead shrike, Bendire's thrasher, LeConte's thrasher, and grey vireo). Twelve of the animal species of concern potentially occur along the California/Nevada segments, and one, the Texas horned lizard, potentially occurs along the New Mexico segment. These species of concern could be adversely affected by direct mortality or harassment during the removal or rehabilitation actions, or they could be adversely affected indirectly from short- or long-term loss of habitat. The status of each of these species is identified in Table 34. Impacts specific to each species of concern identified as occurring or potentially occurring in the project area are discussed below.

Desert Tortoise (*Gopherus agassizii*).

Direct Mortality - Tortoise mortality impacts are largely related to their limited mobility. Tortoise mortality could result by direct contact with machinery/vehicles or entrapment within burrows that are wholly or partially destroyed by the machinery. Individuals may also become trapped in open holes, trenches, or vaults.

Stress, Harassment, and Disease - Tortoises that are removed from the project area to another location may be exposed to temperature extremes, or to other tortoises within the population that carry an upper-respiratory tract disease suspected of contributing to the widespread decline of tortoise populations in the Mojave Desert. Removal and rehabilitation actions could also result in stress and harassment of tortoises due to dust, noise, and the presence of workers, equipment, and vehicles.

Habitat Along Right of Way - Removal of the coaxial cable would result in an unavoidable long-term impact to tortoise habitat. Cable removal is proposed along 80.8 miles of BLM-designated tortoise category habitat in the CDCA, 28.8 miles of USFWS-designated critical habitat in the Mojave National Preserve, and 0.6 mile of USFWS-designated critical habitat in Nevada. Assuming a 20-foot-wide area of disturbance, cable removal would affect approximately 196 acres of BLM-designated category habitat in the CDCA, 70 acres of USFWS-designated critical habitat in the Mojave National Preserve, and 1.5 acres of USFWS-designated critical habitat in Nevada. In all areas, cable removal would be conducted along 87.5 miles of USFWS critical habitat, affecting approximately 212 acres.

Habitat at Hut Sites and Along Access Corridor - The repeater huts and the access corridor are currently devoid of vegetation and do not provide actual habitat for the tortoise. Although many of the huts and most of access elimination segments fall within designated tortoise habitat, the area is already heavily disturbed, and no habitat loss is expected because of structure removal or repeater hut site or access corridor rehabilitation.

Exotic Species and Tortoise Habitat - As noted in the discussion of general vegetation impacts, the new disturbance of soil due to removal and rehabilitation actions and associated traffic could increase the spread of exotic plant species that are present along the project route. It is possible that some exotic species may be of lower food value to desert tortoises than native forbs. In addition, the spread of exotic species has also been linked to increased fire potential, causing further damage to native desert vegetation, which is often less fire-resistant.

Beneficial Impacts - Elimination of access across approximately 38 miles of critical habitat and rehabilitating the access corridor should have a permanent beneficial impact on desert tortoise by increasing available habitat and reducing vehicle-related impacts along the access corridor. Rehabilitation of the 4 miles of dual track in critical habitat would also increase habitat value in the long-term. The elimination of the marker posts could reduce raven predation along the right of way and access corridor.

Mojave Ground Squirrel (*Spermophilus mohavensis*).

Direct Mortality, Stress, and Harassment - Direct mortality impacts, stress, and harassment to the Mojave ground squirrel could occur during removal and rehabilitation actions. These impacts, though significant, would be limited by the mobility of squirrels.

Habitat - Assuming vegetation within the entire 20-foot right of way in the identified range of Mojave ground squirrel habitat is damaged by cable removal activities, an estimated 135 acres of habitat along 56 miles of the project route would be lost, which is a significant, long-term impact. Habitat areas affected are those identified by Aardahl and Roush in 1985 (see Figure 16: Extent of Mojave Ground Squirrel Habitat in the Vicinity of the Project). The Mojave ground squirrel is not a federal listed species and thus USFWS has not designated any areas as critical habitat. The rehabilita-

tion of the hut sites and access corridor would have limited habitat impacts due to minimal vegetation loss.

Beneficial Impacts - Rehabilitation of the repeater hut sites and the access corridor within Mojave ground squirrel habitat would affect a limited but permanent increase in habitat values. Approximately 7.7 miles of corridor rehabilitation and 2 miles of the dual track to be rehabilitated are in squirrel habitat. The elimination of access would reduce vehicle-related mortality and disturbance along the access corridor in addition to the disturbance related to human access to habitat areas.

Nelson's Bighorn Sheep (*Ovis canadensis nelsoni*). Three known or probable travel corridors for Nelson's bighorn sheep are traversed by the existing right of way and access corridor. Sheep primarily occupy the higher-elevation mountain tops and use the corridors only to reach other mountainous areas. The Proposed Action would temporarily disturb the use of the sheep corridors during removal or rehabilitation actions. Sheep have adapted to vehicle use across the corridors and would likely avoid use of the corridors during removal or rehabilitation activities, which would occur during daylight hours, when bighorn sheep are not as active. However, staging of equipment and associated activity in the sheep corridors could disrupt the corridors for several months during construction, resulting in more significant temporary impacts. No long-term impact is expected from the Proposed Action because the sheep corridors are not considered prime habitat

Gila Monster (*Heloderma suspectum*), Chuckwalla (*Savromalus obesus*), Texas Horned Lizard (*Phrynogoma cornuium*). These reptiles have known ranges that are traversed by the right of way and access corridor. The gila monster and the chuckwalla are found in the eastern Mojave Desert, extending into Nevada. Impacts to the chuckwalla are less likely, because the chuckwalla typically inhabits boulder-strewn open areas, which are located adjacent to the right of way and access corridor but were cleared to install the original cable. The Texas horned lizard occurs within the Chihuahuan Desert community traversed by the New Mexico segment of the Proposed Action. Construction activities could result in direct mortality to individuals during cable removal and rehabilitation actions. Impacts would be minimal, however, because these reptiles are highly mobile.

Prairie Falcon (*Falco mexicanus*), Swainson's Hawk (*Juteo Swainsoni*). Both of these raptor species were observed in the project area, and each likely uses the right of way and access corridor as part of a larger forage habitat. Given the wide-ranging habitats of these raptors, each species would use alternate forage habitat during construction actions. Removal of coaxial cable MPs would eliminate apparent roosting locations for these raptors, but impacts from removal of the MPs is expected to be less than significant due to other roosting locations.

Burrowing Owl (*Athene cunicularia*). The burrowing owl uses only a very restricted habitat traversed by the project; the only identified habitat for the owl is in the Harper Lake area. Because of the scarcity of shrubby vegetation and the presence of a dike within the right of way, burrowing owls are unlikely to burrow in this area and no burrows were observed during field surveys. If present, removal of the coaxial cable and grading of the access corridor berms could result in the loss of burrows and the direct mortality of individual owls. If construction occurred during the breeding season (approximately February to August), and burrows are present in the path of disturbance, removal or rehabilitation actions could result in the destruction of nestings and adults in burrows nest abandonment and reproductive failure. However, given the limited owl and burrow presence identified to date in the path of disturbance and the mobility of owls, impacts are expected to be less than significant.

Loggerhead Shrike (*Lanius ludovicianus*), Bendire's Thrasher (*Toxostoma bendirei*), Leconte's Thrasher (*Toxostoma lecontil*), Grey Vireo (*Vireo vicinion*). Each of these species has wide-ranging habitat across the Mojave Desert. Of these four species, only the loggerhead shrike was identified along the project area. Based on the field survey, few nests of any species were observed within the right of way. This is attributed to the presence of the access corridor that creates a continuing disturbance, the use of the coaxial cable MPs as roosts for predatory species, and the possibility that nesting activity within, or directly adjacent to, the right of way would be extremely susceptible to predation. Removal activities may adversely affect forage habitat in the short-term for each of these species, but due to presence of other nearby forage habitat, this is less than significant. Removal and rehabilitation activities also have the potential to directly impact any nests that might occur within the right of way. Due to the limited presence of nests, impacts are expected to be limited and less than significant. No significant habitat loss to these species is expected due to the presence and extent of nearby habitat. Removal of the MPs and elimination of portions of the access corridor would benefit these species by removing factors that inhibit breeding or nesting in the project area.

Cumulative Impacts. Cumulative impacts for plant species of concern and animal species of concern are discussed below.

Plant Species of Concern - Cumulative Impacts. The Proposed Action could have significant impacts on the desert cymopterus (a federal species of concern and a BLM sensitive species), and could result in loss of individuals from five other plant species of concern, but natural recovery is expected for these five species. The desert cymopterus population affected by the Proposed Action is on sand dunes that are grazed and privately owned. Ongoing sheep grazing and private activity could continue to affect this local population in the future, resulting in a cumulative impact. There are no federal plans or actions to develop any of the areas where these plant species of concern are found, although grazing on federal lands will continue to affect local vegetation. Private development in, and outside of, the area affected by the Proposed Action could affect the relative abundance of these plant species, and result in cumulative impacts.

Animal Species of Concern - Cumulative Impacts. Due to the rarity of animal species of concern, cumulative impacts could occur due both to projects and development that affect species and habitat in close proximity to the Proposed Action, as well as projects and development that affect species and habitat at great distance from the project route.

Desert Tortoise - The Proposed Action would have significant impacts on the desert tortoise due to potential direct mortality, as well as stress, harassment, and loss of habitat, while promoting habitat recovery due to rehabilitation of repeater hut sites and parts of the access corridor. Cumulative impacts to the desert tortoise population and tortoise habitat are likely due to increasing private development in tortoise habitat in the Mojave Desert; the impacts of the Fort Irwin expansion, if implemented; other future actions; and ongoing mortality, stress, and harassment due to existing activities in tortoise habitat. These cumulative impacts could be reduced or controlled in certain areas, depending on the actions resultant from the planning efforts currently underway for the west Mojave (WMCMP), northern and eastern Mojave (NEMCMP), and the Mojave National Preserve (GMP). Since these planning efforts are in progress, the possible beneficial cumulative impacts cannot be estimated or considered at this time. Over time, the implementation of the Western Mojave Land Tenure Adjustment Project should result in increasing amounts of private land in tortoise habitat coming under federal management, which should benefit the tortoise. However, significant, adverse, cumulative impacts to the desert tortoise are expected to continue to until coordinated action by local,

state, and federal agencies results in measures that effectively stabilize the Mojave population of desert tortoise, thus resulting in sufficient recovery to allow delisting of the species.

Mojave Ground Squirrel - The Proposed Action could result in direct mortality and would result in stress, harassment, and loss of squirrel habitat in the western part of the project area. The western part of the project area is predominantly in private ownership, and is in the land disposal area for the Western Mojave Land Tenure Adjustment Project. Private development and future population growth is more likely to affect this portion of the project area more than any other. Projects, such as the proposed new prison near California City, could also result in development and induced population growth in the vicinity. Loss of additional habitat could result in cumulative impacts whether the habitat is contiguous or not to the habitat affected by the Proposed Action. Thus, significant cumulative impacts, particularly loss of habitat, are possible.

Nelson's Bighorn Sheep - The Proposed Action would only affect the three noted sheep corridors during the construction period. There are no current federal plans to develop areas in the project route. Private development within the sheep corridors along the project route or federal or private development along other portions of these sheep corridors that occurs at the same time as the project could result in cumulative disruption to passing bighorn sheep. Since the Proposed Action would not permanently alter or disturb the sheep corridors, it would not contribute to any permanent cumulative impact.

Gila Monster, Chuckwalla, Texas Horned Lizard - The Proposed Action could result in direct mortality, stress and harassment of these reptile species of concern, but impacts are expected to be less than significant due their limited presence in affected areas and their mobility. Other projects or actions could also affect the abundance of these species and their habitats, but the contribution of the Proposed Action to any cumulative impact would be minimal.

Prairie Falcon, Swainson's Hawk - The Proposed Action could disrupt these bird species of concern during construction and would remove the MPs as roost sites, but these impacts would be less than significant due to the availability of nearby habitat and their mobility. Other projects or actions could affect these species by reducing forage habitat or adversely affecting nesting or roosting sites, but the contribution of the Proposed Action to any cumulative impact would be minimal.

Burrowing Owl - The Proposed Action could result in direct mortality of burrowing owls if any occupied burrows are destroyed during construction, but impacts are expected to be less than significant due to the limited owl presence and their mobility. Other projects or actions could also result in destruction of burrows, direct mortality, stress, and harassment, but the contribution of the Proposed Action to any cumulative impacts would be minimal.

Loggerhead Shrike, Bendire's Thrasher, Leconte's Thrasher, Grey Vireo - The Proposed Action is expected to have less than significant impacts on these bird species of concern due to very limited number of nests of any bird species found in the area that would be affected by construction. Other projects or actions could affect nest sites for these species, where present, but the contribution of the Proposed Action to any cumulative impact would be minimal.

Conclusion. The Proposed Action could result in loss of individual plant species of concern. Significant impacts are only expected for the Desert cymopterus. Mitigation measures are required to ensure that construction disturbance is kept to the minimum necessary for this and other plant species of concern. Residual impacts after mitigation are expected to be less than significant.

The Proposed Action would have significant impacts on desert tortoise and Mojave ground squirrel habitat because of cable removal. Mitigation (see Table 30 and Appendix G) is required to reduce these significant impacts. The mitigation measures would not eliminate the loss of existing habitat along the right of way and the potential for direct mortality, and thus residual impacts to these two species would be significant. Impacts to other animal species of concern are expected to be less than significant due to their mobility and limited presence in potentially disturbed areas.

Impacts of Alternative B

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Plant Species of Concern. Impacts to plant species of concern are discussed by species below.

Purple Bird's-Beak (*Cordylanthus parviflorus*). Removal of the cable in Round Valley is the same as the Proposed Action. Thus, cable removal could affect the individuals of this species in the path of disturbance along the cable in Round Valley, but natural recovery is expected. No rehabilitation of the access corridor in Round Valley would occur in this alternative.

Desert Cymopterus (*Cymopterus deserticola*). Removal of the cable from the dunes near Aerial Acres is the same as the Proposed Action. Removal of cable could affect individuals of this species that are present in the path of disturbance in the dunes near Aerial Acres. No rehabilitation of the access corridor near the dunes would occur as part of this alternative.

Mojave Indigo Bush (*Psorothamnus arborescens var. arborescens*). Cable removal in this alternative would only occur at four of the eight locations where Mojave indigo bush has been identified between Waterman Hills and Water Valley. Up to 14 individual Mojave indigo bush plants were observed in the path of disturbance for cable removal. This alternative includes more access corridor rehabilitation in the area where this species has been found. Removal of cable or grading or access corridor berms could affect individuals of this species that are present in the path of disturbance, but natural recovery is expected.

Cima Milk Vetch (*Astragalus cimae var. cimae*). Removal of the cable in Round Valley is the same as the Proposed Action. Thus, removal of cable could affect individuals of this species that are present in the path of disturbance in Round Valley, but natural recovery is expected. No access corridor rehabilitation in Round Valley would occur as part of this alternative.

Sand Linanthus (*Linanthus arenicola*). Removal of the cable in western Cronese Valley is the same as the Proposed Action. Thus, approximately 60 plants are in the likely path of disturbance. Removal of cable could affect individuals of this species that are present in the path of disturbance in the west end of Cronese Valley, but natural recovery is expected. No access corridor rehabilitation in Cronese Valley would occur as part of this alternative.

Small-Flowered Androstephium (*Androstephium breviflorum*). Removal of the cable in western Cronese Valley is the same as the Proposed Action. Thus, removal of cable could affect individuals of this species if they are present in the path of disturbance in the west end of Cronese Valley.

Animal Species of Concern. This alternative includes 61 fewer miles of cable removal. In general, this would result in a lower potential to affect animal species of concern. Less forage and cover would be lost because of damage to vegetation.

This alternative includes 12 more miles of access corridor rehabilitation. The additional construction activity could result in further disturbance of animal species of concern, and could affect dens or burrows found in the berms to be graded. In the long-term, the rehabilitated 12 miles of the access corridor should provide additional habitat values for animal species of concern found in these areas.

Specific impacts of this alternative for the desert tortoise and the Mojave ground squirrel are discussed below.

Desert Tortoise (*Gopherus agassizii*). This alternative would include no cable removal on federal lands within critical habitat. As a result, cable removal in critical habitat would only occur along approximately 27 miles of private and state land in California, affecting 65 acres. Based on the convention noted previously of treating private and state lands within category habitat areas as designated category habitat, cable removal would occur along 22.0 miles of BLM category I habitat (affecting 53.2 acres) and 30.0 miles of BLM category III habitat (affecting 72.7 acres) in California. The category I habitat and USFWS-designated critical habitat overlap in many areas, but the category III habitat areas on the project route are outside critical habitat. Where cable removal occurs within tortoise habitat, there would be similar disturbance, direct mortality potential, and habitat loss as in the Proposed Action.

This alternative includes the rehabilitation of 12 more miles of the access corridor than the Proposed Action. The elimination of access would reduce vehicle-related impacts along the access corridor and decrease disturbance from human access. The rehabilitation of the access corridor could result in some direct disturbance and mortality potential, but only in minimal vegetation loss. The access corridor rehabilitation overall should enhance tortoise habitat in the long-term by promoting revegetation of currently non-vegetated access corridor segments.

Mojave Ground Squirrel (*Spermophilus mohavensis*). Because this alternative includes no removal on federally owned critical habitat for the desert tortoise and this critical habitat overlaps with Mojave ground squirrel habitat, cable removal affects on the Mojave ground squirrel would be less than in the Proposed Action. Cable would be removed from approximately 45 miles of squirrel habitat, affecting 109 acres — 26 acres less than the Proposed Action. Where cable removal occurs within squirrel habitat, there would be similar disturbance, direct mortality potential, and habitat loss as in the Proposed Action.

This alternative includes the rehabilitation of 12 more miles of the access corridor than the Proposed Action. Six of these miles between the Waterman Hills and Water Valley are in squirrel habitat. The elimination of access would reduce vehicle-related impacts along the access corridor, in addition to the disturbance from to human access. The rehabilitation of the access corridor could result in some direct disturbance and direct mortality potential, but only in minimal vegetation loss. The access corridor rehabilitation overall should enhance Mojave ground squirrel habitat in the long-term by promoting revegetation of currently non-vegetated access corridor segments.

Other Animal Species of Concern. Although construction could result in direct mortality, stress, and harassment of several other reptile and bird species of concern, impacts would be limited by mobility of these species and their limited presence in affected areas and would be less than significant.

Conclusion. This alternative would have significant, but lower level of impact on plant and animal species of concern, in particular the desert tortoise, than the Proposed Action because of the overall lower level of construction activity. Impacts to plant species of concern would be less than significant after mitigation. Impacts to desert tortoise and Mojave ground squirrel would be significant and the same mitigation as the Proposed Action would be required, with the exception that land compensation for habitat loss would be proportionally lower. Residual impacts to desert tortoise and Mojave ground squirrel would still be significant after mitigation.

This alternative would have a slightly increased benefit to desert tortoise and Mojave ground squirrel habitat due to the additional miles of access corridor rehabilitation.

Impacts of Alternative C

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Plant Species of Concern. Impacts to plant species of concern are discussed by species below.

Purple Bird's-Beak (*Cordylanthus parviflorus*). Removal of the cable at the Round Valley location of this species would not occur in this alternative because it is on federal land. No rehabilitation of the access corridor would occur in Round Valley.

Desert Cymopterus (*Cymopterus deserticola*). Removal of the cable from the dunes near Aerial Acres is the same as the Proposed Action. Removal of cable could affect individuals of this species that are present in the path of disturbance in the dunes near Aerial Acres. No rehabilitation of the access corridor near the dunes would occur as part of this alternative.

Mojave Indigo Bush (*Psorothamnus arborescens var. arborescens*). Cable removal in this alternative would only occur at three of the eight locations where Mojave indigo bush has been identified between Waterman Hills and Water Valley. Removal of cable or grading could affect individuals of this species that are present in the path of disturbance, but natural recovery is expected. No rehabilitation of the access corridor would occur in the area where this species is found in this alternative.

Cima Milk Vetch (*Astragalus cimae var. cimae*). Removal of the cable in Round Valley would only occur at one of the four locations where this species was found. Thus, removal of cable would only affect individuals of this species that are present at this one location, but natural recovery is expected. No access corridor rehabilitation in Round Valley would occur as part of this alternative.

Sand Linanthus (*Linanthus arenicola*). Removal of the cable in western Cronese Valley is the same as the Proposed Action. Thus, approximately 60 plants are in the likely path of disturbance. Removal of cable could affect individuals of this species that are present in the path of disturbance in the west end of Cronese Valley, but natural recovery is expected. No access corridor rehabilitation in Cronese Valley would occur as part of this alternative.

Small-Flowered Androstephium (*Androstephium breviflorum*). Removal of the cable in western Cronese Valley is the same as the Proposed Action. Thus, removal of cable could affect individuals of this species if present in the path of disturbance in the west end of Cronese Valley.

Animal Species of Concern. This alternative includes 102 fewer miles of cable removal, which would generally decrease the likelihood of affecting animal species of concern. Less forage and cover would be lost from the damage to vegetation.

This alternative includes 34 fewer miles of access corridor rehabilitation. The construction activity would generally result in less disturbance of animal species of concern than in the Proposed Action. In the long-term, the rehabilitation of fewer portions of access corridor would provide less enhancement of habitat values for animal species of concern than the Proposed Action.

Specific impacts of this alternative for the desert tortoise and the Mojave ground squirrel are discussed below.

Desert Tortoise (*Gopherus agassizii*). This alternative would include no cable removal on federal lands in Nevada and California. As a result, cable removal in critical habitat would only occur along approximately 27 miles of private and state land in California, affecting 65 acres of critical habitat. Based on the convention noted previously of treating private and state lands within category habitat areas as designated category habitat, cable removal would occur along 22.0 miles of BLM category I habitat (affecting 53.2 acres) and 21.8 miles of BLM category III habitat (affecting 52.8 acres) in California. The category I habitat and USFWS-designated critical habitat overlap in many areas, but the category III habitat areas on the project route are outside critical habitat. Where cable removal occurs within tortoise habitat, there would be similar disturbance, direct mortality potential, and habitat loss as in the Proposed Action.

This alternative includes the rehabilitation of only 3.5 miles of the access corridor in critical habitat, which is 34 fewer miles than in the Proposed Action. Elimination of access would reduce vehicle-related impacts along the access corridor, and reduce the disturbance from human access. The rehabilitation of the access corridor could result in some direct disturbance, and mortality potential, but only in minimal vegetation loss. The access corridor rehabilitation overall should enhance tortoise habitat in the long-term by promoting revegetation of currently non-vegetated access corridor segments.

Mojave Ground Squirrel (*Spermophilus mohavensis*). Because this alternative includes no removal on federally owned land, cable removal affects on the Mojave ground squirrel would be less than in the Proposed Action. Cable would be removed from approximately 37 miles of squirrel habitat, affecting 89 acres — which is 46 acres less than the Proposed Action. Where cable removal occurs within squirrel habitat, there would be similar disturbance, direct mortality potential, and habitat loss as in the Proposed Action.

This alternative includes no access corridor rehabilitation in squirrel habitat. Rehabilitation of dual track would be the same as the Proposed Action.

Other Animal Species of Concern. Although construction could result in direct mortality, stress, and harassment of several other reptile and bird species of concern, impacts would be limited by mobility of these species and their limited presence in affected areas and would be less than significant.

Conclusion. This alternative would have significant, but fewer, impacts on plant and animal species of concern, in particular the desert tortoise, than the Proposed Action because of the overall lower level of construction activity. Mitigation would be the same as the Proposed Action, except that land compensation would be proportionate to the fewer miles of cable removal in tortoise habitat. Residual impacts to desert tortoise and the Mojave ground squirrel would be significant after mitigation.

Because of the smaller amount of access corridor rehabilitation, this alternative would have fewer beneficial impacts than the Proposed Action for the desert tortoise and the Mojave ground squirrel habitat.

CULTURAL RESOURCES

Impacts of the No Action Alternative

There would be no construction-related impacts of the No Action Alternative on cultural resources. Continued access along the access corridor could result in the traffic-related degradation of some of the resources along the project route.

Conclusion. Impacts on cultural resources due to the No Action Alternative are limited to possible disturbance of resources found immediately adjacent to the access corridor by vehicles.

Impacts of the Proposed Action

Impacts of cable removal are described in greater detail in the Cultural Resources Report (Peak & Associates 1997).

Cultural Resources. Cable removal could affect several areas where cultural resources are known to exist or may potentially exist in New Mexico, California, and Nevada. Although the previous cable installation and maintenance activities have already disturbed the right of way, removal of the cable could uncover potentially significant cultural resources. Based on field surveys and a review of existing literature (Peak & Associates 1997), no known sites presently listed on the National Registrar of Historic Places would be affected by cable removal or corridor rehabilitation. In general, removal of the cable and associated marker posts would enhance the integrity of the historic period resources present in the study area because the setting would be returned to a pre-1963 condition.

In New Mexico, potentially significant cultural resources exist along the project route at five locations. No cable removal is proposed at the locations where these cultural resources were identified. Construction vehicle traffic along the right of way, however, could affect these sites. No access corridor exists in New Mexico, so no access corridor rehabilitation would be conducted. In New Mexico, the one repeater hut site is not within any of the five recorded sites and there would be no impacts due to structural removal or hut site rehabilitation.

In Nevada, one archaeological site exists along the project route, which is not expected to be affected by the Proposed Action.

In California, twenty-three archaeological sites exist along the project route. Cable removal has the potential to affect five sites that are considered to be potentially eligible for the NRHP and 10 sites that are not considered potentially eligible. The remaining sites are located in areas not affected by cable removal. New disturbance of cultural resources at identified locations would be limited because of the relatively loose soil characteristics and extent of existing disturbance caused by cable installation and maintenance activities.

It is possible that rehabilitation (i.e., deep ripping and chain-dragging) of the repeater hut sites could disturb potentially significant cultural resources, if they are present. Impacts to cultural resources are unlikely because of the cleared and highly disturbed state of the repeater hut sites.

It is possible that rehabilitation of access corridor segments could disturb potentially significant cultural resources, if present, under the access corridor, but new disturbance is unlikely due to the highly disturbed state of the access corridor. Corridor rehabilitation could affect two sites that are not considered potentially eligible for the NRHP. Dual track rehabilitation would not affect any of the identified sites. Elimination of the access corridor in the Kelso Wash Area (MP 6325 - MP 6373) could result in limited diversion of traffic to the Mojave Road, parts of which contains historical parts of the culturally significant Mojave Trail. Due to the distance between the access corridor and the Mojave Road and the existence of other crossing routes, no significant impact is expected due to this diversion of traffic.

Native American Resources. Consultation between the NPS and appropriate governmental agencies is ongoing regarding potential affects of the project on Native American resources. Based on information obtained to date, Native American resources are not expected to be present in the project area, and no impacts would occur as a result of removal or rehabilitation activities.

Cumulative Impacts. Cumulative impacts for cultural resources and Native American resources are discussed below.

Cultural Resources - The Proposed Action could result in significant impacts to potentially eligible cultural resources during construction. There are no known federal plans or policies to develop any of the federal lands affected by the Proposed Action, but some of the cultural resources potentially affected are located on private land. Future private development could further affect the integrity of some of these resources. In addition, ongoing activities such as vehicle travel and grazing could also affect those resources found along the project route on both federal and private land.

Native American Resources - The Proposed Action is not expected to affect Native American Resources and thus would not contribute to any cumulative impacts.

Conclusion. The Proposed Action could disturb several cultural resources potentially eligible for the NRHP and other resources not considered potentially eligible. Mitigation (see Table 30 and Appendix G) is required to reduce or avoid impacts to these resources. After mitigation, the Proposed Action should not have any significant impacts on cultural resources.

Impacts of Alternative B

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Cultural Resources. This alternative would include less cable removal than in the Proposed Action, and consequently fewer potential overall impacts on cultural resources. Cable removal could affect the same sites potentially eligible for the NRHP (5 in New Mexico and 5 in California), except that removal would affect fewer locations of one of these sites, the Mojave Trail/Old Government Road. Cable removal could also affect five sites not considered eligible for the NRHP.

This alternative would include rehabilitation of 51.6 miles of access corridor. Rehabilitation of the access corridor has the potential to affect six sites, one of which is considered potentially eligible for the NRHP.

Native American Resources. Based on information obtained to date, Native American resources are not expected to be present in the project area, and no impacts would occur as a result of removal or rehabilitation activities.

Conclusion. This alternative could have similar significant impacts as the Proposed Action. Cable removal would be less likely to affect potential cultural resources but corridor rehabilitation would be more likely to affect potential cultural resources and the Proposed Action. Mitigation would be the same as the Proposed Action, and residual impacts should be less than significant.

Impacts of Alternative C

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Cultural Resources. This alternative would include less cable removal than the Proposed Action, and consequently fewer potential overall impacts on cultural resources. Vehicle traffic during construction could affect the five potentially eligible sites in New Mexico. Cable removal could affect four sites potentially eligible for the NRHP in California. Construction actions would not affect the Mojave Trail. Cable removal could also affect four sites not considered eligible for the NRHP.

Access corridor rehabilitation would include only 5 miles in the Mojave National Preserve. The only cultural resource site identified in the access corridor rehabilitation areas is a site in Soda Lake which is not considered potentially eligible for the NRHP.

Native American Resources. Based on information obtained to date, Native American resources are not expected to be present in the project area, and no impacts would occur as a result of removal or rehabilitation activities.

Conclusion. This alternative could have similar significant impacts as the Proposed Action, but less likelihood of affecting currently unidentified potential cultural resources because of less cable removal and access corridor rehabilitation. Mitigation would be the same as the Proposed Action. Residual impacts should not be significant after mitigation.

LAND USE AND RECREATION

Impacts of the No Action Alternative

There would be no construction-related impacts of the No Action Alternative. Access along the access corridor into and through parts of the Mojave Wilderness would be unimpeded. Although vehicle access is prohibited to unauthorized users, without any physical barriers to travel, it is likely that vehicle travel in these areas would continue. Repeater huts and MPs would remain in wilderness areas.

Conclusion. With no action, there would be no physical barriers to access along the access corridor into several portions of the Mojave Wilderness. This could allow unauthorized vehicle travel in wilderness areas and could result in degradation of wilderness amenities. The presence of P140 structures in wilderness would remain inconsistent with wilderness values.

Impacts of the Proposed Action

The Proposed Action would result in temporary land use impacts during the construction phase, short- and long-term land use impacts primarily due to loss of vegetation, and long-term access impacts related to access elimination. Impacts are discussed separately for land use plans and policies, physical land uses, special management areas, recreation and recreational access.

Land Use Plans and Policies. The Proposed Action includes the elimination of portions of a right of way. The existence and use of this right of way have not, to date, prevented the use of the underlying or adjacent land uses. The Proposed Action would not result in the establishment of any new land use on private, state, or federal land, and thus would not result in any new conflict with any applicable county, state, or federal land use plans or policies.

The cable right of way is not within a local, state, or federally designated utility corridor except along I-15 which is a designated BLM utility corridor (BLM 1980). Removal of cable and structures and elimination of portions of the AT&T right of way would not affect the use or designation of this utility corridor along I-15, because other utilities and potential future users would not be affected by the Proposed Action.

Rehabilitation of the repeater hut sites would promote the revegetation of currently barren areas. This revegetation would not restrict or establish any particular land use, and thus would not be in conflict with any applicable private, state, or federal land use policies.

Rehabilitation of the access corridor would result in the elimination of approximately 40 miles of the access corridor. Although the access corridor is mapped on various publicly available maps, the access corridor is not a county, state, or federally-designated road. No access corridor segments on private land would be eliminated, and none of the access corridor is recognized by local or county transportation agencies, thus access elimination would not be in conflict with any county or local transportation plans or policies. The elimination of approximately 5 miles of access corridor in wilderness areas in the Mojave National Preserve would be consistent with the Wilderness Act of 1964, which prohibits unauthorized vehicle travel in wilderness areas. Access guides or other maps published by the NPS would need to be updated to avoid future public confusion.

The CDCA plan governs land use on public lands in the CDCA. The BLM Desert Access Guides, which are based on the CDCA plan, identify all of the 9.2 miles of access elimination segments in the BLM Barstow Resource Area as open routes, i.e., approved routes of travel available for use by all types of motorized vehicles. The Proposed Action would result in both a physical change and would affect a policy change. Physically, 9.2 miles of existing route would be eliminated. Concerning policy, the Proposed Action would result in the change of designation of the 9.2 miles of access corridor from "open route" to "closed". Access guides or other maps published by the BLM would need to be updated to avoid future public confusion.

The elimination of the access corridor across 4.1 miles of CDFG land is likely to be consistent with CDFG management priorities for these lands, because they were originally acquired from private ownership as tortoise compensation land for conservation purposes. In general, the elimination of the access corridor in desert tortoise critical habitat would be consistent with recommendations of the Desert Tortoise Recovery Plan for Desert Wildlife Management Areas (DWMAs). However, no DWMAs along the project area have been adopted to date.

Physical Land Uses. Temporary impacts due to removal actions include the direct disturbance of approximately 423 acres of land use along the cable right of way, and indirect disturbance of land uses adjacent to the right of way and the repeater hut sites. Although the cable right of way has been maintained and patrolled for 30 years, it has not precluded certain land uses from continuing or being established. Common land uses that may be temporarily affected include dispersed recreation, grazing, and conservation. Existing land uses would be directly adversely affected by the removal actions. Existing and adjacent land uses would be indirectly adversely affected by noise, dust, and traffic generated by the cable removal and structure demolition.

The area of impact by land ownership due to cable removal is shown in Table 35. Acreage calculations are based on a disturbance to the entire width of the coaxial cable right of way (20 feet). The width of disturbance would likely be less than the width of the right of way. Although the repeater hut sites (approximately 10,000 square feet per site) would also be disturbed, these sites are not used by anyone other than AT&T, and areas of disturbance at the sites have not been included in Table 35.

The coaxial cable right of way traverses approximately one mile of active cropland and just over one mile of fallow cropland. If the cable removal occurred during the growing season, crop value would be lost. Because the cable is within an existing right of way, removal should not impact any underground irrigation or drainage systems.

Grazing lands are located on private lands, BLM lands, and park system lands crossed by the coaxial cable right of way. Minimal forage material for livestock would be affected by cable removal, and available forage would be present adjacent to, and in the vicinity of, the disturbed area.

The coaxial cable right of way traverses limited areas of developed land, including cleared areas of rural residences, and uncompleted residential developments with only road and infrastructure improvements. Potential impacts include removal of structural amenities (i.e., fences) and temporary increases in noise, dust, and traffic levels. No business are located along the route.

No search for mining claims along the project area was conducted, thus it is unknown whether any valid claims may cover areas affected by the Proposed Action. However, there are no obvious mining activities located along the project route, indicating a low probability of valid claims. Removal actions would not affect any mining claims, if present.

Elimination of portions of access corridor would eliminate some secondary access to grazing areas and private lands, but this is not expected to have a significant impact due to the existence of alternate routes. Access corridor segments that provide a sole route of travel over federal land to private lands were excluded from elimination. The elimination of portions of the access corridor could, however, require some owners of private lands to use other roads in poorer condition than the access corridor, or to use more indirect routes of travel to reach their lands. The elimination of portions of the access corridor would only affect mining claims, if any were present in the area, where access is eliminated and no alternative route to the claim exists and is considered unlikely. Mining areas outside the right of way that are accessed by the access corridor would not be affected because access in those areas is not proposed for elimination. Recreational uses and access are discussed separately below.

Special Management Areas. Affected special management areas include wilderness, BLM SMAs, and BLM ACECs.

Wilderness - Cable would be removed from 6.6 miles of the Mojave Wilderness and would include the use of mechanical equipment and vehicles within the wilderness. Four huts, two vaults, and marker posts would also be removed from the Mojave Wilderness. Structural removal would temporarily disturb several units of this wilderness, but there would be a long-term benefit of removing these man-made structures from the wilderness. Cable removal would also indirectly affect the following areas that are adjacent or nearby the right of way: 29 miles of the Mojave Wilderness, 1.7 miles of the Soda Mountains wilderness study area, and 2.3 miles of the Black Mountain Wilderness. Cable removal would result in temporary indirect impacts (i.e., noise, dust, and traffic) to any users of these adjacent wilderness areas at the time of removal. The Proposed Action could also affect immediately adjacent wilderness units if construction equipment or vehicles were to stray from the right of way and access corridor. The likelihood of this happening would be reduced by the flagging of the construction limits.

The access corridor would be eliminated and rehabilitated where it crosses 5.4 miles of the Mojave Wilderness. Because mechanized travel is prohibited in the wilderness, access elimination is consistent with Wilderness Act purposes and provisions. Rehabilitation activities would temporarily disrupt these wilderness areas due to dust, noise, and the visual impact of construction. The elimination of mechanized access into the wilderness would have a long-term beneficial impact.

Other Special Management Areas - Cable removal would affect 0.5 mile (disturbing 1.2 acres) within one designated special management area, the Box SMA, in New Mexico. The area affected by cable removal is outside Box Canyon, which is the main focus of recreational climbing.

Cable removal would occur at five crossings of the Mojave Road which is a proposed historic trail and a BLM ACEC on public land. The Mojave Road crossings would be temporarily disrupted during removal of the cable. Access corridor rehabilitation would not eliminate access to the Mojave Road from other roads. Elimination of the access corridor across Kelso Wash could result in some limited diversion of traffic from the access corridor to the Mojave Road, although other existing roads are also expected to absorb some of the traffic.

Recreational Use and Access. Recreational impacts of the Proposed Action include temporary disruption due to construction, long-term disruption due to loss of vegetation, and long-term recreational access impacts due to access elimination. The Proposed Action would also have some long-term beneficial impacts by removing visual intrusions in desert recreation areas and by promoting vegetation of barren hut sites and portions of the access corridor.

Designated recreational areas include wilderness areas, areas of critical environmental concern, and special management areas. Outside of designated areas, open desert areas on federal land are also used for dispersed recreation. Cable removal would occur along nearly 58 miles of park system land within the Mojave National Preserve and 49 miles of public land within the CDCA.

Recreational areas along the right of way and access corridor would be temporarily disrupted during construction by noise, dust, and the presence of equipment and vehicles. Cable removal would also result in a long-term recreation impact due to the disturbance of the vegetative cover that supports the passive recreation use of the land. This is considered a long-term impact because of the slow growth of a vegetative cover in the desert.

As noted previously, the elimination of 5.4 miles of the access corridor in the Mojave Wilderness would be consistent with the Wilderness Act and would not affect recreational access. The elimination of the access corridor across 4.1 miles of CDFG conservation land would also not affect recreation. The remaining 30.3 miles of access elimination would eliminate vehicle access to open desert areas on park system and public lands, which is a significant impact. Affected areas include including 21.1 miles in the Mojave National Preserve and 9.2 miles within the CDCA. Because the access corridor has become part of the system of dirt roads in the desert, elimination of portions of the access corridor could also affect the ability to reach some portions of areas reached by crossing dirt roads.

Vehicle access to any designated sites (as apart from undesignated open desert areas on park system and public lands) would not be affected. Vehicle access would not be eliminated to any of the recreational sites listed in Table 26: Segments of AT&T Access Corridor Used to Reach Recreational Sites/Area because of either the exclusion of segments that provide such access or the existence of equivalent other routes of travel.

Removal of the repeater huts and the MPs along the right of way and rehabilitation of the repeater hut sites would have a positive, long-term, aesthetic impact that would enhance recreational experiences by reducing the man-made elements and promoting revegetation. As noted above, rehabilitation of portions of the access corridor would eliminate vehicle access for recreation to some open desert areas while at the same time promoting revegetation that would enhance desert aesthetics for non-vehicular recreation.

Cumulative Impacts. Cumulative impacts for land use plans and policies, physical land uses, special management areas, and recreation use and access are discussed below.

Land Use Plans and Policies - The Proposed Action is consistent with existing land use plans and policies because it does not establish any permanent land uses that might be incompatible with land use controls. Access elimination on federal land is part of the Proposed Action to implement recommendations of the Desert Tortoise Recovery Plan and to protect wilderness areas designated by the 1994 CDPA. Other private or federal actions will have to be considered separately for their compliance with land use controls, but the Proposed Action is not expected to contribute to any cumulative conflict with existing land use plans or policies.

Physical Land Uses - The Proposed Action would disrupt uses temporarily during construction and would eliminate some areas of secondary grazing and secondary private access. No cumulative impacts are expected during the construction period because there are no known federal plans to develop parts of the project route affected by the project and because any additional private develop-

ment would have to authorized by affected private landowners. It is possible that some of the planning efforts, such as the WMCMP, the NEMCMP, or the GMP for the Mojave National Preserve, could result in further elimination of travel routes that could affect grazing or private access and cumulative impacts on grazing and private land uses.

Special Management Areas - In the Mojave Wilderness, the Proposed Action would result in temporary disruption during construction and in long-term vegetation damage prior to revegetation, but it would also eliminate 5 miles of the access corridor and remove incompatible man-made structures. The 1994 CDPA designated the Mojave Wilderness and the Proposed Action, while resulting in temporary disruption, would result in long-term rehabilitation actions to improve the ability of the NPS to protect the wilderness values of designated areas. Future development is prohibited in wilderness areas so no cumulative impacts would be expected inside wilderness areas themselves. Future development could still disrupt wilderness areas adjacent to future project sites, and result in cumulative impacts.

Recreational Use and Access - The Proposed Action would temporarily disrupt open desert recreation areas, result in a loss of vegetation that supports passive recreation, and eliminate 30 miles of recreational access to undesignated open desert areas on federal land. Since the recreational areas are on federal land and there are no known federal plans for development along the immediate project route, no cumulative impacts are expected during construction. Elimination of 30 miles of recreational access along the access corridor (outside of wilderness) could have a significant cumulative impact if any of the regional planning efforts (such as the GMP for the Mojave National Preserve) or projects (such as the Fort Irwin Expansion) result in the elimination of additional roads and areas for dispersed desert recreation use and access on federal land.

Conclusion. The Proposed Action is consistent with applicable federal and county land-use plans. Physical land-uses would be temporarily disturbed by construction and loss of limited amounts of crops and grazing fodder, and improvements could occur. Mitigation (see Table 30 and Appendix G) is required. Residual impact to physical land uses (apart from recreational use and access) after mitigation would be less than significant.

The Proposed Action could have a significant impact on wilderness and the Mojave Road, and mitigation (see Table 30 and Appendix G) is required. Residual impacts from construction disturbance are expected to be less than significant after mitigation. Rehabilitation actions would have beneficial impacts by removing man-made structures and eliminating mechanized access in wilderness.

The impacts of the Proposed Action on recreation areas would be significant due to temporary construction disturbance and long-term damage to vegetation. Mitigation (see Table 30 and Appendix G) is required. Residual impacts would still be significant after mitigation due to the slow pace of desert revegetation.

The elimination of 30 miles of the access corridor outside wilderness would eliminate recreational driving along the access corridor and recreation use across adjacent dispersed federal desert lands, which is a significant impact. Since access elimination is an integral part of the Proposed Action, no mitigation is proposed. NPS and BLM would update information and maps to reflect the elimination of the access corridor and avoid confusion, but significant impacts would still occur.

Impacts of Alternative B

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Land Use Plans and Policies. Similar to the Proposed Action, this alternative would not result in the establishment of any permanent new land uses and would not prevent the establishment of any other land uses along the cable removal segments or at the structural removal locations. Thus, this alternative would not result in any conflict with local, county, state, or federal land use plans and policies regarding new land uses.

This alternative includes the elimination of 12 more miles of access corridor on federal land, including an additional 1.5 miles in the Mojave National Preserve, 2.5 miles in the BLM Needles Resource Area, 7.3 miles in the BLM Barstow Resource Area, and 0.4 mile in the BLM Las Vegas District, compared to the Proposed Action. The elimination of 10 more miles of existing open routes of travel in the CDCA, including segments of the designated EF401 open route between Waterman Hills and Water Valley, would require a redesignation of the eliminated segments as closed. The elimination of 0.4 mile of existing open route in the BLM Las Vegas District and would also require a redesignation of this segment as closed.

Physical Land Uses. This alternative would include 61 fewer miles of cable removal. The area of impact by land ownership due to cable removal in this alternative is shown in Table 35. Temporary impacts due to removal actions include the direct disturbance of approximately 275 acres of land use along the cable right of way and indirect disturbance of land uses adjacent to the right of way, and the repeater hut sites. Impacts to the agricultural land in Water Valley would be the same as the Proposed Action because it is private land. Grazing forage would be less affected in this alternative than in the Proposed Action because of less cable removal. Impacts to grazing access and secondary access to private lands would be similar to, but greater than, the Proposed Action because of more access elimination.

Special Management Areas. Impacts to the Box SMA in New Mexico would be the same as in the Proposed Action. Cable removal would occur in 3.2 miles of the Mojave Wilderness. Cable removal would also indirectly affect approximately 12 miles of adjacent or nearby units of the Mojave Wilderness, 1.7 miles of the Soda Mountains wilderness study area, and 2.3 miles of the Black Mountain Wilderness. The access corridor would be eliminated and rehabilitated in the same wilderness areas as the Proposed Action.

Cable removal would occur at four crossings of the Mojave Road. The elimination of the access corridor across portions of eastern Piute Valley could result in the diversion of traffic onto the nearby Mojave Road. Access corridor would also be eliminated from a segment near Kelbaker Road (MP 6449 - MP 6459) that provides an alternate route to driving in Willow Wash for Mojave Road travellers.

Recreation Areas and Access. This alternative would result in less construction disruption of open desert recreation areas due to less cable removal and associated traffic. Construction disruption would be greater along the 12 additional miles of access corridor rehabilitation, compared to the Proposed Action. Long-term recreation impact due to the disturbance of the vegetative cover would be less than the Proposed Action because removal would affect only 275 acres of desert vegetation.

Outside of wilderness areas, this alternative would eliminate the use of 42 miles of the access corridor on federal land for recreational driving and viewing of the open desert, including 0.4 mile in Nevada, 22.6 miles in the Mojave National Preserve and 19 miles within the CDCA. Because the access corridor has become part of the system of dirt roads in the desert, elimination of portions of the access corridor could also affect the ability to use some portions of crossing dirt roads.

Access to several designated and undesignated recreational sites would be made more difficult due to the elimination of the 12 more miles of the access corridor. Access to an open desert informal camping area, Balancing Rock Camp near MP 6051, which is apparently used by Mojave Road travellers, would be eliminated because the access corridor provides the only route to this camp. This camp is referenced in Dennis Casebier's *Mojave Road Guide*. Direct access from the Rainbow Basin area to the Black Mountain/Inscription Canyon area would not be possible because this alternative would eliminate some of the access corridor segments between MP 7359 and MP 7405. This segment is also currently designated as Open Route EF401 by the BLM. Travellers from Rainbow Basin to the Black Mountain/Inscription Canyon area would be forced to use either a more westerly approach (via Hinkley Road, Opal Mountain Road, and/or several other dirt roads), or a more easterly approach (via Copper City Road and connecting dirt roads), both resulting in detours of anywhere from 7 to 12 miles depending on intended destination.

Conclusion. Construction-related impacts would be similar to, but less than, the Proposed Action due to less construction disruption overall.

The rehabilitation of 12 more miles of access corridor would have significant additional impacts on recreational access beyond those of the Proposed Action. Although alternate routes are available to the Black Mountain/Inscription Canyon area, the elimination of direct access from Rainbow Basin toward this area would still have a significant adverse affect on recreational access.

Mitigation for significant impacts would be similar to the Proposed Action. The only residual significant impacts after mitigation would be the long-term damage to vegetation and the elimination of recreational access.

Impacts of Alternative C

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Land Use Plans and Policies. Similar to the Proposed Action, this alternative would not result in the establishment of any permanent new land uses and would not prevent the establishment of any other land uses along the cable removal segments or at the structural removal locations. Thus, this alternative would not result in any conflict with local, county, state, or federal land use plans and policies regarding new land uses.

This alternative only includes elimination of the access corridor in 5.4 miles of wilderness in the Mojave National Preserve. Since the Wilderness Act prohibits unauthorized vehicle travel in wilderness areas, the elimination of the 5.4 miles of access corridor would be consistent with, and promote the full implementation of the Wilderness Act in these areas. Other existing routes of travel outside of wilderness areas would not be affected by this alternative.

Physical Land Uses. This alternative would include 102 fewer miles of cable removal. The area of impact by land ownership due to cable removal in this alternative is shown in Table 35. Temporary impacts due to removal actions include the direct disturbance of approximately 175 acres of land use along the cable right of way, and indirect disturbance of land uses adjacent to the right of way and the repeater hut sites. Impacts on the agricultural land in Water Valley would the same as the Proposed Action because it is private land. Grazing lands would be less affected in this alternative than in the Proposed Action because of less cable removal.

Special Management Areas. Impacts on the Box SMA in New Mexico would be the same as in the Proposed Action. Cable removal would not occur in any wilderness areas. Cable removal would only affect several wilderness units in the Mojave Preserve where wilderness is adjacent to private land on which removal would occur. The access corridor would be eliminated and rehabilitated along 5.4 miles in the Mojave Wilderness, which is a beneficial impact. Cable removal would occur at two crossings of the Mojave Road. Access corridor rehabilitation would not affect the Mojave Road.

Recreational Areas and Access. This alternative would cause less construction disruption of open desert recreation areas due to less cable removal, less access corridor rehabilitation, and less associated traffic. Long-term recreation impact due to the disturbance of the vegetative cover by cable removal would be limited because removal would affect desert vegetation only on private and CDFG land in California and 11.3 acres of public land in New Mexico. Recreational areas along the access corridor rehabilitation segments in wilderness in California would be temporarily disrupted by noise, dust, and traffic during rehabilitation activities.

Corridor rehabilitation would help to eliminate vehicle recreation use within wilderness areas, which is already prohibited. This alternative would only eliminate the access corridor within wilderness in the Mojave National Preserve; thus, no adverse impacts to recreational access are expected.

Conclusion. Construction-related impacts for this alternative would be similar to, but less than, the Proposed Action because of less construction disruption overall. Access corridor rehabilitation would result in some temporary disruption in several wilderness units. Mitigation would be the same as the Proposed Action. Because cable removal would not affect recreation areas in California and Nevada and limited recreation areas in New Mexico, and would not affect recreational access, there would be no residual significant impacts after mitigation.

TRANSPORTATION AND UTILITY CORRIDORS

Impacts of the No Action Alternative

There would be no construction impacts on transportation from the No Action Alternative. Traffic along the access corridor, including maintenance patrols would continue as at present. Utilities would be unaffected.

Conclusion. There would be no impacts of the No Action Alternative on transportation or utility corridors.

Impacts of the Proposed Action

Traffic Flows, Level of Service, and Traffic Safety. Methods for removing cable from specific road crossings are shown in Table 36.

The Proposed Action would not significantly impact traffic flow, LOS standards, or traffic safety for any federally maintained roadway (U.S. Route 60 in New Mexico; and U.S. Route 95, U.S. Highway 15, and U.S. Highway 395 in California). Where cable removal is to occur at these federal roadway crossings, it would be pulled from casing beneath the roadway. Because this removal technique does not interfere with the structural or operating characteristics of the roadway, no short-term or long-term traffic impacts would occur.

Out of 49 road crossings over non-federal roadways, cable would be removed by plowing or trenching at 33 crossings, and by pulling at six crossings. Cable would not be removed at 10 crossings. No impacts on traffic are expected where the cable is removed by pulling. Of the road crossings where cable is to be removed by plowing or trenching, all but three (Fort Irwin Road, Clay Mine Road, and Kelbaker Road) are constructed of gravel or dirt. No significant transportation impacts are expected to occur during cable removal at the dirt and gravel roadways, however, as their locations are typically remote and AADT volumes are minimal.

There could be temporary impacts associated with the plowing or trenching of two of the paved roads due to higher traffic volumes; however, it is expected that there would be no short-term or long-term impacts because of the limited time necessary to remove the cable. Fort Irwin Road and Clay Mine Road are both operating at a LOS "B." Although these roads have relatively high AADT volume when compared to most other roads crossed, available roadway capacity is relatively high and the actual volume of trips during off-peak hours is relatively low. AM and PM peak hour trips (i.e., the hour during which the maximum traffic occurs) on Fort Irwin Road are expected to approximate 60 to 70 percent of the AADT because the primary purpose of the roadway is to transport military personnel and civilian workers between Barstow and Fort Irwin. To a less extent, Clay Mine Road functions as a transportation corridor between California City and Edwards Air Force Base and is expected to have a high peak hour volume. Temporary delay of less than 30 minutes on these roads may be expected because only one lane of traffic would be kept open during the surface cut. No safety hazards are expected because safety measures would be implemented in accordance with the *Manual on Uniform Traffic Control for Street and Highways*. Kelbaker Road in the Mojave National Preserve is the other paved roadway to be trenched or plowed. Because of the low AADT (43) on the road, no significant impacts would occur as a result of cable removal.

The only railroad crossing is the Union Pacific Railroad (MP 6323 to MP 6324) in California. The cable would be removed from an underground casing, as described above. No disturbance to the rail line is expected.

Rehabilitation of the repeater huts would have no impact on traffic. Rehabilitation of the 4 miles of dual track would eliminate this second route of travel in remote areas of Piute Valley and between the Waterman Hills and Water Valley, but one of the tracks of the access corridor would remain open. Access corridor elimination would discourage travel along the eliminated segments due to the ripping of the corridor and the placement of access control at crossings with other roads. Where access corridor rehabilitation affects existing road crossings, these road crossings would be restored to their pre-removal status. Access issues were discussed separately with the land use and recreation impacts. Diversion of traffic from the access corridor elimination segments is discussed separately below.

No impacts are expected from the transport of removal and rehabilitation equipment to the right of way. A minor increase in vehicle traffic on existing roads would occur during construction activities due to transportation of crews and materials to and from the work site. Trip length would depend on the point of origin and the location along the right of way where work is occurring.

Utility Service. Removal and rehabilitation activities would not adversely affect existing utility services. Utility identification services would be contacted prior to construction. The cable would be removed by methods approved by the regulating utility company. Access corridor rehabilitation would only affect the first 12 inches of soil along the access corridor and is not expected to affect buried utilities if present in the rehabilitation area.

Permanent Diversion of Traffic. For the most part, traffic levels along the access corridor are very low because of the remote nature of the access corridor, and the existence of alternate routes. Sole access to private inholdings and designated recreational sites would not be affected. Diversion of small amounts of traffic from the eliminated access corridor segments to other nearby dirt or paved roads could occur. While this is not expected to result in traffic delays, alternate routes to the access corridor could receive greater amounts of traffic. In addition, because portions of the access elimination segments are presently mapped on AAA maps, Desert Access Guides, and Mojave National Preserve maps, travellers could become confused when encountering the eliminated segments. Access elimination would have impacts related to land use, recreation, and recreational access as discussed previously.

Cumulative Impacts. Cumulative impacts for traffic, utility service, and permanent diversion of traffic are discussed below.

Traffic Flows, Level of Service, and Traffic Safety - The Proposed Action would result in minimal delays along crossed roads during cable removal only. There are no permanent impacts of the Proposed Action on traffic flows, service, or safety. Unless there are transportation projects that occur at the same time as the Proposed Action and affect crossed roads in close proximity, there will be no cumulative traffic impacts.

Utility Service - The Proposed Action is not expected to have any affect on utility service and thus would not contribute to any cumulative impact on utilities.

Permanent Diversion of Traffic - The Proposed Action could result in diversion of small amounts of traffic as a result of access elimination. If regional planning efforts or land agency management plans result in significant closure of dirt roads in close proximity to the access corridor, amounts of traffic diverted and lengths of diversion could be greater than that posed by the Proposed Action alone. Because of the small amounts of traffic, this is unlikely to have a significant impact on other existing roads. However, cumulative diversion could have significant access impacts, affecting public and private land uses, recreation, and recreational access.

Conclusion. Temporary traffic delays because of cable removal are possible at Fort Irwin Road and Clay Mine Road, but would be less than significant. Impacts to other affected road crossings would be less than significant. Utility service is not expected to be affected. Access elimination would result in some permanent diversion of traffic. Because of the small amounts of traffic concerned, this diversion is not expected to have a significant transportation impact, but could have significant access impacts, which were discussed previously.

Impacts of Alternative B

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Traffic Flows, Levels of Service, and Traffic Safety. This alternative includes less cable removal than the Proposed Action. Cable would be not be removed from five road crossings, including Kelbaker Road and Fort Irwin Road, where cable would be removed in the Proposed Action. Thus, there would be slightly fewer temporary impacts on traffic.

Access corridor rehabilitation would have similar impacts as would the Proposed Action, although additional segments of the access corridor would be eliminated. Elimination of the access corridor from parts of the Piute Valley and between the Waterman Hills and Water Valley, in particular, would result in the permanent diversion of traffic to alternate routes, which are discussed below.

Utility Service. Impacts to utility service would be the same as in the Proposed Action.

Permanent Diversion of Traffic. Diversion of small amounts of traffic from the eliminated access corridor segments to alternate routes could result in increased traffic. This is not expected to result in significant transportation impacts because of the small amount of traffic involved, but it could have impacts related to land use, recreation, and recreational access (all discussed previously).

Access elimination between the Waterman Hills and Water Valley would force travellers to use long detours. Travellers from Rainbow Basin to the Black Mountain/Inscription Canyon area would be forced to use either a more westerly approach (via Hinkley Road, Opal Mountain Road, and/or several other dirt roads), or a more easterly approach (via Copper City Road and connecting dirt roads), both resulting in detours of anywhere from 7 to 12 miles, depending on intended destination.

Conclusion. Impacts for this alternative are slightly less than for the Proposed Action concerning temporary construction impacts and are less than significant. The elimination and rehabilitation of 12 more miles of the access corridor would result in permanent diversions of traffic between the Waterman Hills and Water Valley. Although mitigation for recreational access would provide updated information to affected users, these users would still have to travel via significant detours to reach the Black Mountain/Inscription Canyon area from Rainbow Basin, which is a significant recreational access impact.

Impacts of Alternative C

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Traffic Flows, Levels of Service, and Traffic Safety. This alternative includes less cable removal than does the Proposed Action. Cable would be not be removed from 15 road crossings, including Kelbaker Road and Fort Irwin Road, where cable would be removed in the Proposed Action. Thus, the temporary impacts to traffic would be slightly less. Access corridor rehabilitation would have no impacts on traffic, because all of the elimination/rehabilitation segments are in wilderness areas.

Utility Service. Impacts to utility service would be the same as in the Proposed Action.

Permanent Diversion of Traffic. No traffic would be permanently diverted because of access elimination, which would only occur in wilderness areas where public vehicle travel is prohibited.

Conclusion. Temporary construction impacts for this alternative are less than in the Proposed Action and less than significant. Access corridor rehabilitation would have no affect on transportation.

VISUAL AESTHETICS

Impacts of the No Action Alternative

There would be no construction-related impacts of the No Action Alternative. The P140 system would remain in place over the 220 miles of the project route. The right of way would continue to revegetate, progressively becoming less visible over time. The repeater huts and the marker posts would continue to be visible along the project route. The repeater hut sites and all of the access corridor would remain devoid of vegetation and highly visible in open desert areas.

Conclusion. Man-made improvements, including the repeater huts and the marker posts would remain highly visible features in open desert landscapes, some of which have high scenic values. In particular, four huts, the marker posts, and the access corridor would be long-term visual components in the portions of the project area that cross wilderness areas in the Mojave National Preserve. Vegetation would continue to recover from the original 1963 installation unimpeded.

Impacts of the Proposed Action

Construction Disturbance. Much of the landscape in the project area possesses high scenic value. There would be some temporary visual disturbance during removal and rehabilitation actions because of the presence of construction vehicles in otherwise undeveloped desert areas and due to the generation of noise and fugitive dust. This disturbance would also affect the wilderness areas crossed by the project route and wilderness areas adjacent to the project route.

Permanent Aesthetics. The coaxial cable right of way has revegetated over time (see Figure 19), and although still visible, it has begun to blend into the surrounding landscape. Cable removal would damage vegetation along the right of way, resulting in vegetation loss and a more visible contrast with the surrounding landscape. Following removal, the linear orientation of the right of way over 175 miles of cable removal would be more visible to users of the surrounding areas until the vegetation recovers and natural erosion processes obscure the ground disturbance. This adverse affect would be most acute in undeveloped areas where the dominant features are natural and undisturbed, and the cable route does not follow any other utility corridors or permanent roads. Recovery of vegetation to preremoval conditions could take up 20 to 50 years.

Removal of the cable could also dislodge existing rock above and around the cable itself. Where cable removal dislodges rock that has not been exposed to oxygen and sunlight, the newly dislodged rock might lack desert "varnish" (iron and magnesium oxides that form a crust or stain on exposed rock) and promote a contrast in color to natural rock. This contrast would be limited to individual rocks, as the cable removal is not expected to result in a consistent row of exposed rocks. Further, rock color in the desert varies

tremendously, and the addition of scattered rocks lacking desert varnish is not expected to result in a noticeable contrast for desert visitors.

Beneficial impacts of the Proposed Action would include the removal of the aboveground metal huts and MPs that are anomalous structures in areas with dominant visual features of open space and range. The top portion of the manholes would also be removed to 3 feet below ground surface and backfilled, thus eliminating their visibility, which is a minor beneficial impact. Repeater hut rehabilitation would promote revegetation of these currently barren sites, which would reduce their visual contrast with surrounding vegetated areas. Access corridor rehabilitation would reduce the linear visibility of the eliminated access corridor segments and the dual track segments over time and is a beneficial long-term impact of the Proposed Action.

Cumulative Impacts. Cumulative impacts for construction disturbance and permanent aesthetics are discussed below.

Construction Disturbance - The Proposed Action would result in temporary disturbance of desert areas during construction. On federal lands, there are no known projects that would occur at the same time as the Proposed Action and no cumulative temporary impacts would be expected. It is possible that private development might occur at the same time as the Proposed Action, but the cumulative visual impacts would be limited to the private area of development only.

Permanent Aesthetics - The Proposed Action would damage vegetation on the right of way that could take between 20 and 50 years to recover to present conditions. In the long-term, the Proposed Action should result in an improvement in desert aesthetics over the present due to removal of man-made structures and rehabilitation actions. There are no known federal plans that would affect the vegetation on the right of way, but it is possible that private development could affect vegetation along the right of way and result in a cumulative visual impact. Because of the topography of the Mojave Desert, it is possible that other developments off-site could also result in long-term adverse visual impacts to desert aesthetics, that on a landscape basis, could be cumulative.

Conclusion. The Proposed Action would result in some significant, temporary, disturbance due to construction and significant long-term disturbance of vegetation with recovery expected to take 20 to 50 years. Mitigation (see Table 30 and Appendix G) is required. Residual temporary impacts are expected to be less than significant. Due to the recovery duration, residual long-term vegetation impacts after mitigation would be significant. The Proposed Action would improve desert aesthetics where repeater huts and MPs are removed, and hut sites and the access corridor are rehabilitated.

Impacts of Alternative B

The following actions are the same as in the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Construction Disturbance. This alternative would include 61 fewer miles of cable removal and 12 more miles of access corridor rehabilitation than the Proposed Action. Overall, construction disturbance would be less than in the Proposed Action.

Permanent Aesthetics. Cable removal would affect vegetation along 61 fewer miles of the project route in the long-term. In the long-term, the rehabilitation of 12 more miles of the access corridor would be an increased beneficial visual impact over the Proposed Action.

Conclusion. This alternative would result in fewer temporary visual impacts because of construction overall, and would result in slightly more rehabilitation and enhanced visual aesthetics along the access corridor, compared to the Proposed Action. Mitigation would be the same as the Proposed Action, and residual impacts to vegetation on the right of way would still be significant after mitigation.

Impacts of Alternative C

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as in the Proposed Action.

Construction Disturbance. This alternative would include 102 fewer miles of cable removal and 34 fewer miles of access corridor rehabilitation and would create less construction disturbance than the Proposed Action.

Permanent Aesthetics. Cable removal would affect vegetation along 102 fewer miles of the project route in the long-term. In the long-term, access corridor rehabilitation would affect 34 fewer miles than in the Proposed Action.
Conclusion. Overall, this alternative would have fewer temporary visual impacts because of construction and less loss of vegetation due to cable removal, but would result in less rehabilitation and fewer enhanced visual aesthetics along the access corridor, compared to the Proposed Action. Mitigation would be the same as the Proposed Action and residual impacts to vegetation on the right of way would be significant after mitigation.

HAZARDOUS MATERIALS AND SAFETY

Impacts of the No Action Alternative

There would be no construction-related impacts of the No Action Alternative. Leaving the cable in place is not expected to result in soil contamination or safety impacts because the cable is buried, encased in polyethylene and steel, and soil conditions are not favorable to mobilization of lead to the environment. AT&T would continue maintenance activities, including cable locates, that would minimize potential safety problems for other projects.

Conclusion. There would be no hazardous material or safety impacts associated with the No Action Alternative.

Impacts of the Proposed Action

Worker/Public Exposure. Hazardous material use during construction would be limited to oils, gasolines, and lubricants; these materials would be stored, used, and disposed in accordance with a spill prevention plan. No significant public or worker exposure would be expected to occur from hazardous material spills or waste disposal.

No release of hazardous substances has been reported due to the existing coaxial cable or associated equipment (i.e., located in repeater huts and manholes). If any hazardous substances are encountered as a result of prior illegal dumping activity along the right of way, all work within 0.5 mile of the observed waste material would be stopped, and the appropriate authorities would be notified. Therefore, it is not expected that hazardous waste would affect worker or public exposure along the right of way.

Soil Contamination. The use of spill prevention kits and implementation of a spill prevention plan should minimize the potential for spills to contaminate soil. If hazardous substances were encountered during removal or rehabilitation actions, consultation with appropriate agencies would be expected to result in measures to avoid spreading any encountered soil contamination.

As noted in the Affected Environment section, investigation and sampling of soil beneath a lead-sheathed cable similar to the P140 cable did not identify lead soil concentrations above naturally occurring levels or Cal-EPA Action levels. Thus, the presence of the cable is not likely to have resulted in soil contamination along the project route and removal actions would not be expected to encounter cable-related lead contamination.

Worker/Public Safety. AT&T would develop a health and safety plan and utilize construction practices that follow the AGC recommendations regarding fire hazards and accident prevention. Traffic safety measures would in accordance with U.S. DOT standards for traffic control. These measures should adequately protect worker and the public safety.

Cumulative Impacts. Cumulative impacts for worker/public exposure, soil contamination and worker/public safety are discussed below.

Worker/Public Exposure - The Proposed Action is not expected to result in any significant worker or public exposure and thus would not contribute to any cumulative impact.

Soil Contamination - The Proposed Action is not expected to result in any soil contamination or in the mobilization of any existing contamination and thus would not contribute to any cumulative impact.

Worker/Public Safety - The Proposed Action is not expected to result in any impacts to worker/public safety and thus would not contribute to a cumulative impact.

Conclusion. There would be no significant hazardous material or safety impacts.

Impacts of Alternative B

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Worker/Public Exposure. Same as the Proposed Action.

Soil Contamination. This alternative would include leaving approximately 61 miles of cable in the ground where it would be removed in the Proposed Action. Because the presence of the cable is not expected to have resulted in contamination of surrounding soils, leaving the cable in the ground in this alternative is not expected to result in future soil contamination. Cable that remains buried is very

unlikely to cause soil contamination because soil conditions are not favorable to mobilization of lead from the cable into the environment. It is possible that cable could become exposed over time in wash areas where heavy erosion occurs. The lead would still be encased in polyethylene and steel, and soil conditions would still be unfavorable to mobilization.

Worker/Public Safety. Same as the Proposed Action.

Conclusion. This alternative would not be expected to have significant impacts on hazardous material and safety.

Impacts of Alternative C

The following actions are the same as the Proposed Action: structure removal, rehabilitation of the repeater hut sites, and rehabilitation of 4.0 miles of dual track. Impacts related to these actions would be the same as the Proposed Action.

Worker/Public Exposure. Same as the Proposed Action.

Soil Contamination. This alternative would include leaving approximately 102 miles of cable in the ground where it would be removed in the Proposed Action. As noted above for Alternative B, leaving the cable in the ground is not expected to result in future soil contamination. Other impacts would be the same as the Proposed Action.

Worker/Public Safety. Same as the Proposed Action.

Conclusion. This alternative would not be expected to have significant impacts on hazardous material and safety.

SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Impacts of the No Action Alternative

With the No Action Alternative, population and demographics would remain constant. No new local employment opportunities would occur. Vacancy rates would remain the same. There would be no new direct economic benefits to local business. No additional taxes would be collected by the local government and state agencies. The BLM would continue to receive an average of $893 a year for right of way grants (BLM receives the fees for the grants on both BLM and NPS lands). No additional expenditures of revenues would be required by local governments to provide services. There would be no impact to local and regional tourism. No disproportionately high and adverse human health or environmental affects on low and minority populations would occur.

Conclusion. There would be no additional cost or benefits over existing conditions.

Impacts of the Proposed Action

Population, Employment and Housing. The Proposed Action would have a minor temporary impact on the population and demographics in the deployment area (Barstow, Baker, Laughlin/Bullhead, and Socorro). Approximately 25-30 workers are required per construction spread for a duration of approximately 4 months, except in Socorro, where the duration would be limited to 2 to 4 weeks. Any temporary impacts would be minimized because of the relatively small construction work force in any given project area, and because of the use of local labor. Local labor, estimated to be 25 percent of the work force, is expected to commute to the construction area rather than temporarily relocate. In addition, non-local workers would remain in the construction area only for the duration of the construction. No short-term or long-term impact is expected. Because only 6 to 8 workers per spread would be local and unemployment rates indicate sufficient available labor in the project area, no labor shortage would occur. No short-term or long-term impacts would occur.

Because construction workers would need temporary housing, there would be a temporary impact on available rental housing (apartments and houses) and motel/hotel occupancy. Although lodging preferences for non-local workers is difficult to obtain, it is estimated that 60 percent of the workers would stay in motels/hotels with the remaining 40 percent of the workers housed in rental units, RV parks, or trailers. Based on the anticipated number of non-local workers required per construction spreads, a maximum of 25 housing units would be required in any affected area, except near Baker. Near Baker, due to the expected distribution of work, a maximum of 12 housing units would be required.

With the exception of Baker, the in-migration of construction workers should not cause vacancy rates for temporary housing to fall to less than 5 percent in any affected area. Most housing vacancy rates in the areas average between 9 and 10 percent. In addition, the total number of hotels/motels, and their occupancy rates suggests that there would not be a significant competing demand between construction workers and tourists for hotel/motel lodging.

Conversely, the vacancy rate in the Baker rental market is literally non-existent. Any occupation of rental housing, if available, would have a significant temporary impact on available housing. The use of available rental housing by non-local workers would continue the displacement of local workers, who because of the existing housing shortage are required to commute from outside the Baker area. Motel lodging in Baker is also limited to about 75 to 80 rooms. With an estimated need of 12 housing units for the construction spread near Baker, approximately 15 percent of the motel rooms would be occupied by the temporary workers which would adversely affect the availability of rooms for non-workers.

For all project deployment areas, no short-term or long-term impact to housing would occur as permanent worker housing would not be required in the post construction period. Because the workers are temporary and will not be purchasing housing, no impact to the price of permanent housing should occur.

Because of the limited duration of the Proposed Action, per capita and median family incomes in the project area should not be adversely affected. Depending on the number of local workers employed and monies spent, there may be a slight, temporary increase in incomes. With most workers from outside the region, the proposed action will not consume the educated resources of the area. With current maintenance operations employing such a small workforce, and future operation involving no permanent workforce, the project would not have a significant adverse affect on occupation growth sectors. The Proposed Action should not have a significant adverse affect on the availability of community facilities and services due to the small work force and the relatively short duration of the project. Because construction workers are not expected to bring their families to the construction area, there should be no

impact on local schools. Service such as medical facilities and police and fire protection, are generally in adequate supply and should be able to easily absorb any demand by the relative small temporary construction work force.

Taxes and Revenues. The majority of the socioeconomic benefits would accrue to the economies of the project deployment and work areas. These economic benefits are temporary impacts expected to last for the duration of the Proposed Action. Local expenditures would increase as construction workers purchase goods and services. Local expenditures by contractors is expected to be minimal, as the type of work does not require construction material. If it is assumed that the average per diem rate is $100 per day (government rate is $100 per day in Barstow) and there are 25 non-local workers per construction spread, approximately $2,500 for living expenses, is spent per day in each project area. This does not include disposable income spent by the construction workers for other non-essential items.

Besides expenditures by non-local labor, the majority of earnings by local labors would be spent in the economies of the project areas. If 6 to 8 laborers per spread are employed, and assuming the average laborer earns $12 per hour, at 60 hours per week (time and half for overtime), additional gross incomes to be spent locally is approximately $840 per week per local construction worker.

No revenues are expected to be lost to the displacement or disruption of a business because the project area is significantly removed from commercial areas. No temporary, short-term, or long-term displacement or disruption to a business is expected.

Revenues lost to government agencies with the removal of right of way grants and easements would be minimal. Of the original fees allocated to government agencies, BLM still receives a revenue ($893 per year) from the original right of way grant (for lands under both BLM and NPS jurisdiction). No other taxes are being paid for the operation/maintenance of the right of way grant.

The Proposed Action would not result in a short-term or long-term reduction in tax revenues of any affected municipality.

Tourism. The Proposed Action would not result in a short-term or long-term loss of more than one-percent of annual tourist revenue within the project area or region. The region's primary tourist destinations, Las Vegas and Laughlin/Bullhead City have such substantial revenue incomes that any revenue impact, otherwise not off-set by the workers, would be negligible to the overall economies. The local (or I-15 corridor) passer-by tourism industry is also significantly large enough as not to be affected by the Proposed Action.

Although the access corridor would be eliminated in federally-owned critical habitat and wilderness it is not expected that the elimination would reduce the overall recreational use of the region. In addition, it is not expected that the negative temporary aesthetic impact would be such as to reduce the number of visitors to recreational destinations.

Environmental Justice. Consistent with the primary purpose of Executive Order 12898 of February 11, 1994, all criteria, methods, and practices utilized in the evaluation of disproportionately high and adverse human health or environmental affect of actions on minority and low-income were based on scientific and technical methodologies, and they do not discriminate either directly or indirectly on the basis of race, color, or national origin. All methods of analyses and evaluation utilized are widely accepted and are unbiased scientific and technical practice.

The availability of census data used for the identification of minority and low-income populations included populations somewhat removed from the actual area of impact. Because of this problem, an assessment of the residential population in proximity to the project was required to effectively evaluate the potential impacts to any minority or low-income population.

Although a minority population was identified near Socorro, New Mexico, this population should not experience a disproportionately high and adverse human health or environmental affects of the Proposed Action as: 1) most of the population in the area reside in the city of Socorro and there are no residential areas along the project area; 2) only public lands are crossed; and 3) the human health and environmental exposure risk associated with the removal project are limited to areas immediately surrounding the project and have a low exposure potential. The severity of exposure hazards from the project are limited to dust, noise, and hazardous material which include oils, gasoline, and lubricants.

In project impact areas near, Barstow, Yermo, and California City where limited residential development occurs, project populations are not considered minority or low-income. In fact, population in the Cal/Mojave area is predominately non-minority and income exceeds the county median. Where any population could be affected by the Proposed Action, construction practices and health and safety plan implementation would minimize the human health and environmental exposure risk.

Because of the socioeconomic diversity of the Proposed Action area, no group of people, including any racial, ethnic, or socioeconomic group would bear a disproportionate share of any negative environmental consequence as a result of the Proposed Action.

To ensure public participation in environmental justice consideration, opportunity for community input into the preparation of this DEIS was provided. The federal agencies held scoping meetings in Laughlin, Nevada, and Barstow, California and additional information meetings at Hole-In-The Wall in the Mojave National Preserve and in Socorro, New Mexico. The NPS has provided and would continue to provide ample opportunity for all individuals and groups to participate in the NEPA process. This DEIS is being distributed to all interested agencies and those individuals who request a copy.

Cumulative Impacts. Cumulative impacts for population, employment and housing, taxes and revenues, tourism, and environmental justice are discussed below.

Population, Employment, Housing - The Proposed Action would have minimal impacts on population, employment, and housing, with the exception of impacts on the vacancy rate of temporary accommodations in Baker. If other projects or developments were to result in increased demand for temporary accommodations in Baker at the same time as the Proposed Action, there could be a significant cumulative impact. Otherwise, there would be no cumulative impacts to population, employment, or housing.

Taxes and Revenues - The Proposed Action makes no significant contributions to local taxes or revenues, and thus would not contribute to any cumulative impact.

Tourism - The Proposed Action is not expected to have any substantial impacts on tourism and would not contribute to any cumulative impact.

Environmental Justice - The Proposed Action would not result in any disproportionate impacts on high-minority or low-income populations, and thus would not contribute to any cumulative environmental justice impact.

Conclusion. No short-term or long-term socioeconomic impacts would occur as a result of the Proposed Action. The only temporary significant impact concerns temporary accommodations in Baker. No temporary significant impacts would occur provided that construction workers are not lodged in Baker. No minority or low-income population would experience a disproportionate amount of any adverse impacts.

The socioeconomic impacts of the Proposed Action would primarily benefit the impact regions. It is estimated that for each spread (4-month period) local labor income would be about $800,000 and per diem expenditures by non-local labor would be approximately $225,000. Because of these expenditure, there would be an indirect economic benefit to local and state government through an increase in tax revenues. These economic benefits are expected to off-set any adverse, measurable economic impacts associated with the Proposed Action.

Impacts of Alternative B

Population, Employment and Housing. The impacts to population, employment and housing are similar to but less than those under the Proposed Action, because the duration of the project would be reduced due to the overall lower level of construction.

Taxes and Revenues. The impacts associated with this alternative would be similar to but less than those describe for the Proposed Action.

Tourism. The impacts would be similar to those described for the Proposed Action.

Environmental Justice. The impacts would be similar to those described for the Proposed Action.

Conclusion. The impacts of this alternative would be similar to but less than those of the Proposed Action. Mitigation concerning Baker would be the same as the Proposed Action, and no residual significant impacts are expected.

Impacts of Alternative C

Population, Employment and Housing. The impacts to population, employment and housing are similar to but less than those under the Proposed Action, because the duration of the project would be reduced due to far fewer miles of cable removal and access corridor rehabilitation.

Taxes and Revenues. The impacts associated with this alternative would be similar to but less than those describe for the Proposed Action.

Tourism. The impacts would be similar to those described for the Proposed Action.

Environmental Justice. The impacts would be similar to those described for the Proposed Action.

Conclusion. The impacts of this alternative would be similar to, but less than, the Proposed Action. Mitigation concerning Baker would be the same as the Proposed Action, and no residual significant impacts are expected.

REQUIRED IMPACT SECTIONS

Unavoidable Adverse Impacts

Removal activities would have an unavoidable adverse impact on desert vegetation and desert tortoise habitat along the route with 20 to 50 years estimated for recovery to present conditions. The loss of vegetation during removal activities would make the linear orientation of the right of way more visible and create an unavoidable contrast with the surrounding landscape. Rehabilitation of the access corridor would result in the unavoidable elimination of recreational access to open desert areas. Removal and rehabilitation activities would result in unavoidable air quality impacts due to fugitive dust emissions associated with construction activities.

These adverse impacts would be offset with project implementation due to the permanent enhancements to the environment as summarized below.

Irreversible and Irretrievable Commitment of Resources

The No Action Alternative. This alternative will not require any long-term commitment of resources above existing conditions.

Alternative A - Proposed Action. The Proposed Action will result in the irretrievable commitment of fossil fuels (gasoline and diesel fuel) for equipment operation during removal and rehabilitation actions.

Alternative B. Commitment of resources for this alternative would be the same as the Proposed Action except that less fossil fuels would be used.

Alternative C. Commitment of resources for this alternative would be the same as the Proposed Action except that less fossil fuels would be used.

Relationship Between Short-term Uses of Environment and Maintenance and Enhancement of Long-term Productivity

The No Action Alternative. This alternative will not involve any short-term uses of the environment above existing conditions.

Alternative A - Proposed Action. This alternative would result in short- and long-term losses of desert vegetation and desert tortoise habitat due to cable removal activities. Elimination of the access corridor will also result in the permanent loss of 30 miles of recreational access on federal land.

Removal of marker posts along the 220-mile route would result in the permanent enhancement of desert tortoise habitat by eliminating predator perches. Elimination of vehicle access would result in a permanent gain to desert vegetation, desert tortoise habitat, and wilderness areas by eliminating vehicle-related impacts. There will be a permanent enhancement of habitat values with the rehabilitation of the repeater hut sites and the access corridor. The removal of the aboveground structures will also be a permanent visual enhancement in the project area.

Alternative B. This alternative would result in less short- and long-term losses of desert vegetation and desert tortoise habitat due to 61 fewer miles of cable removal activities as compared to the Proposed Action.

Removal of marker posts along the 220-mile route would result in the permanent enhancement of desert tortoise habitat by eliminating predator perches. Elimination of 12 more miles of the access corridor would result in a greater permanent gain to desert tortoise habitat by eliminating vehicle-related impacts. The permanent enhancement of habitat values at the repeater hut sites would be the same as the Proposed Action. The permanent visual enhancement associated with the removal of the aboveground structures would be the same as the Proposed Action.

Alternative C. This alternative would result in less short- and long-term losses of desert vegetation and desert tortoise habitat due to 102 fewer miles of cable removal activities as compared to the Proposed Action.

Removal of marker posts along the 220-mile route would result in the permanent enhancement of desert tortoise habitat by eliminating predator perches. Eliminating 34 fewer miles of the access corridor as compared to the Proposed Action would result in a smaller permanent gain to desert tortoise habitat from eliminating vehicle-related impacts. The permanent enhancement of habitat values at the repeater hut sites would be the same as the Proposed Action. The permanent visual enhancement associated with the removal of the aboveground structures would be the same as the Proposed Action.