

Chapter 5A. Environmental Impacts and Mitigation Measures for Point Arena to Robbins

INTRODUCTION

Like Chapter 4A, AEnvironmental Setting for Point Arena to Robbins@, this discussion of impacts and mitigation measures is organized by resource topic corresponding to the Environmental Checklist Form of the amended California Environmental Quality Act (CEQA) Guidelines. A completed checklist for the project is provided in **Appendix A**. Table 5-1A lists sensitive and protected resources by OP-AMP/regenerator station site, along with any applicable mitigation measures.

Table 5-1A. Sensitive or Protected Resources Identified at the Regenerator/OP-AMP Station Sites during Field Surveys and Site Visits

Regenerator/OP-AMP Station Site	Associated Resources	Applicable Mitigation
Point Arena to Robbins		
Ukiah	None identified	N/A
Clearlake Oaks	None identified	N/A
Arbuckle	None identified	N/A

For each resource discussion, the relevant portion of the state environmental checklist form is provided and the significance criteria used in the impact evaluation (i.e., checklist criteria and local agency or professional standards) are identified. Each entry on the environmental checklist form has a corresponding impact discussion.

Pursuant to the State CEQA Guidelines, a projects physical effects on the environment can be characterized as having either:

- # no impact - the project would not result in an impact;
- # a less-than-significant impact - the project would result in an impact, but at a level that is not considered significant;
- # a potentially significant impact unless mitigation is incorporated - absent mitigation measures or project revisions, the impact of the project would be considered significant; or
- # a potentially significant impact - there is substantial evidence that the impact of the project may be significant and cannot be avoided or reduced to a less-than-significant level.

Mechanisms that could cause impacts are discussed for each resource area. Besides installation of the fiber optic cable system, the project would require minor activities related to future operation and maintenance, as

described in Chapter 2, **Project Description**. Project effects fall into the following three categories: temporary, short-term, and long-term. These categories are defined as follows:

- # A **Temporary** effect would occur only during construction and/or subsequent restoration.
- # A **Short-term** effect would last from the time construction ceases to within 3 years following construction and/or subsequent restoration.
- # A **Long-term** effect would last longer than 3 years following construction and/or subsequent restoration and is typically associated with operation and maintenance of the fiber optic cable system. In some cases, a long-term effect could be considered a **Permanent** effect.

Implementation of the mitigation measures specified in this subsequent initial study/mitigated negative declaration (IS/MND) would either avoid the impacts completely or reduce all temporary and short-term construction impacts and any long-term operational impacts to less-than-significant levels. Williams has adopted all of the mitigation measures recommended in this subsequent IS/MND, in addition to those mitigation measures incorporated into the project design and construction approaches in Chapter 2, **Project Description**, as part of the construction mitigation strategy for the proposed project.

Pursuant to Public Resources Code Section 21081.6, the California Public Utilities Commission (CPUC) will adopt a mitigation monitoring plan at the time it approves the CPCN and adopts this subsequent mitigated negative declaration. The purpose of the plan is to ensure that the mitigation measures being adopted as part of this project approval will be complied with when the project is implemented. The plan identifies each of the mitigation measures and describes the party responsible for monitoring, the time frame for implementation, and the program for monitoring compliance. A mitigation monitoring plan was adopted by the CPUC with the approval of the original IS/MND. **Appendix I** contains the mitigation monitoring plan required by the subsequent IS/MND, with additional mitigation measures as necessary.

The following terminology is also used to describe impacts:

- # A **Accumulative** impact is an impact of the project that is cumulatively considerable when compounded with impacts from other past, present, or reasonably foreseeable future projects. A project's incremental effects are not **Accumulatively considerable** solely because other projects would have a significant cumulative impact.
- # **Construction** applies to activities associated with installation of the conduit and cable, construction of the optical amplification (OP-AMP)/regenerator stations, and/or subsequent restoration.
- # **Preproject conditions** refer to conditions before installation of the fiber optic cable system. It does not refer to conditions before construction of the existing facilities in a disturbed right-of-way (i.e., railroad and road or Pacific Gas and Electric [PG&E] transmission line).
- # **No further mitigation is required** is stated if the impact has been premitigated by Williams=incorporating specific measures into the project design and construction approaches.
- # **None required** is stated if the impact is considered minimal or less than significant and does not require mitigation.

This document examines potential impacts and, where necessary, identifies mitigation measures on a programmatic and/or project-specific basis.

Williams has committed to avoid all significant impacts as its preference. Where all avoidance is not possible, Williams has committed to reducing all potentially significant impacts to less-than-significant levels by:

- # undertaking all impact avoidance measures described in Chapter 2, **Project Description**, and elsewhere in this IS/MND;
- # implementing various plans (i.e., storm water pollution prevention, fire prevention and management, and reclamation plans), where necessary;
- # committing to either rerouting the conduit and cable around sensitive resources, boring the conduit under sensitive resources, or attaching it to existing bridges, where available;
- # siting the cable system (conduit and cable and OP-AMP/regenerator sites) in the field in areas that do not support sensitive resources with support from qualified biologists, archeologists, and other resource personnel;
- # staking and flagging resources in the field and locating sensitive resources on construction drawings before construction;
- # conducting an environmental training and awareness program;
- # establishing a construction management structure in the field to ensure avoidance; and
- # adopting and implementing all the mitigation measures identified in mitigation monitoring plan (**Appendix I**).

I. AESTHETICS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
I. AESTHETICS - Would the project:				
1. Have a substantial adverse effect on a scenic vista?	_____	_____	_____	/
2. Substantially damage scenic resources along a scenic highway, including, but not limited to, trees, rock outcroppings, and historic buildings?	_____	/	_____	_____
3. Substantially degrade the existing visual character or quality of the site and its surroundings?	_____	/	_____	_____
4. Create a new source of substantial light or glare that would adversely	_____	/	_____	_____

Potentially
Significant Impact

Less than Significant
with Mitigation
Incorporated

Less than
Significant Impact

No
Impact

affect daytime or nighttime views in
the area?

Criteria for Determining Significance

The analysis of significance of impacts of the proposed project is based on criteria *a-d* described in the environmental checklist. In general, however, projects that result in substantial changes to land forms, remove or add significant structures, result in visual clutter or disorder, or substantially disrupt the visual context of their surroundings would be considered to have a significant visual impact.

Impact Mechanisms

Structures and changes in land forms have some impact on the visual environment. The extent of the impact is based on several factors, such as the existing visual character of the areas, the expectations of individuals viewing the areas, and the location of the impact (foreground, middle ground, and background). Potential visual impacts associated with the proposed project could result from ground disturbance and vegetation removal associated with construction, installation of cable markers, and construction of the OP-AMP/regenerator stations.

Impact Assessment

Aesthetic values differ between areas. Tolerance for visual clutter, expectations for landscaping, and preferred types of architecture are common discriminators of aesthetic values. Context is also important. For example, large office structures that would have little visual impact in a large city might have a significant visual impact in a suburban community.

To assess effects on visual resources, two factors were considered:

- # the sensitivity of the project study area to disturbances, and
- # the type and duration of the disturbance associated with the proposed project.

In general, the project would have a minimal aesthetic impact. Fiber optic cable would be buried by plowing or trenching along railroad and road rights-of-way. Minimal surface disturbance would be needed for a short period during installation. Three OP-AMP/regenerator stations would be constructed as part of the project. These structures can be designed to be unobtrusive, with exteriors that match their surroundings.

a. Have a substantial adverse effect on a scenic vista?

As detailed in Chapter 3, *Project Route Descriptions*, the project route would traverse a long corridor through several counties and cities in northern California. Although aesthetics is essentially a qualitative issue, scenic vistas are usually considered those that offer high-quality views of the natural environment. On this basis, the most scenic portion of the project route crosses the Coast Range from Point Arena to Calpella.

Conduit and cable would be buried or attached to existing bridges. Approximately 99% of all work would occur within existing railroad or road rights-of-way. As discussed in Chapter 2, *Project Description*, installation involves only limited machinery and construction disturbance and would occur for only a short time. Trenches,

bore pits, and areas where potholes are dug to install manholes or handholes or provide access to pipelines would be restored as close to preproject conditions as possible or practicable. Installation of conduit and cable would have no long-term aesthetic impacts.

- b. *Substantially damage scenic resources along a scenic highway, including, but not limited to, trees, rock outcroppings, and historic buildings?*

As described above, 99% of the project route would be within disturbed rights-of-way and belowground where it would have minimal visual impact. Because the project route would be installed in already disturbed rights-of-way, the cable markers would blend with existing utility marker posts and markers demarcating the roads. The discussion of **Aesthetics** in Chapter 4A, **Environmental Setting for Point Arena to Robbins**, identifies the locales where the project route would parallel or pass near designated state scenic highways.

Impact: Possible Temporary Minor Changes in Landscape from Trenching Operations

Conduit and cable installation would have a temporary visual impact during construction. The conduit and cable, however, would be located in already visually disturbed rights-of-way. No historic resources along scenic highways would be adversely affected (refer to the **Cultural Resources** section of this chapter for further detail). In general, installation by trenching may have an aesthetic impact beyond the construction period in rural areas if trenching leaves a landscape scar for a short duration (i.e., for less than 3 years). This type of impact is related only to trenching, not plowing. The effects of trenching could be particularly visible when trenches run up steep slopes. However, Williams plans to avoid trenching steep slopes, where feasible. Also, as detailed in Chapter 2, **Project Description**, the project would be built with minimum disturbance to the existing landscape by using plowing and boring construction techniques, where possible. Measures to minimize possible temporary changes in landscape from trenching operations are included in the reclamation plan prepared for the project route, as required by the CPUC and other jurisdictional agencies (**Appendix H**). Implementation of the construction techniques associated with the project would result in a less-than-significant impact on scenic resources.

Mitigation Measure. No further mitigation is required.

- c. *Substantially degrade the existing visual character or quality of the site and its surroundings?*

Impact: Possible Temporary Minor Changes in the Existing Visual Character or Quality of a Site

As discussed above, in general, the project would not substantially degrade the existing visual character or quality of areas surrounding the project route because the project route would be located within previously disturbed rights-of-way, most of the installation and subsequent restoration would be buried and therefore not visible, except for the cable markers and OP-AMP/regenerator stations (described separately), and the installation methods described in Chapter 2, **Project Description**, would ensure avoidance of visual impacts beyond the construction period. Nonetheless, locating a OP-AMP/regenerator station in scenic rural areas may affect the existing visual character or quality of an area. For example, the Clearlake Oaks OP-AMP/regenerator station is within a scenic corridor, and the Arbuckle OP-AMP/regenerator station is in an open agricultural area located adjacent to an existing farmhouse and barns.

The project's visual impacts would be minimal. Underground installation would have minimal impact because the installation would be within an already disturbed right-of-way, installation methods described in Chapter 2, **Project Description**, would ensure that surface disruptions are returned as close as possible or practicable to preproject grade, and disturbed areas would be reseeded as necessary. Williams would place the OP-AMP/regenerator stations in areas that do not support sensitive resources and would adhere to any local permit conditions regarding design.

The conduit and cable would often be installed by plowing or trenching within road rights-of-way, which will have minimal visual impacts in urban areas. Plowed installation would insert the conduit belowground with minimal surface disturbance. Trenching generally would create a 1-foot-wide by 4-foot-deep trench into which conduit and cable are placed. Although installation would be limited to road rights-of-way, this alone would not ensure that there would be no visual impact in rural areas because installation may use vegetated portions of the right-of-way. However, the disturbance would be temporary and the placement of cable markers would be consistent with existing road and other utility markers that are typically already existing within road rights-of-way. As detailed in Chapter 2, *Project Description*, the project has been designed so that disturbance to the existing landscape would be minimized because plowing is the preferred method of installation. In areas where trenching is employed, impacts would be minimized by replacing existing topsoil, using stringent erosion control methods, and reseeding disturbed areas, where necessary, as outlined in the sample storm water pollution prevention plan (SWPPP) and reclamation plan (**Appendix E** and **Appendix H**). For these reasons, this impact is considered less than significant.

Mitigation Measure. No further mitigation is required.

Impact: Possible Minimal Visual Effect Resulting from Construction of OP-AMP/Regenerator Stations

Visual impacts may result in rural areas where a facility is constructed where other structures currently exist. This impact is considered less than significant because these facilities would not be located on sites supporting sensitive resources and Williams has committed to minimize this impact by adopting the following mitigation measure as part of the construction mitigation strategy for the project.

Mitigation Measure A-1: Design OP-AMP/Regenerator Stations to Be Unobtrusive. When constructing OP-AMP/regenerator stations in rural areas, Williams would implement various measures to reduce the visual impact of the facility, such as siting the facility where it would be screened by existing vegetation or topography, and will design the exterior to blend with the surroundings. The buildings would be colored in the predominant shade of their surroundings (rural areas are those sites located outside the corporate limits of a city or that are zoned for agricultural use). However, because of the distance between stations and the innocuous design of the structures, this impact is considered less than significant. Compliance with this measure would be monitored by the environmental resource coordinator on the project route and reported to the CPUC. Williams would comply with any local permit design requirements and conditions and report compliance with those measures to the appropriate local agency. Implementation of this mitigation measure would reduce this impact to a less-than-significant level.

d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

The single security light and exterior door lights at the three OP-AMP/regenerator stations would introduce a new low-level source of light. However, because this lighting would be similar to a standard porch light and would not produce substantial light or glare, it would have no impact.

Cumulative Impacts

On completion of the project, only the OP-AMP/regenerator stations and cable markers would be visible. The stations would be sited only in areas that do not support sensitive resources and would be designed to be unobtrusive. Cable markers indicating the existence of underground fiber optic cable would be installed along the project route; however, they would be within existing rights-of-way containing either railroads, roads, or other

facilities and would be consistent with the existing markers already located within these disturbed rights-of-way. The project would not make a cumulative considerable contribution to any impact on aesthetics.

II. AGRICULTURAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<p>II. AGRICULTURAL RESOURCES - In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation. Would the project:</p>				
<p>1. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>	_____	_____	____/____	_____
<p>2. Conflict with existing zoning for agricultural use or with a Williamson Act contract?</p>	_____	_____	_____	____/____
<p>3. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use?</p>	_____	_____	_____	____/____

Criteria for Determining Significance

The analysis of significance of impacts on agricultural resources is based on criteria *a-c* in the environmental checklist.

Impact Mechanisms

Projects that have a significant effect on agricultural resources are those that result in a long-term or permanent loss of agricultural land. Conversion of agricultural land may result in a significant impact. Conversion may be direct, through construction over the land or removal of land from Williamson Act contract in anticipation of development, or indirect, through the incremental loss of agricultural land or restriction of agricultural use.

Impact Assessment

In general, the project would have a minimal impact on agricultural resources. Conduit and cable would either be installed within railroad and road rights-of-way. Minimal surface disturbance would occur for a short period during installation along disturbed rights-of-way. The project would not result in the permanent conversion of farmland, and therefore, would not affect agricultural resources along the project route.

- a. *Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

Impact: Conversion of Prime Farmland to a Non-Agricultural Use

The project would not result in the permanent conversion of significant amounts of prime or unique farmland or farmland of statewide importance to nonagricultural use. The conduit and cable would be installed in existing, disturbed rights-of-way. Construction may temporarily disrupt agricultural activities only in the immediate area of the disturbed rights-of-way, but would have no permanent impact on operations. Once installed, the fiber optic cable would have no long-term impact on agricultural operations beyond that already inherent in the existing rights-of-way. In addition, because the conduit and cable would be installed within existing disturbed rights-of-way, disruption of agricultural activities is unlikely because these disturbed rights-of-way are not currently in agricultural production.

All three OP-AMP/regenerator stations would be sited outside existing developed areas and each would typically require about 1 acre (150 feet by 275 feet) in land area (within the fencing). The OP-AMP/regenerator stations would not require conversion of significant amounts of land from agricultural use and would be considered an Allowable use within agricultural preserve areas (described further below).

The total area of prime farmland to be converted to OP-AMP/regenerator station use for the project route is approximately 1 acre (Arbuckle OP-AMP/regenerator). The total farmland of local importance (which can include prime farmland that lacks irrigation water) being converted along the route is approximately 1 acre at one site. Approximately 1 acre total of pasture would be lost at all three sites. These losses of farmland are less than significant.

Mitigation Measure. None required.

- b. *Conflict with existing zoning for agricultural use or with a Williamson Act contract?*

Communications facilities such as these stations are considered a Compatible (i.e., allowable) use in agricultural preserves under Government Code Section 51238 and are therefore allowed on agricultural land that is subject to California Land Conservation Act (Williamson Act) contract (Getz pers. comm.). Construction of OP-AMP/regenerator stations would be consistent with the above government code and would not have an impact on Williamson Act land by requiring or resulting in its conversion to other nonagricultural uses.

- c. *Involve other changes in the existing environment that, due to their location or nature, could result in conversion of farmland to non-agricultural use?*

The project would create no demand on agricultural land and exert no pressure for conversion of agricultural land to another use. The fiber optic cable system simply transmits data across agricultural land. The project would not result in an impact on agricultural resources.

Cumulative Impacts

The project could possibly result in, at most, temporary disruption of agricultural activities during construction only in the areas of the disturbed right-of-way, although this would be highly unlikely. Any agricultural activities allowed within the right-of-way before the fiber optic cable installation would be allowed to continue after its installation. However, it is unlikely that agricultural activities currently occur within these railroad or road rights-of-way. The project would not contribute to the loss of agricultural land in California.

III. AIR QUALITY

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<p>III. AIR QUALITY - When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:</p>				
a. Conflict with or obstruct implementation of the applicable air quality plan?	_____	_____	_____	/
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	_____	/	_____	_____
c. Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is a non-attainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	_____	/	_____	_____
d. Expose sensitive receptors to substantial pollutant concentrations?	_____	/	_____	_____
e. Create objectionable odors affecting a substantial number of people?	_____	_____	/	_____

Criteria for Determining Significance

A project would normally have a significant effect on the environment if it violates any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations.

The Yolo-Solano Air Quality Management District (AQMD) is the only air district that would be crossed by the project that has established quantitative significance emission thresholds. Those thresholds equal 82 pounds per day for each reactive organic gases (ROG), oxides of nitrogen (NOx), and particulate matter less than 10 microns in diameter (PM10) from either construction or operation (Yolo-Solano Air Quality Management District 1996). The following impact analysis uses this threshold to determine whether project-related emissions would result in a significant air impact in either of the three air basins that would be crossed by the project.

Methodology Used to Estimate Air Emissions

Construction Emissions. A variety of construction equipment, including backhoes, excavators, tractors, and other vehicles, would be used during the construction phase of the project. The heavy equipment would produce air pollutants during the project's construction phase.

Table 5A.III-1 summarizes emissions associated with typical construction activities involved with fiber optic cable installation. The emissions include exhaust from construction equipment and fugitive PM10 dust from vehicles operating on exposed earth. The emission estimates shown in **Table 5A.III-1** are reasonable worst case emissions associated with trenching methods. Installation of fiber optic cable in existing pipelines or through the use of boring techniques would result in lower emission levels than those shown in **Table 5.III-1**.

Table 5A.III-1 also shows worst case annual emissions for the project route segments based on each segment's estimated length. With one exception, these worst case emissions assume that trenching would be used for fiber optic cable installation. The exception is that segment of the project route that would use existing dark fiber in an existing PG&E aerial transmission line, which includes all of the project route in Lake County and portions in Mendocino and Colusa Counties. Actual emissions would be lower if the fiber optic cable was installed using other installation methods generate lower air emissions.

Table 5A.III-1. Construction Emissions Associated with Fiber Optic Cable Installation

Location	Emissions	ROG	NOx	PM10
North Coast Air Basin	Pounds per day	7.30	80.50	27.80
	Tons per year	0.30	2.75	1.14
Lake County Air Basin	Pounds per day	3.90	51.30	14.80
	Tons per year	0.04	0.56	0.16
Sacramento Valley Air Basin	Pounds per day	7.30	80.50	27.80
	Tons per year	0.25	2.30	0.94

Notes: Construction emissions based on vehicles typically used for fiber optic cable installation projects and for building pad preparation. Fiber optic cable installation assumed to occur at 2,000 feet per day in the North Coast Air Basin (150 days total) and Sacramento Valley Air Basin (119 days total). No installation emissions assumed for Lake County and portions of Mendocino and Colusa County. OP-AMP/regenerator stations assumed at acre per site and one month construction period. Emission estimates based on the California Air Resources Board's URBEMIS7G model.

Operational Emissions Electrically powered OP-AMP/regenerator stations would be used to strengthen and/or regenerate the telecommunications signals. Under normal operations, no emissions would be generated as a result of the operation of the fiber optic cable system. However, one 260-horsepower (hp) diesel backup generator would be located at each OP-AMP/regenerator station to provide emergency electrical power during electrical outages. Air pollutants would be produced by backup generators during power interruptions. **Table 5A.III-2** summarizes daily emissions associated with a typical backup generator if it was required to operate for 24 hours. **Table 5A.III-2** also shows total annual emissions per air basin assuming that all backup diesel generators operate a maximum of 100 hours (approximately 4 days) per year.

Table 5A.III-2. Operational Emissions Associated with OP-AMP/Regenerator Station 260 HP Diesel Generators

Location	Emissions	ROG	NOx	PM10
North Coast Air Basin	Pounds per day	5.40	73.50	1.900
	Tons per year	0.01	0.15	0.004
Lake County Air Basin	Pounds per day	5.40	73.50	1.900
	Tons per year	0.01	0.15	0.004

Sacramento Valley Air Basin	Pounds per day	5.40	73.50	1.900
	Tons per year	0.01	0.15	0.004

Notes: Emissions estimated are vendor specific emission factors of 5.347 grams of NOx per brake horsepower hour, 0.396 grams ROG per brake horsepower hour, and 0.139 grams PM10 per brake horsepower hour. Annual emissions estimated by multiplying hourly emissions by 100 hours per year.

Impact Mechanisms

As described in the methodology section above, air quality significance thresholds vary among the air districts. The lowest of those requires impact assessment and mitigation for any increase in construction emissions. Consequently, for the project, any construction activity within an air district is considered the trigger that requires an impact assessment.

Impact Assessment

a. Conflict with or obstruct implementation of the applicable air quality plan?

The primary air emissions generated by the proposed project in California would be temporary, resulting from construction activities associated with installation. Emissions would also be produced by the infrequent operation of emergency backup generators at the OP-AMP/regenerator stations. Neither of these activities would conflict with or obstruct implementation of an applicable air quality plan. Therefore, no impact would occur.

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Impact: Increased Levels of Air Pollutants during Construction Exceeding Air District Thresholds

Heavy equipment would produce temporarily increased levels of air pollutants during construction. Daily and annual emissions within each air basin are shown in **Table 4.III-3**. Although emissions would not exceed the 82 pounds per day threshold, construction activities would generate fugitive dust. This impact is considered less than significant because Williams has committed to avoid significant impacts by adopting the following mitigation measure as part of the construction mitigation strategy of the project.

Mitigation Measure AQ-1: Implement Construction Best Management Practices Williams would employ best management practices (BMPs), as required in the respective air pollution control or air quality management district, for construction activities and shall train work crews in those measures prior to beginning work. The BMPs would, at a minimum, include the practices listed below in combination with any additional practices required by the presiding air district:

- # Use low emission construction equipment and/or reformulated fuel.
- # Water construction areas to minimize visible dust emissions.
- # Apply approved chemical soil stabilizers according to manufacturers specifications to all inactive construction areas (previously graded which remain inactive for 96 hours).
- # Reestablish ground cover on construction site to preconstruction levels through seeding and watering.
- # Maintain truck and equipment engines in good running condition.

- # Clean equipment daily or as needed to reduce tracking of soil onto adjacent roads.
- # Clean adjacent roads daily or as needed to remove accumulated soil.
- # Maintain a maximum speed of 15 mph on unpaved areas.
- # Suspend all grading operations when wind gusts exceed 25 mph.
- # Environmental resource coordinator would monitor for compliance with requirements of all air quality permits.

Impact: Potential Operational Emissions Exceeding Limits from Backup Generators

Diesel generators would be used as a backup supply of electrical power at the three OP-AMP/regenerator stations. One 260 hp diesel engine would be located at each OP-AMP/regenerator stations. The diesel engines are expected to operate no more than 100 hours per year. **Table 5A.III-2** shows that the worst case emissions from these generators, when operating at 100 hours per year, would not be expected to exceed the daily significance thresholds. Therefore, no impact would occur.

Mitigation Measure None required.

- c. *Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is a non-attainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?*

Refer to the discussion below under **Cumulative Impacts**.

- d. *Expose sensitive receptors to substantial pollutant concentrations?*

Refer to the response to criterion *b* above.

- e. *Create objectionable odors affecting a substantial number of people?*

Impact: Temporary Generation of Odors from Diesel Exhaust during Construction and from Diesel Backup Generators at OP-AMP/Regenerator Stations

The project would generate odors temporarily from diesel exhaust during construction activities. Odors would also be produced temporarily from diesel exhaust emitted during the operation of emergency backup generators. These odor impacts are considered less than significant because construction odors would be temporary and operational odors would be infrequent, and neither odor source would be severe or would affect a substantial number of people.

Mitigation Measure. None required.

Cumulative Impacts

With implementation of the identified mitigation measures, the project would comply with all air quality standards. Installation and operation of the fiber optic cable system would neither conflict with or obstruct implementation of any applicable state or federal air quality plan, nor violate any air quality standard or contribute substantially to an air quality violation. It would not result in a cumulatively considerable net increase of a criteria pollutant in a nonattainment area. Furthermore, it would not expose sensitive receptors to substantial pollutant concentrations.

IV. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES - Would the project:				
1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	_____	_____/____	_____	_____
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	_____	_____/____	_____	_____
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	_____	_____/____	_____	_____
4. Interfere substantially with the movement of any native resident or	_____	_____/____	_____	_____

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	_____	_____	_____	_____/_____
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	_____	_____	_____	_____/_____

Criteria for Determining Significance

The analysis of significance of impacts of the project is based on the criteria described in the environmental checklist above. Additionally, the following general criteria were also considered in determining whether an impact on biological resources would be significant:

- # federal or state legal protection of the resource or species,
- # federal or state agency regulations and policies,
- # local regulations and policies,
- # documented resource scarcity and sensitivity both locally and regionally, and
- # local and regional distribution and extent of biological resources.

Based on the State CEQA Guidelines and the general criteria identified above, impacts on biological resources would be considered significant if the project would result in any of the following:

- # long-term degradation of a sensitive plant community because of substantial alteration of land form or site conditions (e.g., alteration of wetland hydrology);
- # substantial loss of a plant community and associated wildlife habitat;
- # fragmentation or isolation of wildlife habitats, especially riparian and wetland communities;
- # substantial disturbance of wildlife resulting from human activities;
- # avoidance by fish of biologically important habitat for substantial periods, which may increase mortality or reduce reproductive success;

- # disruption of natural wildlife movement corridors;
- # substantial reduction in local population size attributable to direct mortality or habitat loss, lowered reproductive success, or habitat fragmentation of:
 - species qualifying as rare and endangered under CEQA,
 - species that are state-listed or federally listed as threatened or endangered, or
 - portions of local populations that are candidates for state or federal listing and federal and state species of concern;
- # substantial reduction or elimination of species diversity or abundance.

Impact Mechanisms

Biological resources could be directly affected by construction activities during conduit and cable installation, by construction of associated facilities (i.e., OP-AMP/regenerator stations), and by ongoing operational and maintenance activities along the project route.

Direct and indirect disturbance from construction activities could result in the loss or degradation of biological resources through the following ground-disturbing activities:

- # plowing or trenching during conduit and cable installation;
- # temporary stockpiling of soil or construction materials and sidecasting of soil and other construction wastes;
- # excavation for bore pits and assist points;
- # use of designated equipment staging areas (impacts on biological resources are unlikely because locations that are already heavily disturbed, including those that are paved or have compacted dirt and gravel, will be used as staging areas);
- # soil compaction, dust, and water runoff;
- # equipment access through nonsensitive stream channels (streams that do not support sensitive species, critical habitat, or riparian woody vegetation);
- # vehicle traffic and equipment and materials transport along the right-of-way;
- # noise disturbance to wildlife species from construction activities; and
- # temporary parking of vehicles outside the construction zone on sites that support sensitive resources (sites not designated as equipment staging areas).

Impact Assessment

Approach and Methodology

Assumptions. Biological resources could be directly and indirectly affected by construction activities. Construction-related impacts could result in temporary, short-term, or long-term disturbance of biological resources in the project study area. In assessing the magnitude of possible impacts, the following assumptions were made regarding construction-related impacts on biological resources:

- # Plowing and trenching activities along the project route would be limited to a 40-foot-wide right-of-way except in designated sensitive resource areas (e.g., wetlands and drainages), where the right-of-way would be 20 feet wide.
- # The actual extent of disturbance within the rights-of-way would likely be substantially less than the maximum rights-of-way width.
- # The rights-of-way would be accessible only from existing access roads. No new access roads would be constructed for the project route.
- # OP-AMP/regenerator stations would be located every 30 to 40 miles; some would have and other may have permanent access roads constructed. These facilities would be constructed on disturbed sites that do not support sensitive biological resources. As discussed in Chapter 2, **Project Description**, if any new station locations are identified, biologists would conduct surveys to determine the presence of sensitive biological resources and an environmental compliance checklist (**Appendix F**) will be submitted to the CPUC for review and approval. All OP-AMP/regenerator stations would be subject to mitigation measures described in this chapter, including biological monitoring.
- # All material stockpiling areas and staging areas would be located either within the 40-foot-wide right-of-way, on non-sensitive areas, or at designated disturbed sites outside the right-of-way.
- # Removing portions of common and widespread habitat types, such as annual grassland, during conduit and cable installation activities would not lead to substantial local decreases in those habitat types.
- # In shrub and forested communities, construction activities would avoid or minimize removal of woody vegetation.
- # Removing portions of uncommon and biologically unique habitats, such as vernal pools, riparian woodland, and emergent wetland, during conduit and cable installation activities could lead to a localized decrease in those types and result in the direct loss of special-status species or their habitats. However, direct impacts on sensitive habitats (e.g., woody riparian habitat) would be avoided as part of the project through the following procedures:
 - having a biological monitor present during construction within natural areas;
 - limiting all activities to within a demarcated corridor to avoid impacts on sensitive resources;
 - boring the conduit and cable only as required beneath sensitive streams, vernal pools, and other sensitive resource sites (e.g., perennial streams, special-status plant populations, and special-status wildlife habitat); and
 - attaching the fiber optic cable to bridges, where available, to avoid sensitive perennial streams.

- # A conservative approach was used in identifying potential presence of fish species in smaller drainages, particularly sensitive fish species. If tributaries to larger basins (for which fisheries information was known) appeared from topographic and other data to provide access to fish, it was assumed that these smaller drainages supported similar fish species as the larger connected basins. The fiber optic cable would be installed by boring under all flowing streams assumed to support sensitive fish species or by bridge attachment, where available.

General Project Commitments

The following general project commitments would be implemented as part of the project to avoid and minimize impacts on biological resources:

- # **Retain Qualified Biologists and Resource Specialists to Monitor Construction Activities near Specified Sensitive Biological Areas.** Williams would retain qualified biologists and other qualified resource specialists, as necessary, to monitor fiber optic cable installation activities on the project route where sensitive resources have been identified. Monitors would be hired and trained prior to construction and would be responsible for preconstruction surveys, staking resources, onsite monitoring, documentation of violations and compliance, coordination with contract compliance inspectors, and postconstruction documentation.

Biological monitors would locate and stake previously identified sensitive resources before construction activities begin in specified segments. Resource monitors/contract construction inspectors would patrol areas and work with contract compliance inspectors to ensure that barrier fencing, stakes, and required setback buffers are maintained. They would also be responsible for monitoring construction activities in areas that support special-status species, woody riparian vegetation, wetlands, and perennial (i.e., flowing at the time of construction) drainage crossings.

The field monitors would also be responsible for completing variance forms and obtaining clearance from the resource agencies for deviations from the mitigation measures (e.g., decreases in exclusion zones).

- # **Conduct a Biological Resource Education Program for Construction Crews.** Williams would conduct a biological resource education program for construction crews (primarily crew and construction foremen) before construction activities begin. The education program would include a brief review of the special-status species and other sensitive resources that could exist in the project study area (including their life history and habitat requirements), what portions of the project study area they may be found in, and their legal status and protection under the federal Endangered Species Act (ESA) (16 USC 1536). The education program would include materials describing sensitive resources, resource avoidance, permit conditions, and possible fines for violations of state or federal environmental laws. The program would also cover the mitigation measures, environmental permits, and project plans (e.g. a SWPPP, reclamation plan, and any other required plans). The program would also cover interpretation of the construction drawings because sensitive resources would be marked on the drawings. The education program would inform construction personnel of possible fines for violations. The construction monitors would hand out written materials describing sensitive resources, resource avoidance, permit conditions, and fines. The crew foreman would be responsible for ensuring that crew members adhere to the guidelines and restrictions. Multiple education programs would be conducted as needed to inform appropriate new personnel brought on the job during the construction period.

- # **Confine Construction Equipment and Associated Activities to the Project Route and OP-AMP/Regenerator Station Sites in Areas That Support Sensitive Resources.** Construction equipment would be confined to a 20-foot wide work area in areas that support sensitive resources (e.g., in areas that support riparian and wetland communities and special-status species adjacent to the work

area). For OP-AMP/regenerator station sites, construction will be confined to areas that do not support sensitive resources. This measure would not apply to resources that are being completely avoided by directional boring and drilling.

During the environmental training program, construction personnel would be informed about the importance of avoiding ground-disturbing activities outside of the designated work area. The contract compliance inspectors and environmental resource coordinator, with support from qualified biologists, if necessary, would ensure that construction equipment and associated activities avoid any disturbance of sensitive resources outside the project route.

- a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

The project would not have a significant effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species, because Williams will avoid (through rerouting around or boring under sensitive resources or by bridge attachment, where available, over sensitive waterbodies) and reduce impacts to less-than-significant levels through the application of the mitigation measures identified in this subsequent IS/MND. Williams has adopted all of the following recommended mitigation measures to either avoid or reduce significant impacts on these species to less-than-significant levels.

It should be noted that the mitigation measures described for potential impacts on special-status species have not been developed through formal consultation or coordination with resource agencies (e.g., California Department of Fish and Game [DFG] and the U.S. Fish and Wildlife Service [USFWS]). The mitigation measures may be modified during future project-specific coordination with the resource agencies. Additional mitigation measures that may be identified as part of project permits (e.g., Section 404, 1603 streambed alteration agreement) will be implemented as part of the project and monitored during construction to ensure compliance.

Impact: Possible Disturbance of Special-Status Plant Populations

Coast lily, a CNPS List 1B species, is the only special-status plant located during the late-season botanical surveys. Additional preconstruction surveys would be conducted between March and April 2000 to locate early-blooming special-status plants.

Fiber optic cable installation activities could result in the disturbance of special-status plants located within and adjacent to the project route, potentially reducing local population of coast lily and other special-status plants that may be located during next year's surveys. This impact is considered less than significant because Williams has committed to avoid significant impacts by adopting the following mitigation measures as part of the construction mitigation strategy of the project.

Mitigation Measure B-1: Avoid Impacts on Coast Lily and Other Threatened, Endangered, and Candidate Species by Establishing and Observing Exclusion Zones. This mitigation measure focuses on avoiding all direct and indirect effects on threatened, endangered, and candidate and other special-status plants (California Native Plant Society [CNPS] List 1B). Before construction, qualified biologists would establish exclusion zones around these special-status plant populations or areas identified as suitable habitat for special-status plants that were not identifiable at the time of the field surveys. Exclusion zones would have a minimum 20-foot radius and would be marked in the field with stakes and flagging and marked on the construction drawings. Construction-related activities would be prohibited within these zones. All other construction activities, vehicle operation, material and equipment storage, and other surface-disturbing activities would be prohibited within the exclusion zones.

Mitigation Measure B-2: Avoid Impacts on CNPS Lists 2, 3, and 4 Special-Status Plant Populations by Implementing Specific Measures. No CNPS List 2, 3, and 4 species were located during the late-season 1999 field surveys. However, these species may be located during early-season 2000 surveys. Complete avoidance of some nonlisted special-status plant populations may be considered unwarranted (e.g., certain locally common California Native Plant Society List 2 species). For some species, impacts of the project would not be significant based on the distribution of the species, the narrow width of the project route, and other factors (e.g., timing of installation may avoid the plants' critical reproductive period). For other species, the impact of construction activities could result in an impact on the local plant population. To avoid significant impacts on CNPS Lists 2, 3, and 4 special-status plants that may be located during future botanical surveys in spring of 2000, the following measures would be implemented:

- # Identify plant populations and areas identified as suitable habitat in the construction corridor and staging areas using staking and flagging.
- # Conduct construction activities during the period when the plant is not flowering or fruiting.
- # Minimize disturbance in areas that support special-status plants by limiting ground disturbance and other activities to the smallest possible corridor.
- # Identify CNPS List 2 plant populations that may be affected at least 2 weeks prior to disturbance to allow time for coordination with the appropriate land management and resource agencies (e.g., DFG, USFWS, and CPUC). The appropriate agencies would be contacted to discuss the most appropriate measures to use for minimizing impacts on CNPS List 2 species. In general, the measures would include excavating the appropriate topsoil depth (approximately 216 inches depending on the species) from the population site and stockpiling with intact roots, rhizomes, and seed bank in areas that would be trenched. The topsoil material would be replaced immediately during postremoval revegetation activities with little compaction to encourage water filtration and soil oxygenation. The contractor would also be directed to avoid replacing topsoil infested with exotic or noxious weed species. This revegetation activity would be monitored by a qualified botanist familiar with the local flora.
- # Contact the appropriate land management and/or resource agencies after restoration activities are complete and report findings.

Impact: Possible Introduction of New Noxious Weeds or Spread of Existing Noxious Weed Infestations

Construction activities could introduce or spread noxious weeds into currently uninfested areas, possibly resulting in the displacement of special-status plant species and degradation of habitat for special-status wildlife. Plants or seeds may be dispersed on construction equipment if the appropriate measures are not implemented. This impact is considered less than significant because Williams has committed to avoid this impact by adopting the following mitigation measure as part of the construction mitigation strategy for the project.

Mitigation Measure B-3: Avoid the Dispersal of Noxious Weeds in the Fiber Optic Cable and Associated Facility Rights-of-Way. Williams is currently mapping noxious weed infestations and potential wash stations along the project route. To avoid the introduction or spread of noxious weeds into previously uninfested areas, Williams would implement the following measures as part of the project:

- # Continue to identify noxious weed infestation areas before construction activities and indicate locations on construction drawings.

- # Use certified weed-free imported materials (or rice straw in upland areas).
- # Continue to coordinate with land management agencies to ensure that the appropriate best management practices are implemented. County agricultural commissions and land management agencies were contacted to develop lists of target noxious weed species for the project route and discuss measures to avoid the dispersal of noxious weeds.
- # Educate construction supervisors and managers on weed identification and the importance of controlling and preventing the spread of noxious weed infestations.
- # Clean equipment at designated wash stations after leaving noxious weed infestation areas (these wash stations would be identified by the resource specialists before construction activities in a particular project route segment).

The contract compliance inspectors, with support from resource personnel, would routinely inspect installation activities to verify that construction equipment is being cleaned of soil and plant matter at designated wash stations.

Impact: Construction Activities Near Areas that are Habitat for the Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (VELB), a federally listed threatened species, is associated with elderberry shrubs that would be located along the project route in the Sacramento Valley and coastal valleys of the inner Coast Ranges. Disturbance of an elderberry shrub within the range of VELB could result in a take of the species, as defined under the federal ESA, which would require consultation with USFWS under Section 7 of the ESA or preparation of an habitat conservation plan under Section 10 of the ESA. Elderberry shrubs were located and mapped along the project route within the range of VELB. The wildlife resource tables in **Appendix G** provide specific locations of elderberry shrubs along the project route. This impact is considered less than significant because Williams has committed to avoiding this impact by adopting the following mitigation measure as part of the construction mitigation strategy of the project.

Mitigation Measure B-4: Avoid Disturbance to Elderberry Shrubs by Establishing and Observing Exclusion Zones. To avoid impacts on VELB habitat, field resource specialists would identify and mark with flagging all elderberry shrubs within 50 feet of the project route. Orange barrier fencing would be installed around all shrubs to further avoid inadvertent effects. No ground-disturbing activities would be permitted within 25 feet of the elderberry shrub. All shrubs within 25 feet of potential ground-disturbing activities would be avoided by boring under the affected elderberry shrub from a site outside the 25-foot exclusion zone at a depth of at least 5 feet to avoid damage to the elderberry capillary root system.

Impact: Possible Mortality and Temporary Habitat Disturbance of Giant Garter Snake

The giant garter snake, a federally threatened species, potentially occurs in emergent marsh habitats in the Central Valley portions of the project route. The species occurs primarily along flowing drainages, including agricultural canals, that support emergent marsh vegetation; and uses crevices and rodent burrows in adjacent uplands habitats as hibernaculae. Several sites potentially occupied by giant garter snake were identified during field surveys along the project route (**Appendix G**).

Potential construction related impacts on the giant garter snake include disturbance to emergent wetland habitat and adjacent upland habitats from ground disturbance during fiber optic cable installation and related activities. This impact is considered less than significant because Williams has committed to avoid this by adopting the following mitigation measures as part of the construction strategy of the project.

Mitigation Measure B-5. Avoid Disturbance to Giant Garter Snake Habitat. To avoid impacts on giant garter snake, field resource specialists would identify and mark all potential habitat for this species along the project route. As required by the U.S. Army Corps of Engineers (Corps) programmatic Section 7 consultation with the USFWS, a 200-foot buffer would be established on both sides of drainages or wetlands that potentially support the giant garter snake. All potential habitat would be avoided by boring at under the habitat area from a site outside the 200-foot buffer. Conduit and cable would be installed beneath most of the adjacent upland within the 200-foot buffer at depths ranging from approximately 4 to 30 feet, depending on the depth of the channel.

If avoidance of upland habitat within the 200-foot buffer is not feasible, the Corps will consult with the USFWS under the existing programmatic Section 7 consultation to determine when it would be appropriate for Williams to work within these areas.

Mitigation Measure B-6: Avoid Riparian and Wetland Habitats That Support Special-Status Species by Establishing and Observing Exclusion Zones. Before construction, qualified biologists would stake and flag exclusion zones around all riparian and wetland areas. Exclusion zones would have a minimum 20-foot radius beyond the limits of riparian or wetland vegetation that support habitat for special-status species. Construction-related activities would be prohibited within these zones. Essential vehicle operation on existing roads and foot travel would be permitted. All other construction activities, vehicle operation, material and equipment storage, and other surface-disturbing activities would be prohibited within the exclusion zone. Construction activities within an exclusion zone would be accomplished by boring under the zone. In seasonal streams that potentially support special-status amphibians and where boring is infeasible, Mitigation Measure B-7 will be implemented.

Impact: Possible Disturbance of Habitat for Non-Federally Listed Special-Status Amphibians and Reptiles

The foothill yellow-legged frog, northern red-legged frog, and western pond turtle are California state species of special concern and federal species of concern that potentially occur in stream and wetland habitats in the Central Valley and Coast Ranges. The foothill yellow-legged frog is found in perennial and some ephemeral streams from the valley floor to about 6,000 feet elevation in the Coast Ranges. The northern red-legged frog is found in coastal streams north of the San Francisco Bay. The western pond turtle is found in ponds, streams, and marshes throughout the Central Valley and Coast Ranges.

The Natural Diversity Data Base and DFG were consulted to obtain information on known occurrences. Habitat surveys identified suitable streams for these species along the project route. The wildlife resources tables in **Appendix G** provide specific locations of suitable habitat for each of these species along the project route. Construction activities in drainages supporting these species could disturb occupied habitat and temporarily displace individual animals. This impact is considered less than significant because Williams will not plow or trench perennial streams. Where boring is infeasible, Williams has committed to avoid this impact by adopting the following mitigation measures as part of the construction mitigation strategy of the project.

Mitigation Measure B-6: Avoid Riparian and Wetland Habitats That Support Special-Status Species by Establishing and Observing Exclusion Zones. Refer to the discussion of this mitigation measure earlier in this section.

Mitigation Measure B-7: Avoid Disturbance to Special-Status Reptiles and Amphibians by Boring Under Streams or Constructing Barrier Fencing and Relocating Animals During Construction. Potential impacts on special-status reptiles and amphibians would be avoided by implementing Mitigation Measure B-6.

However, at seasonally flowing streams that support suitable habitat for non-federally listed special-status amphibians and reptiles where boring is infeasible, impacts would be avoided by constructing barrier fencing and relocating individual animals during construction, as follows:

- # If the stream does not have flowing water during the time of construction and before construction activities begin, qualified and permitted biologists would survey the project route to determine the potential for animals to exist in residual pools or vegetation within the project route. If special-status amphibians and reptiles continue to occupy habitats within the route, they would be captured by qualified, permitted wildlife biologists and relocated to the nearest suitable habitat upstream or downstream of the project route. Barrier fencing would be constructed along each side of the work area to prohibit animals from reentering the work area during conduit and cable installation activities. Once the conduit is installed, the site would be immediately restored to its original scope and conditions, and the barrier fencing would be removed. Qualified biological monitors and wildlife biologists would be onsite to identify and relocate any animals that move into the work area during construction activities.

- # Where other access is unavailable, vehicles may need to cross drainages. Williams would restrict vehicle crossings to existing crossing sites where feasible. If necessary, vehicle crossings will be constructed as described in Chapter 2, **Project Description**. Qualified wildlife biologists would assist Williams in identifying suitable crossing locations to avoid impacts on vegetation and other habitat features. If impacts on vegetation or other habitat features are unavoidable, Williams would attempt to access the opposite side of the drainage by traveling around the site on existing roads or rights-of-way, or consult with DFG for a site-specific variance. If a drainage with flowing water requires a vehicle crossing, barrier fencing would be installed and animals relocated. Barrier fencing would be constructed of wire mesh material so that flows are not impeded but access to the disturbance area by amphibians and reptiles is restricted. If barrier fencing is required, it would be installed 4 days prior to use of the crossing site. Relocation surveys would be conducted for 3 consecutive days to verify that all animals are removed from the disturbance area. Temporary barriers would be removed immediately after the installation activities are completed, the crossing is no longer needed, and the site is restored.

Impact: Construction Activities near Areas with Potentially Active Nonlisted Special-Status Raptor Nests and Other Potential Nesting Habitat

Potential nesting habitat for one or more nonlisted special-status raptor species (**Appendix K-4**), including golden eagle, Cooper's hawk, sharp-shinned hawk, osprey, white-tailed kite, and northern harrier would be located along the project route. Active nests and potential nesting habitat were located and mapped for these species during the surveys. Golden eagle habitat is found in rock outcrop and oak woodland habitat. White-tailed kite habitat is found in annual grassland and agricultural habitats of the Central Valley and coastal valleys. Cooper's hawk habitat is found in woodlands of the Coast Ranges, and osprey habitat is found along or near the coast around large rivers, reservoirs, or lakes. Northern harrier is a ground-nesting raptor that could potentially nest in grassland, seasonal wetlands, and agricultural lands within and adjacent to the right-of-way. Surveys were conducted to locate active raptor nests in the vicinity of the project route during spring 1999 surveys. Additional preconstruction surveys for these species will be conducted as needed if construction occurs during the breeding season in suitable habitat areas (see Mitigation Measure B-21).

Other than for the northern harrier, no nesting habitat would be directly affected by the project. However, human disturbances from construction activities could cause nest abandonment and death of young or loss of reproductive potential at active nests located near the project route. This impact is considered less than significant because Williams has committed to avoiding this impact by adopting the following mitigation measure as part of the construction mitigation strategy of the project.

Mitigation Measure B-8: Avoid Disturbing Active Special-Status Raptor Nests. To avoid potential adverse effects on nesting special-status raptors, Williams would establish no-disturbance buffers around active nests during the breeding season. If construction activities are scheduled to occur during the breeding season,

preconstruction surveys of all potentially active nest sites within 0.5 mile of the project route would be conducted. If construction activities are scheduled to occur during the non-nesting season, then no surveys would be required. If surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation would be required. If active nests are found, Williams would establish a no-disturbance buffer around the active nest, as follows:

- # for the golden eagle and prairie falcon, the buffer would include a 0.5-mile radius around the nest; and
- # for the white-tailed kite, Cooper's hawk, sharp-shinned hawk, and osprey, the buffer would include a 500-foot radius around the nest.
- # for the northern harrier, the buffer would include a 200-foot radius around the nest.

The size of individual buffers can be adjusted based on an evaluation of the site by a qualified raptor biologist. The evaluation would be based on the presence of topographical features that obstruct the line of site from the construction activities to the nest or observations of the nesting pair during construction based on the level of ongoing disturbance (e.g., farming activities or road traffic) and the observed sensitivity of the birds. Evaluations and buffer adjustments would be done in consultation with the local DFG representative. The portion of the project route that is within the designated buffer would be identified in the field by staking and flagging. If construction activities occur only during the nonbreeding season (between August 1 and February 1), no surveys would be conducted and no buffers would be required.

The preconstruction surveys would be conducted during spring and summer of the construction year. To avoid impacts on active nest sites, no installation activities would occur within the specified buffer zone during the breeding season (between February 1 and August 1) or until it is determined that young have fledged. Surveys would not be conducted in areas where project activities would occur only during the nonbreeding season (between August 1 and February 1).

Impact: Possible Disturbance of Active Swainson's Hawk Nests

The Swainson's hawk, a state-listed threatened species, nests in trees on the Central Valley floor. Surveys were conducted to identify, describe, and map active nest sites in the vicinity of the project route. The wildlife resources tables in **Appendix G** provide specific locations of two active nest sites along the project route. No nest trees would be removed or disturbed during installation of the conduit or during construction of regenerator facilities. However, human disturbances can cause the abandonment of active nests and death of young or loss of reproductive potential at active nests located near the project route. This impact is considered less than significant because Williams has committed to avoiding this impact by adopting the following mitigation measure as part of the construction mitigation strategy of the project.

Mitigation Measure B-9: Avoid Disturbing Active Swainson's Hawk Nests by Establishing and Observing Buffer Zones. To avoid disturbing active Swainson's hawk nests, Williams would establish a 0.5-mile-radius no-disturbance buffer zone around each active nest during the breeding season. All buffer zones would be based on line-of-sight. If topographical features obstruct the line-of-site of an active nest within the buffer zone, or if other factors reduce the likelihood of disturbance, then the buffer may be reduced based on consultation with DFG. The portion of the project route that would be within the designated buffer zone will be identified on the construction drawings and in the field by staking and flagging. If construction activities occur only during the nonbreeding season (from August 1 to February 28), no buffers or further mitigation would be required.

If construction activities continue into the 2000 breeding season, surveys would be conducted again to determine activity at all potential nest sites. Qualified raptor biologists would conduct construction year surveys of all potentially active nest sites within 0.5 mile of the project route. Surveys would be conducted by searching all suitable nest trees with binoculars to find active nests. If surveys indicate that nests are inactive or potential habitat is unoccupied during the construction year, no further mitigation measures would be required. If active nests are found, a 0.5-mile-wide no-disturbance buffer would be established around the active nest as described above.

To avoid effects on active nest sites, no construction activities would occur within the specified buffer zone during the breeding season (between March 1 and August 1) or until it is determined that young have fledged. Surveys would not be conducted in areas where project activities will occur only during the nonbreeding season.

Impact: Possible Disturbance to Active Northern Spotted Owl or Northern Goshawk Nests

The northern spotted owl, a federally listed threatened species, and the northern goshawk, a species of special concern, could potentially be present in mature conifer forest habitats along the project route east of Point Arena. Surveys were conducted to identify, evaluate, and map suitable habitat for the northern spotted owl and northern goshawk along the project route. The majority of conifer forest habitats that would be located along the project route are unsuitable for these species because of repeated harvesting of the forest stands and the resulting young stand age. Only one small area was located that supports suitable nesting/roosting habitat for these species. The wildlife resource tables in **Appendix G** provide locations of potential habitat for these species. No direct impacts on these species or their habitat would occur because the fiber optic cable will be installed along road shoulders or other disturbed rights-of-way. However, noise disturbance from construction activities could result in the abandonment of active nests and the death of young or loss of reproductive potential at active nests located near the project route. This impact is considered less than significant because Williams has committed to avoid this impact by adopting the following mitigation measure as part of the construction mitigation strategy of the project.

Mitigation Measure B-10: Avoid Disturbing Northern Spotted Owl and Northern Goshawk Nests by Constructing During the Non-Breeding Season or by Establishing and Observing Buffer Zones Around Active Nests. Protocol surveys for northern spotted owl and northern goshawk were not conducted because installation of the conduit is scheduled for fall and winter 1999, during the nonbreeding season. If construction activities occur during the nonbreeding season (between September 1 and March 15) then no mitigation would be required. However, if construction continues into the 2000 breeding season, potentially occupied sites described in **Appendix G** would be avoided until after the breeding season or after protocol surveys are conducted and indicate that no spotted owl or goshawk nests occur within 0.25 mile of the project route (as described below).

- # **Construction during the Breeding Season.** If construction activities are scheduled to occur during the breeding season, to avoid impacts on the northern spotted owl and northern goshawk, protocol surveys would be conducted by qualified raptor biologists to determine if active breeding sites are present.

Project-related disturbances to active northern spotted owl and northern goshawk nests would be avoided by conducting protocol-level surveys in all potential habitat areas to determine the location of nests and establishing no-disturbance buffers around active sites. No construction activities would occur within 0.25 mile of potential habitat until after protocol surveys are complete. If no spotted owls or northern goshawks are detected during surveys, no additional mitigation would be required. If northern spotted owls or northern goshawks are detected during surveys and are found to be nesting within 0.25 mile of the project route, field resource specialists would establish a 0.25-mile-radius buffer zone around the nest

site. To avoid disturbing nesting spotted owls and goshawks, project activities would be postponed within the buffer zone during the breeding season.

Surveys for spotted owls and northern goshawks would be conducted between March and August of the construction year. To avoid disturbing nesting spotted owls, no construction activities would be permitted within the buffer zone during the nesting season, between March 15 and August 30, or until it is determined that young have fledged.

Impact: Construction Activities in Areas near Potential Active Burrowing Owl Nests

The burrowing owl, a species of special concern, is a ground-nesting raptor that typically uses the burrows of other species, such as ground squirrels. This species potentially nests in the Central Valley and coastal valleys. Active burrowing owl burrows could potentially occur within the project route, where installation activities could destroy active nest sites. Surveys were conducted to locate, describe, and map active burrowing owl nesting burrows along the project route. The wildlife resources tables in **Appendix G** provide specific locations of active burrowing owl nest sites. This impact is considered less than significant because Williams has committed to avoid impacts on burrowing owl nest and winter burrows by adopting the following mitigation measure as part of the construction mitigation strategy of the project.

Mitigation Measure B-11: Avoid Disturbing Active Burrowing Owl Nests and Implement Standard DFG Guidelines during the Nonbreeding Season. Surveys were conducted during spring and summer 1999 to locate active burrowing owl nesting burrows. Because construction is scheduled to occur during fall and winter 1999, additional preconstruction surveys would be conducted to locate active nonbreeding burrows. If construction activities continue into the 2000 breeding season, preconstruction surveys would be conducted to locate active nesting burrows. Surveys would consist of visually checking all potential sites within 500 feet of the project route within 30 days of construction. To avoid impacts on burrowing owls, no-disturbance buffers would be established around all active nesting burrows during the breeding season, and the DFG burrowing owl guidelines would be implemented during the nonbreeding season. If no burrowing owls are found, no further mitigation measures would be required.

- # **Breeding Season.** If active burrowing owl nests are found, biologists would establish a 250-foot buffer zone around the active burrow. No installation activities would be permitted within the specified buffer zone until after the breeding season (between February 1 and August 31) or until it is determined that young have fledged.

- # **Wintering Season.** Because adult burrowing owls can occupy burrows year-round, before installation activities in active areas (and following the breeding season), DFG mitigation guidelines for burrowing owls (California Department of Fish and Game 1995) would be implemented. The guidelines require that one-way doors be installed at least 48 hours before construction at all active burrows that exist within the excavation area so that the burrows are not occupied during installation of the conduit. The guidelines also require the installation of two artificial burrows for each occupied burrow that is removed. Qualified wildlife biologists would conduct preconstruction surveys for burrowing owls within 1 to 2 weeks of installation activities. The one-way doors would be installed at that time to ensure that the owls could get out of the burrows but could not get back in. Artificial burrows would be constructed within the project route prior to installation of one-way doors.

Habitat disturbance from construction activities would be minor, linear, and temporary. No permanent habitat loss would occur. Therefore, no habitat compensation is included as part of this mitigation measure.

Impact: Construction Activities on Bridges that are Nesting Habitat for Swallows

Although swallows are not special-status species, cliff swallows, barn swallows, and rough-winged swallows (and their occupied nests and eggs) are protected by federal and state laws, including the Migratory Bird Treaty Act (50 CFR 10 and 21). USFWS is responsible for overseeing compliance with the Migratory Bird Treaty Act, and the U.S. Department of Animal Control Officer makes recommendations on animal protection issues. Active swallow nesting colonies could be located underneath bridge structures where the fiber optic cable could be attached. Cliff swallows and barn swallows construct mud nests, often concentrated into large breeding colonies, underneath concrete bridges. Rough-winged swallows often construct nests within a bridge structure, gaining access to the interior through existing drainage holes in the structure. Surveys were conducted to identify and map all active swallow nesting colonies on bridges and in culverts along project route. The wildlife resources table in **Appendix G** provides specific locations of active sites.

Installation of the fiber optic cable on these bridges during the breeding season (between March 1 and September 1) could result in destruction or abandonment of swallow nests and potentially of entire breeding colonies. This impact is considered less than significant because Williams has committed to avoid this impact by adopting the following mitigation measure as part of the construction mitigation strategy of the project.

Mitigation Measure B-12: Avoid Disturbance to Nesting Swallows by Implementing Timing Restrictions, Removing Nests, and Installing Mesh Netting. If activities to attach fiber optic cable to bridges occur outside the swallow nesting season (between March 1 and August 31) activities could proceed with no further mitigation.

If construction activities are planned to occur during the breeding season, a qualified wildlife biologist would inspect known nest sites during the swallows=nonbreeding season between September 1 and February 28. If all swallow nests are abandoned, the nests may be removed.

If the bridge attachments are to occur during the swallows=breeding season, the nests would be removed before March 1. After nest removals, the underside of the bridge would be covered with 2- to 4-inch mesh net or poultry wire. All net installation would be completed before March 1. The netting must be anchored so that swallows cannot attach their nests to the bridge through gaps in the net. All net installations would be done to the satisfaction of USFWS.

- # If swallows begin building nests on the bridge after net installation, the mud placed by the swallows would be removed. The means of entering the net would be identified, and the net would be repaired.
- # If a swallow successfully completes a nest during bridge attachments, Williams would contact USFWS to obtain the appropriate removal permits.
- # The netting would remain under the bridge from March 1 to September 1, or until the bridge attachments are completed, whichever comes first.
- # If netting of the bridge does not occur by March 1 and swallows subsequently colonize the bridge, attachments to the bridge would not begin before September 1, unless Williams obtains permits from the USFWS.

Impact: Construction Activities in Areas Near Bat Maternity Roosting Sites

The greater western mastiff-bat, California leaf-nosed bat, pallid bat, Townsend's big-eared bat, western red bat, spotted bat, fringed myotis, longed-eared myotis, small-footed myotis, long-legged myotis, and Yuma myotis could potentially occur along the project route. Potential maternity roosting habitat for bats within or near the project study area includes large abandoned buildings; bridges; trees; and cliffs, caves, and mines.

If present, these species could be affected by construction activities associated with the project. Potential effects could include temporary disturbance from noise and human presence associated with construction activities. However, the potential effects of the project would be minimized by the following factors:

- # cliff, mine, cave, and building habitats that could potentially support large colonies of bats do not occur in the project route;
- # trees large enough to potentially support maternity roosting bats would not be removed as part of the project;
- # the project route would be linear and narrow (3-foot excavation corridor and 40-foot maximum disturbance corridor);
- # activities related to the project would be temporary, and restoration efforts would begin immediately following construction; and
- # the project route would be already disturbed, relative to the surrounding landscape, from the original road or utility construction activity in the rights-of-way and from ongoing maintenance of the rights-of-way.

Remaining potential impacts are not considered significant because Williams has committed to avoiding these impacts by adopting the following mitigation measures as part of the construction mitigation strategy of the project.

Mitigation Measure B-6: Avoid Riparian and Wetland Habitats That Support Special-Status Species by Establishing and Observing Exclusion Zones. Refer to the discussion of this mitigation measure earlier in this section.

Mitigation Measure B-13: Avoid Bat Maternity Roost by Postponing Bridge Attachments. In conjunction with mitigation for nesting swallows (Mitigation Measure B-12 described earlier in this section) and before construction, a qualified wildlife biologist would conduct a survey of all bridge attachment sites to determine occupancy by maternity roosting special-status bats. If it is determined that special-status bats are roosting beneath bridge attachment sites, to avoid construction-related disturbance, construction would be postponed until the qualified wildlife biologist determines that the site is unoccupied; or, through consultation with local DFG staff, determines the most appropriate construction time and method.

Impact: Possible Disturbance of Other Special-Status Wildlife Species

Several other special-status species potentially exist in the project study area (**Appendix K-4**). Effects on these species from project activities are expected to be less than significant and no additional mitigation measures are required for one or more of the following reasons:

- # the species, although potentially occurring in the project study area, occupies habitat that would not be affected by project activities;

- # the species occupies and is dispersed throughout a habitat type, such as annual grassland, that is abundant throughout the project study area and the potential for a narrow, linear project to affect local or regional populations is minimal;
- # habitat disturbance would be temporary and expected to recover quickly within disturbed rights-of-way;
- # actual acreage disturbed would be less than that occurring within the project route because of other resource constraints that require localized rerouting or boring;
- # the project route would be linear and narrow (3-foot excavation corridor and 40-foot maximum disturbance area); therefore, the disturbed area would be spread across many miles of the project study area, further minimizing the potential effects of temporary habitat disturbance and the potential for injury or mortality in any given area of the project;
- # the project route is already disturbed, relative to the surrounding landscape, from the original construction activity in the rights-of-way, and from ongoing maintenance of the rights-of-way; the potential for nest sites within the project route would therefore be extremely limited;
- # maintenance of the existing rights-of-way has prevented the establishment of significant shrub cover that would potentially be used for nesting by some special-status birds; therefore, the likelihood of inadvertent destruction of nests would be reduced;
- # Williams has committed to not working in flowing sensitive streams, thereby avoiding or minimizing potential impacts on aquatic species;
- # the species is widely dispersed and the potential for activities in a narrow, linear area to affect an individual would be minimal;
- # although the species has a special-status designation, it is relatively common locally and a narrow, linear project would be unlikely to have an effect on the local population;
- # the species occupies a forest or woodland habitat type that would not be directly affected by the project because the habitat has previously been removed and a cleared corridor is maintained; or
- # the species is associated with a habitat type that would be protected through implementation of existing mitigation measures (e.g., riparian habitat).

Mitigation Measure. None required.

Impact: Temporary Construction Activities in Streams that Support Threatened, Endangered, and Special-Status Fish Species

Special-status fish species have potential to occur in streams along the project route. (**Appendix K-5**). The project would not be expected to adversely affect threatened, endangered, or special-status fish species. The project would be designed to avoid effects on aquatic species through the use of noninvasive construction methods (no work in flowing sensitive streams) that avoid direct effects on in-channel habitat, the use of BMPs to minimize the potential for transport of sediment to streams, and the use of measures to return the crossing sites to preconstruction conditions.

Threatened, endangered, or special-status fish occupy numerous drainages that would be crossed by the project route (**Appendix K-5**). Potential impacts on threatened, endangered, and special-status fish include potential temporary increases in sedimentation and turbidity, short-term loss of habitat, accidental seeps of bentonite from boring activities, and accidental spills of hazardous materials.

As designed, the project would not require any in-water work in sensitive water bodies (i.e., supporting listed, proposed, or candidate aquatic species or critical habitats) and minimal removal of riparian vegetation, which would minimize the potential for sediment generation in streams and avoid direct in-channel habitat effects on threatened and endangered fish species. The potential for short- and long-term sediment transport from upland sources to streams would be reduced to a less-than-significant level through implementation of the SWPPP and reclamation plan prepared for the project route, which include measures to minimize sediment transport and promote the recovery of construction areas to preconstruction conditions. The potential for accidental bentonite seeps and spills of hazardous materials would be minimized through implementation of the measures specified in the SWPPP.

This impact is considered less than significant because Williams has committed to avoid this impact by adopting the following mitigation measures as part of the construction mitigation strategy of the project.

Mitigation Measure B-6: Avoid Riparian and Wetland Habitats That Support Special-Status Species by Establishing and Observing Exclusion Zones. Refer to the discussion of this mitigation measure earlier in this section.

Mitigation Measure B-14: Avoid and Minimize Disturbance of Woody Riparian Vegetation along Drainages. Impacts on woody riparian vegetation would be avoided by boring underneath drainages that support this habitat type. A minimum 20-foot-wide setback would be established and staked by a resource specialists before construction activities. This buffer would extend between the edge of the woody riparian vegetation and construction equipment.

Woody riparian vegetation close to the project route that could be indirectly or inadvertently affected by installation activities would be protected by installation of temporary fencing or staking and flagging of a minimum 20-foot-wide setback. Depending on site-specific conditions, this buffer may be narrower or wider than 20 feet, as determined by the field resource specialist. Identification and protection of woody riparian vegetation close to the work zone would include either flagging or fencing, depending on site-specific conditions.

Before construction activities would be initiated on the project route, the limits of the work zone would be identified by a qualified biologist. The environmental coordinator or contractor compliance inspector would routinely inspect construction activities to ensure that protective measures are working and that they remain in place during installation. The contract compliance inspector also would confirm that protective measures are in place before construction activities begin on the project route. Protective fencing would remain in place until all construction activities in the area are complete.

In areas where boring is determined to be infeasible, the project environmental coordinator would coordinate the appropriate resource agencies to obtain clearance for cutting of woody riparian vegetation. These areas would be identified at least 1 month before vegetation removal. The appropriate land management and resource agencies would be submitted a letter describing existing conditions on the site and photographs of the site. Verbal approval would be obtained prior to removal of any woody riparian vegetation.

Shrub vegetation would be cut at least 1-foot above ground level to leave the root systems intact and allow for more rapid regeneration of the species. Cutting will be limited to a minimum area necessary within the 20-foot-wide project route. This type of removal would be allowed only for shrub species (all trees will be avoided)

and in areas that do not provide habitat for sensitive species (i.e., willow flycatcher). To protect migratory birds, no woody riparian vegetation removal would be allowed between March 15 and September 15, as required under the Migratory Bird Treaty Act.

Mitigation Measure B-15: Conduct Postconstruction Monitoring in Woody Riparian and Wetland Communities That Are Substantially Disturbed during Construction Activities. The project has been designed to avoid and minimize disturbance of woody riparian and perennial wetland communities because it would occur within existing disturbed rights-of-way. However, if woody riparian vegetation and wetlands are substantially disturbed during construction, site conditions would be restored and some areas revegetated to ensure a no-net-loss of habitat functions and values.

Areas that would require revegetation would be determined by a qualified restoration ecologist in conjunction with the appropriate land management and resource agency specialists. A general revegetation plan for wetland and woody riparian communities would be developed and approved by the resource agencies prior to construction. The revegetation plan would include design specifications, an implementation plan, maintenance requirements, and a monitoring program. Revegetation would be implemented as immediately following disturbance as is appropriate in substantially disturbed areas, or as appropriate for the local site conditions. Monitoring for a specified time period would be conducted to document the degree of success in achieving the success criteria and identify remedial actions that may be needed. Annual monitoring reports would be submitted to the appropriate resource agencies. The report would summarize the data collected during monitoring periods, describe how the habitats are progressing in terms of the success criteria (described below), and discuss any remedial actions performed.

Monitoring would be required in all substantially disturbed riparian and wetland communities. Resource specialists would document baseline conditions prior to construction in wetland and riparian areas. Data that may be gathered on each site to document baseline conditions and during the subsequent monitoring visits would include:

- # wetland delineation using DFG guidelines and the Corps= 1987 manual,
- # relative cover and types of plant species establishing in the project route,
- # percent absolute vegetation cover,
- # general assessment of the wetland or riparian habitat in relation to the surrounding undisturbed area, and
- # noxious weed or erosion problems.

Success criteria would be determined through coordination with plant ecologists from land management and other resource agencies. A brief letter report summarizing the results of monitoring and recommending additional needed actions would be submitted to the appropriate land management and resource agencies.

This revegetation plan for riparian and wetland habitats would be considered successful when the following criteria are met:

- # The riparian and wetland habitats established are composed of a mix of species similar to that removed during fiber optic cable installation.
- # At least 75% of the absolute cover of riparian and wetland vegetation immediately adjacent to the construction corridor.

- # Growth is achieved of riparian species that rates good or excellent vigor and growth based on a qualitative comparison of leaf turgor, stem caliber, leaf color, and foliage density in the planted sites with individuals of the same species in the adjacent riparian areas.
- # Annual or perennial nonwetland species that comprise less than 5% of preinstallation species composition or the composition of surrounding undisturbed wetland or riparian vegetation.
- # Plantings at each site (if needed) are self-sustaining without human support (e.g., weed control, rodent control, or irrigation).

Mitigation Measure B-16: Avoid In-Water Construction in All Flowing Streams That Support Sensitive Fish Species at or below the Crossing Location. To avoid impacts on listed fish species, Williams would not use in-water construction methods (plowing or trenching) to cross streams flowing at the time of construction and that support sensitive fish species at or downstream of the crossing location. At flowing sensitive stream crossings, Williams would install the fiber optic cable by boring under the stream, attach the fiber optic cable to an existing bridge, or install the fiber optic cable under or over an existing culvert to avoid impacts on listed fish species.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The project would not have a substantial adverse affect on any riparian habitat or other sensitive natural community because Williams has committed to avoiding this impact by adopting the following recommended mitigation measures into the construction mitigation strategy of the project.

Impact: Possible Removal or Disturbance of Woody Riparian Vegetation

Fiber optic cable installation activities could result in the removal or disturbance of woody riparian vegetation during installation across drainages that cannot be directionally bored. The removal of woody riparian vegetation would be avoided in areas that provide habitat for special-status species.

Riparian habitats that provide important habitat for local and migratory wildlife and fish are considered sensitive resources and are of concern to federal and state agencies. Riparian communities also provide potential habitat for special-status wildlife species, including willow flycatcher and yellow warbler. For these reasons, Williams would avoid the removal of woody riparian vegetation to the fullest extent possible. This impact is considered less than significant because Williams has committed to avoid or minimize this impact by adopting the following mitigation measures as part of the construction mitigation strategy of the project.

Mitigation Measure B-6: Avoid Riparian and Wetland Habitats That Support Special-Status Species by Establishing and Observing Exclusion Zones. Refer to the discussion of this mitigation measure earlier in this section.

Mitigation Measure B-14: Avoid and Minimize Disturbance of Woody Riparian Vegetation along Drainages. Refer to the discussion of this mitigation measure earlier in this section.

Mitigation Measure B-15: Conduct Postconstruction Monitoring in Woody Riparian and Wetland Communities That Are Disturbed during Construction Activities. Refer to the discussion of this mitigation measure earlier in this section.

Impact: Possible Disturbance of Sensitive Biological Resources from the Use of Staging Areas outside the Delineated Proposed Project Study Area and Not within Previously Paved or Graveled Areas

The use of staging areas that are outside the project study area and not already paved or graveled could result in long-term damage to sensitive biological resources. This impact is considered less than significant because Williams has committed to avoid this impact by adopting the following mitigation measure into the construction mitigation strategy for the project.

Mitigation Measure B-17: Survey Proposed Staging Areas before Construction and Implement Avoidance Measures, if Required. All staging areas would be evaluated to determine the presence or potential presence of sensitive biological resources, including waters of the United States, sensitive natural communities, and special-status species. If the surveys are conducted past the appropriate identification period for special-status species, a site evaluation would be conducted to determine if suitable habitat is present. If suitable habitat is located on the site, recommendations would be made for choosing a new location or avoiding the habitat onsite, if feasible. The appropriate mitigation measures discussed for other biological resources in this document would also be implemented. Implementation of this mitigation measure will result in a less-than-significant impact.

- c. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?*

Impact: Possible Short-Term Disturbance of 0.39 to 2.63 Acres of Waters of the United States (Including Wetland Communities)

Fiber optic cable installation activities could result in the disturbance of to 2.63 acres of waters of the United States in California that would occur within the construction corridor (20-foot-wide corridor) (**Table 5A-IV.1**). This acreage does not include perennial drainage systems, emergent wetlands, and open water habitats to be avoided during construction.

Table 5A-IV.1. Summary of Possible Impacts on Waters of the United States

Habitat Type	Possible Indirect Impact Acreage Within the 20-Foot-Wide Construction Corridor	Possible Direct Impact Acreage (3-Foot-Wide Average Corridor of Fill and Excavation)
Seasonal wetland	00.13	00.02
Seasonal Drainages	2.5	0.37
Total	2.63	00.39

Note: These calculations are based on a worst-case assumption and do not account for sensitive wetlands and drainages that will be avoided by boring, bridge attachments, or re-routes.

Many of the wetland communities and associated wildlife habitat in the existing rights-of-way (especially along roads and railroads) have been previously disturbed. Some of these wetland communities have successfully reestablished after previous construction activities and support similar wetland characteristics as adjacent, undisturbed wetlands.

Impacts on jurisdictional wetlands are considered short term and minimal because the disturbances are relatively short in duration and will not substantially alter wetland hydrologic functions, native soils and plant material will be replaced immediately after installation activities at the site, and natural landscape contours will be restored to preproject conditions. Additionally, Williams would implement measures during fiber optic cable installation to minimize disturbance of jurisdictional wetlands and allow wetland vegetation to reestablish after construction activities are complete.

This impact is considered less than significant because Williams has committed to avoid this impact by adopting the following mitigation measures as part of the construction mitigation strategy of the project.

Additional compensatory, restoration, or avoidance mitigation measures may be identified by regulatory agencies (e.g., Corps, Regional Water Quality Control Board [RWQCB], and DFG) as part of the permitting process. Williams has committed to implementing any additional measures as part of the project. Copies of these permits and any additional mitigation measures would be provided to the CPUC.

Mitigation Measure B-15: Conduct Postconstruction Monitoring in Woody Riparian and Wetland Communities That Are Substantially Disturbed during Construction Activities. Refer to the discussion of this mitigation measure earlier in this section.

Mitigation Measure B-18: Minimize Disturbance and Restore Other Waters of the United States to Preproject Conditions. Consistent with the Corps=Nationwide Permit No. 12 for utility line discharges, the area of waters of the United States that will be disturbed would be limited to the minimum area necessary to successfully install the conduit and cable. The following measures would be implemented to minimize impacts on and restore other waters of the United States and associated plant communities:

- # Stabilize exposed slopes and streambanks immediately on completion of installation activities. Other waters of the United States would be restored in a manner that encourages vegetation to reestablish to its preproject condition and reduces the effects of erosion on the drainage system.
- # In highly erodible stream systems, stabilize banks using a nonvegetative material that will bind the soil initially and break down within a few years. If the project engineers determine that more aggressive erosion control treatments are needed, geotextile mats, excelsior blankets, or other soil stabilization products would be used.
- # Remove trees, shrubs, debris, or soils during construction that are inadvertently deposited below the ordinary high-water mark of drainages in a manner that minimizes disturbance of the drainage bed and bank.
- # Implement additional measures that may be required as part of the DFG, Corps, and RWQCB permits that would be obtained for the project route.

These measures would be incorporated into contract specifications and implemented by the construction contractor. Additionally, Williams would incorporate all permit conditions into construction specifications. The contract compliance inspectors and biologists would routinely inspect construction activities to verify that the above protective measures and permit conditions have been implemented.

Mitigation Measure B-19: Minimize Disturbance and Restore Jurisdictional Wetlands to Preproject Conditions. Williams would implement the following guidelines for reestablishing conditions conducive to natural site regeneration:

- # Avoid installation activities in saturated or ponded wetlands during the wet season (spring and winter) to the maximum extent possible. Where such activities are unavoidable, protective practices, such as use of padding or vehicles with balloon tires, would be used.
- # Where determined necessary by the resource specialists, geotextile cushions and other materials (e.g., timber pads, prefabricated equipment pads, or geotextile fabric) would be used in saturated conditions to minimize damage to the substrate and vegetation.
- # In wetlands that are trenched, the top 12 inches of topsoil from the excavated site with intact roots, rhizomes, and seed bank would be stockpiled (Corps=Nationwide Permit No.12 requires that topsoil be stockpiled and replaced). The topsoil and subsoil would be replaced immediately after construction activities are complete.
- # Recontour the ground surface to maintain preproject wetland hydrology.

Mitigation Measure B-20: Avoid and Protect Specified Jurisdictional Wetlands Adjacent to Construction Areas. In wetland areas, fiber optic cable installation would be limited to the rights-of-way. Protective barrier fencing or staking and flagging would be used in specified wetland areas to protect wetlands near the work zone. Wetlands would also be identified on the construction drawings. Resource personnel would assist in placing protective barriers around wetlands prior to any ground-disturbing activities.

Resource personnel would identify the specific location of protective barriers before construction activities would be initiated near specified jurisdictional wetlands. The contract inspectors and resource specialists would routinely inspect protected areas to ensure that barriers remain in place and are effective. Protective barriers would remain in place until all construction activities are complete in areas near sensitive resources.

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, because Williams has committed to avoid this impact by adopting the recommended mitigation measures as part of the construction mitigation strategy of the project to avoid substantial adverse effects on these resources.

Impact: Possible Temporary Disturbances to Wildlife Movements

Because the project route would be linear and cross large areas of wildlife habitat, construction activities could disrupt wildlife movements by temporarily fragmenting habitats and dissecting movement corridors. However, the following factors would ensure that the project would result in less-than-significant impact on wildlife movement:

- # Because construction crews are expected to move quickly, fiber optic cable installation activities would not occur in any one location for typically more than a day.
- # Only several work sites (based on the number of contractors) would be affected at any one time throughout the project study area.

- # Reclamation efforts within the disturbance corridor would begin immediately and involve reestablishing site conditions. This would involve grading to reestablish preconstruction contours, replacing topsoil in specified areas, and seeding with a sterile grass or native vegetation (as dictated by the reclamation plan).

The following mitigation measures would further ensure that impacts on wildlife movements are less than significant.

Mitigation Measure B-6: Avoid Riparian and Wetland Habitats That Support Special-Status Species by Establishing and Observing Exclusion Zones. Refer to the discussion of this mitigation measure earlier in this section.

Mitigation Measure B-7: Avoid Disturbance to Special-Status Reptiles and Amphibians by Boring Under Streams or Constructing Barrier Fencing and Relocating Animals During Construction. Refer to the discussion of this mitigation measure earlier in this section.

Impact: Possible Wildlife Entrapment in Open Trenches

Open trenches during construction could pose a threat to individual animals, particularly at night by entrapping or inadvertently resulting in injury to wildlife species. Several species could become entrapped in trenches. This impact is considered less than significant because Williams has committed to avoiding this impact by adopting the following mitigation measure as part of the construction mitigation strategy of the project.

Mitigation Measure B-21: Fill or Cover Open Trenches Daily. Any open trenches would be filled with earth material imported from an existing borrow site or covered with plywood or other material to prevent entrapment at the end of each work day. Both ends of any open trench would be sloped to form escape ramps before covering. If wildlife are found in the trench, they would be removed by a qualified permitted biological monitor before resumption of work in that trench segment. Williams would specify this requirement in the agreements with all construction contractors.

Impact: Possible Temporary Disturbance of Common Wildlife Species

Project activities could temporarily disturb habitat for many common wildlife species that exist along the project route. Animals within these habitats could be temporarily displaced during fiber optic cable installation, and animals in habitats adjacent to the project route would be subject to noise and other human disturbances. However, the following four factors would minimize the potential for impacts on common wildlife species to a less-than-significant level:

- # The major habitat types the project would affect (i.e., annual grassland, agriculture, desert scrub, chaparral, etc.) are abundant in the project study area.
- # The project route would be linear and narrow (i.e., a 3-foot excavation corridor and 40-foot maximum disturbance corridor).
- # Activities related to the project would be temporary, and vegetation would be expected to recover quickly particularly within disturbed rights-of-way, such as roadsides and railroads;
- # Much of the project study area would be already disturbed, relative to the surrounding landscape, from the original construction activity and ongoing maintenance in the rights-of-way.

Because of the reasons stated above, the project would result in a less-than-significant impact on common wildlife species. Additionally, Williams has adopted all of the mitigation measures for biological resources as part of the construction mitigation strategy of the project (refer to Chapter 2, AProject Description@, of this document).

Mitigation Measure. No further mitigation is required.

Impact: Possible Temporary Increases in Sedimentation and Turbidity Possibly Affecting Fish

Impacts on fish or their habitat attributable to increased sedimentation and turbidity resulting from the project would be expected to be minimal. Increased sediment loading to streams from construction could affect fish health and feeding ability by increasing turbidity and reduce the quality of spawning and rearing habitat through sedimentation. However, as part of its construction mitigation strategy, Williams has committed to avoiding work in perennial drainages or seasonal drainages that are flowing at the time of construction and support sensitive species by boring, bridge attachment, or installation over or under an existing culvert and would implement BMPs to minimize the transport of sediment from adjacent upland areas. These measures would greatly decrease the potential for temporary increases in stream sedimentation and turbidity. This impact is considered less than significant because Williams has committed to avoid this impact by adopting the following additional mitigation measures as part of the construction mitigation strategy of the project.

Mitigation Measure B-14: Avoid and Minimize Disturbance of Woody Riparian Vegetation along Drainages. Refer to the discussion of this mitigation measure earlier in this section.

Mitigation Measure B-15: Conduct Postconstruction Monitoring in Woody Riparian and Wetland Communities That Are Substantially Disturbed during Construction Activities. Refer to the discussion of this mitigation measure earlier in this section.

Mitigation Measure B-16: Avoid in-Water Construction in All Flowing Streams That Support Sensitive Fish Species at or below the Crossing Location. Refer to the discussion of this mitigation measure earlier in this section.

Mitigation Measure B-18: Minimize Disturbance and Restore Other Waters of the United States to Preproject Conditions. Refer to the discussion of this mitigation measure earlier in this section.

Impact: Possible Short-Term Disturbance of Fish Habitat

As designed, the project would not require work in perennial drainages or seasonal drainages that are flowing at the time of construction and support sensitive species; therefore, the project would have a minimal effect on in-channel fish habitat. Although the project route is within existing rights-of-way and all woody riparian vegetation would be avoided to the fullest extent possible, some woody vegetation may be disturbed. This disturbance could affect fisheries resources by increasing the potential for erosion of the affected streambank and loss of stream cover. This impact is considered less than significant because no work would occur in flowing drainages with sensitive species, and very little riparian habitat would be disturbed in the rights-of-way. Williams has committed to avoiding this impact by adopting the following additional mitigation measures as part of the construction mitigation strategy of the project.

Mitigation Measure B-14: Avoid and Minimize Disturbance of Woody Riparian Vegetation along Drainages. Refer to the discussion of this mitigation measure earlier in this section.

Mitigation Measure B-15: Conduct Postconstruction Monitoring in Woody Riparian and Wetland Communities That Are Substantially Disturbed during Construction Activities. Refer to the discussion of this mitigation measure earlier in this section.

Mitigation Measure B-16: Avoid in-Water Construction in All Flowing Streams That Support Sensitive Fish Species at or below the Crossing Location. Refer to the discussion of this mitigation measure earlier in this section.

Mitigation Measure B-18: Minimize Disturbance and Restore Other Waters of the United States to Preproject Conditions. Refer to the discussion of this mitigation measure earlier in this section.

Impact: Possible Short-Term Degradation of Fish Habitat from Accidental Seepage of Bentonite into Streams

Directional boring can result in bentonite seeps to surface waters. This could occur if the bore intersected a fracture that opened to the surface, and bentonite pressures were high enough to push the material to the surface. Bentonite is a nontoxic clay-based water mixture used to lubricate the boring mechanism. Although nontoxic, seeps of bentonite into streams can result in temporary increases in turbidity and sedimentation that could affect fish and their habitat. This possible impact is considered less than significant because Williams would strictly implement the spill prevention measures described in the SWPPP to avoid the potential for bentonite seeps to streams as part of its mitigation strategy, as described in Chapter 2, *Project Description*.

Several measures would be included in the SWPPP to avoid the potential for bentonite seeps, including requiring boring crews to strictly monitor drilling fluid pressures, requirements for no nighttime boring unless absolutely necessary (e.g., some large river crossings), retaining containment equipment on site, monitoring waters downstream of the crossing sites to identify any seeps quickly, immediately stopping work if a seep into a stream or other surface water is detected, immediately implementing containment measures, adhering to agency reporting requirements, and identifying responsible parties.

The DFG streambed alteration agreement and RWQCB water quality certification would most likely contain monitoring and reporting requirements. These requirements would be adhered to during construction.

Mitigation Measure: None required.

Impact: Possible Effects on Fish from Accidental Spills of Toxic Substances during Construction

Hazardous materials associated with the project would be limited to those substances typically associated with construction equipment, such as gasoline, diesel fuels, engine oil, and hydraulic fluids. An accidental spill of these substances could contaminate drainages and adversely affect fish or their habitat. This possible impact is considered less than significant because Williams would strictly adhere to the spill prevention measures described in the SWPPP (see Chapter 2, *Project Description*). The SWPPP would be included in the documents for construction specifications. The contractor would follow the measures in the SWPPP to ensure that petroleum products are not discharged into drainages or bodies of water.

As described in the SWPPP and in Chapter 2, *Project Description*, hazardous substances would be stored in staging areas located at least 150 feet from streams and other surface waters. Refueling and vehicle maintenance would be performed at least 150 feet from these receiving waters. Sedimentation fences, certified weed-free hay bales, sand bags, water bars, and baffles would be used as additional sources of protection for waters, ditches, and wetlands.

Mitigation Measure: None required.

- e. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*
- f. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

The proposed construction within existing rights-of-way would have no impact on local policies or ordinances protecting biological resources or conflict with adopted habitat and natural community conservation plans. Four OP-AMP/regenerator stations would be located along the project route near the communities of Yorkville, Schellville, and Elmira would be constructed in largely undeveloped areas. None of these sites are designated as a habitat conservation or natural community conservation plan area. The typical building footprint of a OP-AMP/regenerator station would be a pad measuring approximately 30 by 97 feet. Williams estimates that three to eight precast concrete buildings would be installed. Site security would be achieved by placing the stations within 150- by 275-foot fenced areas. As in the design mitigation discussed in Chapter 2, *Project Description*, the stations would be located on sites that do not support sensitive biological resources.

Cumulative Impacts

Cumulative impacts of the project on biological resources are considered less than significant for the following reasons:

- # Most of the major habitat types the project would affect are abundant in the project study area.
- # The project route is linear and narrow and construction would disturb a small amount of habitat relative to the amount of these habitats available locally and project wide.
- # Activities related to the project would be temporary and vegetation would be expected to recover quickly particularly within disturbed rights-of-way.
- # OP-AMP/regenerator facilities, while resulting in a small amount of permanent habitat loss, would be sited in areas that either do not support habitat (i.e., developed sites), support only ruderal vegetation, or support a locally common plant community.
- # Much of the project route would be already disturbed from original construction and ongoing maintenance activities for the railroad and road rights-of-way.
- # Mitigation measures have been designed and incorporated into the project design and construction approach to avoid or minimize effects on biological resources to less-than-significant levels. Additionally, Williams has adopted all of the recommended biological mitigation measures in this document as part of the project.
- # Much of the project study area is relatively remote and the project would be located primarily within already disturbed or developed rights-of-way.

Impacts on listed species would be avoided through implementation of the mitigation measures into the project design specifications. Therefore, no cumulative impacts on listed species or their habitats are anticipated.

The cumulative impacts of the project on fish or their habitats are expected to be minimal. No direct habitat loss or impairment of passage or migration would occur because, as designed, Williams would use noninvasive drainage crossing methods for flowing sensitive streams (i.e., crossings would not require in-water work or structures) and multiple crossings within individual drainages would be minimized. Williams would implement measures to minimize the potential for long-term chronic erosion and stabilize site conditions and minimize the potential for accidental spills of materials to surface waters to less-than-significant levels. Therefore, no cumulative impacts on fish populations or their habitats are anticipated.

V. CULTURAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
V. CULTURAL RESOURCES - Would the project:				
1. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	_____	_____/_____	_____	_____
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	_____	_____/_____	_____	_____
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	_____	_____/_____	_____	_____
4. Disturb any human remains, including those interred outside of formal cemeteries?	_____	_____/_____	_____	_____

Criteria for Determining Significance

According to CEQA, an impact is considered significant if it would disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group. In addition to significance criteria *a-d* in the environmental checklist, the State CEQA Guidelines define a significant historical resource as a resource listed or eligible for listing on the California Register of Historical Resources (CRHR) or any resource included in a local register of historical resources as defined in Public Resources Code Section 5024.1(K), or that has been as identified as significant in a historical resources survey meeting the requirements of Public Resources Code 5024.1(g). A historical resource may be eligible for inclusion in the CRHR if it:

- # is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

- # is associated with the lives of persons important in our past;
- # embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values;
- # has yielded, or may be likely to yield, information important in prehistory or history.

Any resource that has been determined eligible for inclusion in the National Register of Historic Places (NRHP) would be considered eligible for the CRHR. Finally, an archaeological site is considered significant if it meets the definition of a unique archaeological resource as defined in Public Resources Code Section 21084.1 and Section 15126.4 of the State CEQA Guidelines.

In addition, under federal regulations, a project has an effect on a historic property when the undertaking could alter the characteristics of the property that may qualify the property for inclusion in the NRHP, including alteration of location, setting, or use. An undertaking may be considered to have an adverse effect on a historic property when the effect may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties include, but are not limited to:

- # physical destruction or alteration of all or part of the property;
- # isolation of the property from or alteration of the property's setting when that character contributes to the property's qualifications for listing in the NRHP;
- # introduction of visual, audible, or atmospheric elements that are out of character with the property or that alter its setting;
- # neglect of a property resulting in its deterioration or destruction; or
- # transfer, lease, or sale of the property (36 CFR 800.9).

Impact Mechanisms

Disturbance of cultural resources from implementation of the project could result in impacts on known cultural resources and on buried, unidentified archaeological sites. Cultural resources could potentially be affected during construction of the cable system through the following ground-disturbing activities:

- # grading or other site preparation,
- # blading or grading of existing access roads,
- # plowing or trenching,
- # temporary stockpiling of soil,
- # construction of associated facilities such as OP-AMP/regenerator stations,
- # digging bore pits or assist points, and
- # use of equipment staging areas.

In addition, siting the OP-AMP/regenerator stations in proximity to historic resources could also cause impacts in circumstances where the setting of a historic resource contributes to its significance. In these cases, changes to the setting could cause an impact on a significant cultural resource.

Impact Assessment

- a. *Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 or*
- b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5*

The following analysis for cultural resources identifies potential impacts on cultural resources that could occur as a result of implementation of the project and describes mitigation measures that would avoid or reduce impacts to less-than-significant levels.

Implementation of the mitigation measures listed below would result in the avoidance of significant impacts on potentially significant cultural resources in compliance with State CEQA Guidelines. No archaeological excavations, artifact analysis, or other specialized studies of cultural artifacts or deposits are proposed as this time based on the understanding that all cultural resource sites would be avoided through rerouting of the conduit and cable or boring under archeological/cultural resources, monitoring potential resource locations and by siting the OP-AMP/regenerator stations on parcels that do not have cultural resources and are not in proximity to potentially historic structures. In the unlikely event that potentially significant resources could not be avoided through one of these measures, additional steps, such as test excavation to determine the significance of resource and data recovery should the resource prove to be significant, could be necessary. A mitigation measure has been included below, which would be followed if site avoidance proves infeasible.

Impact: Possible Long-Term Disturbance of Cultural Resource Sites, C-Ukiah-1 (Ukiah Railroad Station and Loading Platform), C-Arbuckle-1 (Concrete Road By-pass Structure over Colusa Trough Site Ca-Col-219-H), C-Arbuckle-2 (Colusa Trough Site Ca-Col-219H), C-Elledge Peak-1 (CA-Men-1108), and Widely Scattered Isolates Designated Collectively as C-Kirkville-1

All resources above, excluding C-Kirkville-1, can be avoided by implementation of Mitigation Measure C-1. Mitigation Measure C-2 applies specifically to C-Kirkville-1.

Ground-disturbing activities, such as surface clearing, plowing, trenching, siting of OP-AMP/regenerator facilities, and excavation of bore pits, could result in significant impacts on cultural resources. These activities could effect both surface and underground portions of cultural resource sites and potentially historic structures. This impact is considered less-than-significant because Williams is committed to avoid or minimize impacts by adopting the following mitigation measures as part of the construction strategy for the project.

The identified cultural resources sites listed above can be avoided by the following measures. The Ukiah Railroad Station and passenger loading platform (designated C-Ukiah-1) would be avoided by routing the conduit and cable to the west of this site (i.e., west of the railroad tracks). The routing of the conduit and cable to the west, away from the resource (if approaching from the north) should commence at the first road intersection at Perkins Street to the north of the Ukiah Railroad Station. If the construction approach is from the south, the conduit and cable should be located to the west commencing at 20 meters to the southernmost extension of the 360-foot concrete passenger loading platform (sidewalk).

The concrete road bypass structure (designated C-Arbuckle-1) can be avoided by locating the conduit and cable to the south of this structure, along the modern road shoulder (either east or west bound sides). Prehistoric resource site (designated CA-Men-1108) C-Elledge Peck-1 would be monitored to verify its existence outside the project route. To avoid a potentially buried site in the area where the widely scattered artifacts, designated C-Kirkville-1, were found in a plowed agricultural field should be monitored to avoid impacts on a potentially buried site. The specific areas to be monitored would be drawn on the construction maps prior to construction to avoid these resources. The remaining resource that was identified for this project was between the two 0.25-mile sections of C-Arbuckle-1 and is the Colusa Trough (designated C-Arbuckle-2). This historic water conveyance system can be avoided by either attaching the conduit and cable to the modern road bridge or by boring under this resource. This impact is considered less than significant because Williams has committed to avoid or minimize this impact by adopting the following mitigation measures as part of the construction strategy for the project.

Mitigation Measure C-1: Develop and Implement Avoidance Procedures. The project archaeologist and project engineer would review the possible avoidance measures for each potentially significant cultural resource site to determine which avoidance method is appropriate. Depending on the characteristics of individual sites, impacts would be avoided by rerouting the conduit and cable around identified cultural resource sites or boring beneath sites. When an avoidance measure would be agreed on, these measures would be coordinated with the appropriate agency. When applicable, methods of avoiding impacts may also be determined in consultation with a lead federal agency and the SHPO in compliance with Section 106 of the NHPA. Avoidance measures for cultural resources sites are outlined below. The agreed-on avoidance measure would be conveyed to the contractor by marking on the appropriate construction specifications. Where appropriate, field marking of sites or areas of exclusion zones may be undertaken.

Mitigation Measure C-2: Develop and Implement Cultural Resources Monitoring Plan. For each cultural resource, a separate mitigation monitoring plan would be developed. The monitoring plan would outline where and how qualified archaeologists would conduct archaeological monitoring. The plan would include a description of the locations of areas that would be monitored and the methods and procedures for archaeological monitoring areas selected for monitoring. The areas selected for monitoring would include these areas considered

to be particularly sensitive for the presence of buried cultural resources. The monitoring plan would be included as an appendix to the cultural resources inventory report and also be approved by the CPUC. The agreed on monitoring protocols would be conveyed to the contractor by marking the areas to be monitored on the appropriate construction specifications. Where appropriate, field marking of sites or areas of exclusion zones may be undertaken. The role of the archaeological monitor and the process for monitoring would be conveyed to the contractor during preconstruction environmental training as outlined and required in the mitigation monitoring plan.

Mitigation Measure C-3: Conduct Test Excavation to Determine Resources Significance, and if Significant, Conduct Data Recovery Excavation. If avoidance of potentially significant resources proves to be infeasible, or newly discovered resources are identified, then the following mitigation measure would be implemented. A test excavation would be conducted to determine the significance of each resource that cannot be avoided. If the resource is found to be significant, then a data recovery excavation would be conducted. The data recovery would be directed by a data recovery plan, prepared for review and approval by the CPUC.

Impact: Possible Long-Term Damage to Unidentified Buried Cultural Resource Sites from Ground-Disturbing Activities

Buried cultural resources that were not identified during field surveys could be inadvertently unearthed during ground-disturbing activities, which could result in demolition or substantial damage to significant cultural resources. This impact is considered less than significant because Williams has committed to avoid or minimize this impact by adopting the following mitigation measure as part of the construction strategy for the project.

Mitigation Measure C-4: Stop Work If Cultural Resources Are Discovered during Ground-Disturbing Activities. If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, or human bone, are inadvertently discovered during ground-disturbing activities, work would stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with the CPUC, SHPO, and other appropriate agencies. Implementation of this mitigation measure would result in avoidance of a substantial adverse change in the significance of historical or archaeological resources that could be inadvertently discovered during construction.

c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact: Possible Disturbance to Paleontological Resources during Construction

The project would include ground-disturbing activities, such as trench excavation, to install the fiber optic cable system. These ground-disturbing activities could inadvertently affect paleontological resources. This impact is considered less than significant because Williams has committed to avoid this impact by adopting the following mitigation measure as part of the construction mitigation strategy for the project.

Mitigation Measure C-5: Retain a Qualified Paleontologist to Oversee Construction Activities and Prepare a Report. In known areas of high sensitivity for paleontological resources, full-time monitoring by a qualified paleontologist may be required, based on the construction method used (i.e., a paleontological monitor would be present 80 to 100% of the time during ground-disturbing activities in areas with high paleontological sensitivity). In areas of low sensitivity, spot checking may be required (i.e., a paleontological monitor will be present 0 to 20% of the time during ground-disturbing activities in areas with low paleontological sensitivity). The paleontologist would monitor ground-disturbing activities and salvage and catalogue fossils where necessary.

A qualified paleontologist would be present at the preconstruction conference; establish procedures for paleontological resource surveillance; and establish, in cooperation with the contract compliance inspectors and environmental resource coordinator, procedures for temporarily halting or redirecting work to permit sampling, identification, and evaluation of the fossils.

The role of the paleontological monitor would be to recover, analyze, process, catalog, curate, and document significant fossil remains. Paleontological monitors would be available and equipped to salvage fossils as they are unearthed to avoid construction delays and remove samples of sediments that are likely to contain the remains of small fossil vertebrates. Paleontological monitors would be able to temporarily halt or divert construction equipment to allow removal of large specimens. The qualified paleontologist, in cooperation with the contract compliance inspector and environmental resource coordinator, would determine appropriate actions to ensure proper exploration and salvage of encountered paleontologic resources (fossils).

If major paleontological resources or significant concentrations of fossils are encountered that require long-term halting or redirecting of construction or that cannot be collected during normal monitoring time, salvage operations must be initiated and completed as quickly as feasible at the direction of the qualified paleontologist and coordinated with the construction contractor. The environmental resource coordinator would be notified as soon as possible regarding any paleontologic salvage operation.

Implementation of this mitigation measure would result in the salvage of unique paleontological resources or sites and unique geologic features. A final paleontological report would be submitted to the CPUC on completion of the project where areas of high or low sensitivity have been identified. The report would include monitoring dates, methodologies, an itemized inventory of specimens and analysis of the significance of encountered fossils, curation of collected fossils to the point of identification, and accession of the fossils to a museum repository with a retrievable storage system. The final report and inventory, when submitted to the CPUC, would signify completion of the program to mitigate impacts on paleontologic resources.

d. Disturb any human remains, including those interred outside of formal cemeteries?

Impact: Possible Long-Term Damage to Previously Unidentified Human Remains on Nonfederal Land from Ground-Disturbing Activities

It is not anticipated that the project would affect known cemeteries or burials; however, buried human remains that were not identified during field surveys could be inadvertently unearthed during excavation activities, which could result in damage to these remains. This impact is considered less than significant because Williams has committed to avoid or minimize this impact by adopting the following mitigation measure as part of the construction strategy for the project.

Mitigation Measure C-6: Comply with State Laws Pertaining to the Discovery of Human Remains.

If human remains of Native American origin are discovered during ground-disturbing activities on nonfederal lands, state laws relating to the disposition of Native American burials would apply. The Native American Heritage Commission (NAHC) would have jurisdiction (Pub. Res. Code Sec. 5097). If human remains are discovered or recognized in any location other than a dedicated cemetery, there would be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

- # the coroner of the county has been informed and has determined that no investigation of the cause of death is required,
- # if the coroner determines that the remains are of Native American origin, the coroner shall contact the NAHC within 24 hours, and

the NAHC shall identify the person or persons it believes are the most likely descendent of the deceased Native American.

The most likely descendent may make recommendations to the landowner, or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Pub. Res. Code Sec. 5097.98.

According to California Health and Safety Code, six or more human burials at one location constitute a cemetery (section 8100), and unauthorized disturbance of Native American cemeteries is a felony (section 7052). Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission.

The project route would not cross federal lands; therefore, federal laws pertaining to the discovery of human remains do not apply to this project.

Implementation of this mitigation measure would result in avoidance or disturbance of human remains.

Cumulative Impacts

In addition to avoiding impacts on specific identified resources, the project route will not contribute to larger cumulative impacts on historic properties. With the implementation of the proposed avoidance measures, no impacts will result from the project.

VI. GEOLOGY AND SOILS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
VI. GEOLOGY AND SOILS - Would the proposed project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	_____	_____	____/____	_____
2. Strong seismic groundshaking?	_____	_____	____/____	_____
3. Seismic-related ground failure, including liquefaction?	_____	_____	____/____	_____
4. Landslides?	_____	_____	____/____	_____
b. Result in substantial soil erosion or the loss of topsoil?	_____	____/____	_____	_____
c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the proposed project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	_____	_____	____/____	_____
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks	_____	_____	____/____	_____

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
to life or property?				
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of waste water?	_____	_____	_____	____/____

Criteria for Determining Significance

The analysis of significance of impacts on geology and soils is based on professional judgment and on criteria a-e in the environmental checklist. A project would also result in a significant impact if it would cause substantial accelerated soil erosion and sedimentation.

Impact Mechanisms

Geology, seismicity, and soil impact mechanisms include initiation of shallow landslides by improper alignment of a project route or improper installation of fiber optic cable and accelerated erosion caused by soil disturbance. However, Williams=engineering practices include designing a system that minimizes landslide or seismic risk to avoid damage to the fiber optic cable or the environment.

Impact Assessment

This section describes impacts and mitigation measures pertaining to geologic, seismic, and soil conditions that would be located along the project route. Potential water quality impacts caused by erosion and resulting sedimentation are described in the Hydrology and Water Quality@ section of this chapter, and impacts on agricultural lands are described in the Agricultural Resources@ section of this chapter.

The environmental impacts identified in this section were evaluated based on information provided in the references cited above and professional judgement.

- a. *Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. Strong seismic groundshaking? Seismic-related ground failure, including liquefaction? Landslides?*

Impact: Possible Temporary Damage to the Fiber Optic Cable System from Strong Earthquake-Induced Ground Shaking

The project route would pass through areas that are subject to strong earthquake-induced ground shaking. Strong ground shaking from one of these faults would not expose people to potential significant impacts, but could damage the three OP-AMP/regenerator stations. This impact is considered less than significant because the prefabricated structures would not be inhabited, are certified by the manufacturer to meet necessary seismic design standards, and any damage would not affect humans or the environment.

Mitigation Measure. None required.

Impact: Possible Temporary Damage to the Fiber Optic Cable System from Earthquake Fault Displacement

Ground surface displacement of earthquake fault traces could damage the fiber optic cable system where the project route would pass through faults. Although the fault movement could disrupt the operation of the fiber optic cable system, there would be no physical impact on humans or the environment. This impact is considered less than significant because the fiber optic cable system would be designed to accommodate earthquake fault offsets at the soil surface and because damage to the system would not have a significant impact on humans or the environment.

Mitigation Measure. None required.

b. Result in substantial soil erosion or the loss of topsoil?

Impact: Possible Temporary Accelerated Erosion and Sedimentation from Soil Disturbance and Vegetation Removal

Erosion is a natural process; however, accelerated erosion, which is the rate of erosion beyond that of natural erosion, generally occurs as a result of human activities. Soils that would underlie the project route, many of which are already disturbed, vary widely with respect to their erosion hazard. Ground-disturbing activities, including removal of vegetation, can cause increased water runoff rates and concentrated flows and may cause accelerated erosion. The eroded material (i.e., sediment) could degrade the quality of receiving waters.

Williams is required to prepare and implement a SWPPP for the project route, which would include mitigation measures to control accelerated erosion and sedimentation. Williams has already committed to these mitigation measures as part of the project. A SWPPP is required to be prepared for any project that entails soil disturbance of 5 or more acres and are submitted to the applicable RWQCB for approval before project commencement. Because the area of soil disturbance would be small within a given area, there would not be a significant opportunity for erosion to occur, except for those project route segments that would be aligned on steep slopes. The erosion and sediment control measures, if properly prescribed, implemented, and maintained, are expected to reduce erosion rates during and after construction to near preconstruction rates. By implementing these SWPPP mitigation measures, this impact is considered less than significant.

Mitigation Measure. No further mitigation is required.

c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the proposed project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?

Impact: Possible Temporary Damage to the Fiber Optic Cable System from Earthquake-Induced Liquefaction

The project route may pass through a few areas that are subject to earthquake-induced liquefaction. Liquefaction and resulting differential ground settlement and lateral spreading could damage the fiber optic cable system. The impact is considered less than significant because damage to the fiber optic cable system would not have a significant physical impact on humans or the environment.

Mitigation Measure. None required.

Impact: Possible Long-Term Slope Mass Failure

The fiber optic cable would be installed primarily on level to gentle slopes. However, in a few areas, installation would require excavation into steep slopes, some of which are subject to shallow mass movement (i.e., slumping or landsliding). In such areas, runoff water from areas upslope of the trench could percolate into the trench, saturate the soil, and increase soil pore water pressures in a localized area. Such a condition could increase the potential for a shallow mass movement.

The areas of existing and potential instability would be avoided to the extent practicable. Construction engineering conducted by Williams would evaluate areas where the project route would pass through a potentially unstable soil. The geotechnical analysis prepared in conjunction with the construction engineering may recommend that the fiber optic cable be rerouted or bored or trenched beneath the failure plane of the unstable area and that manholes and handholes not be constructed. It is unlikely that people or structures would be located downslope of the increased mass movement hazard area. For these reasons, this impact is considered less than significant.

Mitigation Measure. None required.

d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Impact: Potential Damage to the Cable System from Seasonal Soil Expansion and Contraction

The project route would pass through areas with soils that are considered expansive by the Uniform Building Code and by the USDA Natural Resources Conservation Service. If not properly engineered, seasonal soil expansion and contraction could damage the fiber optic cable system. This impact is considered less than significant because proper engineering and construction techniques would eliminate this hazard and any damage that does occur would not have a significant physical impact on humans or the environment.

Mitigation Measure. None required.

e. Leave soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of waste water?

No septic tanks or alternative wastewater disposal systems would be installed as part of the project. No impacts would occur.

Cumulative Impacts

Development in California has the cumulative impact of bringing additional people into potential contact with geologic hazards. In some instances, such as where mass grading occurs, a project may directly contribute to increased landslide hazard or soil erosion.

As described above, the project would not expose persons to substantial risk of loss, injury, or death relative to geologic hazards; result in substantial soil erosion; potentially result in landslides or other mass movement; create substantial risks due to expansive soils; or produce wastewater from septic tanks, sewers, or other disposal facilities. The contribution of the project to cumulative impacts would be less than significant.

VII. HAZARDS AND HAZARDOUS MATERIALS

	Potentially	Less than	Less than	No
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	Significant Impact	Significant with Mitigation Incorporated	Significant Impact	Impact
VII. HAZARDS AND HAZARDOUS MATERIALS - Would the proposed project:				
1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	_____	_____/_____	_____	_____
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	_____	_____/_____	_____	_____
3. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	_____	_____	_____/_____	_____
4. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	_____	_____/_____	_____	_____
5. Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the proposed project area?	_____	_____	_____	_____/_____
6. Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the proposed project area?	_____	_____	_____	_____/_____

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
7. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	_____	____/____	_____	_____
8. Expose people or structures to the risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	_____	____/____	_____	_____

Criteria for Determining Significance

The analysis of significance of impacts related to hazards and hazardous materials is based on criteria *a-h* in the environmental checklist and on the following factors:

- # potential hazards and/or hazardous materials encountered during trenching or any subsurface excavation and
- # proper disposal of hazardous materials encountered during trenching or any subsurface excavation.

Impact Mechanisms

Potential impacts associated with the proposed project could include:

- # potential exposure to existing contaminated soils, contaminated groundwater, abandoned underground storage tanks and piping, and contaminated material from existing undocumented dumping and landfilling;
- # potential exposure to, and releases of, hazardous materials, such as oils, grease, lubricants, and solvents, used during normal construction operations; and
- # potential risk of upset to the public or the environment.

Impact Assessment

- a. *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? or*
- b. *Would the proposed project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials?*

Impact: Possible Temporary Exposure to or Release of Hazardous Materials during Construction

The project would not require long-term storage, treatment, disposal, or transport of hazardous materials; however, small quantities of hazardous materials will be stored, used, and handled during construction. The

hazardous materials anticipated to be used are small volumes of petroleum hydrocarbons and their derivatives (e.g., gasoline, oils, lubricants, solvents) required to operate the construction equipment. These materials could be released in accidental spills.

This impact is considered less than significant because a SWPPP, which includes methods to protect water quality in response to emergency spills, has been prepared for the project. Additionally, Williams has adopted the following mitigation measure as part of the construction mitigation strategy for the project.

Subsurface hazardous materials may be encountered during construction. A regulatory database search is being conducted for the project route to identify and avoid known contaminated sites so that they can be avoided. The results of the database search are being used by Williams to avoid known contaminated sites. However, during construction, the construction team may encounter unexpected materials that may be considered hazardous waste once they are exposed. Procedures for proper handling and disposal are established by federal, state, and local regulations. Williams=contractors would be trained in the handling of such materials prior to construction.

A transaction screen environmental site assessment is being conducted by Williams for each OP-AMP/regenerator station. Williams would not locate OP-AMP/regenerator stations on known contaminated sites.

Mitigation Measure H-1: Ensure Proper Labeling, Storage, Handling, and Use of Hazardous Materials. The construction contractor would ensure proper labeling, storage, handling, and use of hazardous materials in accordance with BMPs and the Occupational Safety and Health Administration's (OSHA's) Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements. The construction contractor would ensure that employees are properly trained in the use and handling of these materials and that each material is accompanied by a material safety data sheet. Additionally, any small quantities of hazardous materials stored temporarily in staging areas would be stored on pallets within fenced and secured areas and protected from exposure to weather. Incompatible materials would be stored separately, as appropriate.

To avoid unexpected releases of hazardous materials, the construction team would have a written plan outlining response procedures if hazardous materials are unexpectedly encountered. The plan would specify identification, handling, reporting, and disposal of hazardous materials. All hazardous waste materials removed during construction, to the extent necessary to ensure that the area can be safely traversed, would be handled and disposed of by a licensed waste disposal contractor and transported by a licensed hauler to an appropriately licensed and permitted disposal or recycling facility. Williams would require in its contracts that contractors meet federal, state, and local requirements.

c. Would the proposed project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No hazardous emissions would be generated by the project. No hazardous emissions or acutely hazardous materials, substances, or waste would be handled within 0.25 mile of an existing or proposed school. The construction contractor would not locate a staging area near an existing or proposed school. Therefore, this is a less-than-significant impact.

All institutional controls governing the storage, transportation, use, handling, and disposal of hazardous materials would be followed by project personnel during construction of the project.

d. Would the proposed project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would create a significant hazard to the public or the environment?

Impact: Possible Exposure of the Public or Environment to Hazardous Materials Sites

As noted above, a regulatory database search is currently being conducted to locate areas along the project route that may be viewed as potential areas of hazardous materials contamination or locations where it is permitted to perform various hazardous waste activities.

State and federal laws regulate the manner in which contamination and hazardous conditions are investigated and remediated. Contaminated sites can be expected along some of the urbanized areas of the project route. The U.S. Environmental Protection Agency and California Environmental Protection Agency maintain databases listing known contaminated sites. These databases include information about leaking underground storage tanks; hazardous waste generators; treatment, storage, and disposal facilities; sites known to have contaminated groundwater; and sites currently undergoing remediation or corrective action. A search of these locations is currently being performed for the project route. Coordination with waste disposal activities with local regulatory agencies would be needed along the project route. This impact is considered less than significant because all listed hazardous materials sites would be identified prior to construction and avoided through modifying the project route or by siting OP-AMP/regenerator stations to another location.

Mitigation Measure: No further mitigation is required.

e. For a proposed project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the proposed project result in a safety hazard for people residing or working in the proposed project area?

As discussed in Chapter 2, **Project Description**, the project would involve the installation of conduit and cable in railroad and road rights-of-way. There would be no resultant structures that would impair airport operations or endanger other land uses. As a result, the project would have no impact.

f. For a proposed project in the vicinity of a private airstrip, would the proposed project result in a safety hazard for people residing or working in the proposed project area?

As discussed above, the project would not result in a safety hazard for people working or residing in the surrounding area. No trenches or holes would be left open overnight, and no equipment or construction materials would remain accessible to the public once construction activities cease for the day. Therefore, there is no impact.

g. Would the proposed project impair implementation of or physically interfere with an adopted emergency response or evacuation plan?

Impact: Possible Temporary Limited Emergency Access

The project would involve the operation of heavy machinery. Emergency response times may be affected where the project route would be adjacent to or within road rights-of-way. Emergency access would be regulated as a condition of road encroachment permits by the applicable regulatory agency. Also, as discussed in Chapter 2, **Project Description**, Williams would implement a traffic control measures as required by the local jurisdiction.

This is part of the standard construction strategy of the project to further reduce impacts on traffic and emergency response vehicles. This is a less-than-significant impact.

Mitigation Measure. No further mitigation is required.

- h. *Would the proposed project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

Impact: Possible Temporary Exposure of People or Structures to Wildland Fires

The project would not expose people or structures to a significant risk of loss, injury, or death attributable to wildland fires. This impact is considered less than significant because Williams will prepare and implement a fire prevention and management plan for the project route (**Appendix J**).

Mitigation Measure. No further mitigation is required.

Cumulative Impacts

The proposed project would not be expected to make a considerable contribution toward hazard or hazardous materials impacts. Contaminated soils or other materials may be unexpectedly encountered along the project route and would require appropriate handling and disposal by a licensed contractor. Because the characteristics and the volume of hazardous materials that could be unexpectedly encountered during construction cannot be determined, the possible cumulative impact is only speculative. Some materials encountered along the project route may be recyclable, which would reduce any possible impact on hazardous waste disposal/landfill capacity to a less-than-significant level. The cumulative impact of disposal of contaminated materials unexpectedly encountered along the project route is considered a less-than-significant impact because of regulatory safeguards that limit exposure and require controlled handling and disposal.

VIII. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. HYDROLOGY AND WATER QUALITY - Would the proposed project:				
1. Violate any water quality standards or waste discharge requirements?	_____	_____ / _____	_____	_____
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	_____	_____	_____	_____ / _____
3. Substantially alter the existing	_____	_____	_____	_____ / _____

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite?				
4. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?	_____	_____	_____	_____/_____
5. Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	_____	_____	_____	_____/_____
6. Otherwise substantially degrade water quality?	_____	_____	_____	_____/_____
7. Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	_____	_____	_____	_____/_____
8. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	_____	_____	_____	_____/_____
9. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	_____	_____	_____	_____/_____
10. Contribute to inundation by seiche,	_____	_____	_____	_____/_____

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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tsunami, or mudflow?

Criteria for Determining Significance

The analysis of the significance of impacts from the project is based on criteria *a-j* in the environmental checklist. In addition, the potential for significant impacts on hydrologic conditions and water quality from construction activities was evaluated based on the intensity, duration, and timing of the various disturbances of aquatic and riparian resources. State and federal agencies implement policies aimed at managing these three factors and keeping the risk of water quality degradation within safe levels to protect human and aquatic life. With the evolution of ecosystem management, both the magnitude of each factor and the processes that it affects are important.

The intensity of an impact relates not only to its location and areal extent but also to Atypical mean and extreme values observed in the ecosystem. State water quality standards (WQSs) set criteria for parameters with these ranges of values in mind to represent threshold values over or under which the exceedance may become significant. In addition to WQSs, aquatic and riparian habitat parameters, such as spawning area and recruitment of woody debris, have baseline conditions that need to be maintained. In all cases, the location and magnitude of an impact influence whether a parameter will be significantly affected. Agencies may issue a variance, recognizing that certain exceedances of standards are permissible for periods of limited duration.

The timing of water quality impacts is important because it can affect whether reproductive and migratory cycles of aquatic biota or other seasonal beneficial uses are affected. State resource agencies have established preferred construction windows (if in-water work is needed) to minimize the potential impacts of in-water construction on the reproductive and migratory cycles of aquatic organisms, particularly anadromous salmonids.

Impact Mechanisms

Potential construction-related impact mechanisms for water quality include the following:

- # Conduit and cable installation and associated soil disturbance could cause road embankment or channel bed and bank erosion (the latter on dry stream crossings only). Construction equipment can compact soils, leading to accelerated runoff and concentration in localized areas prone to sheet erosion and gullyng. Disturbing ditch lines, which function as extensions of the stream network, also could result in fine sediment deposition into natural stream courses.
- # Removal of riparian vegetation can weaken streambank structure and increase its susceptibility to erosion. Disturbance to the geomorphic characteristics and stability of the channel bed and banks may initiate long-term readjustments (chronic erosion) in self-formed alluvial channels.
- # Hazardous materials associated with the proposed project would be limited to those substances associated with construction equipment, such as gasoline, diesel fuels, engine oil, and hydraulic fluids. An accidental spill of these substances could contaminate drainages, soils, wetlands, and other environmentally sensitive areas.
- # Use of guided boring equipment could result in an accidental bentonite spill into, or adjacent to, stream channels. Bentonite is a non-toxic drill lubricant made from a mixture of clay and water.

There will be no operation- or maintenance-related impact mechanisms.

Impact Assessment

Operation and maintenance activities of the project would be expected to be minor, because access points would already exist and substantial land or vegetation disturbance activities would not be required. Operation and maintenance activities would follow the same guidelines and restrictions as construction activities; therefore, no effects on hydrology and water quality would be anticipated.

a. *Violate any water quality standards or waste discharge requirements?*

Impact: Possible Temporary Transport of Sediment to Waterbodies

Project construction would not require in-water work in drainages supporting sensitive resources (i.e., streams that support sensitive fish, amphibians, or other riparian and water-dependent species or waters that are water quality impaired by sediments). At stream crossings that are flowing at the time of construction, Williams would either attach the conduit to an existing bridge, install the conduit over or under existing culverts, or bore under the stream. Williams may install fiber optic cable across drainages by trenching if the stream is dry during construction or through small flowing streams that do not support sensitive resources.

There is potential for surface runoff to transport upland sidecast trench spoils into streams, which could result in temporary increases in turbidity and sedimentation in watercourses downstream of the project route. Temporary increases in turbidity or sedimentation could be adverse if the rate of sediment generation exceeds the rate of sediment transport in a stream, a frequent occurrence during wet weather. Excessive sediment in the water column (increased turbidity) can interfere with fish feeding behavior and with photosynthesis in aquatic flora. Sediment deposition on the channel bed can displace aquatic fauna and prevent adequate water circulation through fish eggs in spawning beds. Trench spoils generated during construction would be stored on the project route for a short time (generally less than 1 day). To minimize the exposure of sediments to runoff, Williams will make best efforts to ensure that all trenches are backfilled at the end of each work day. Where backfilling the trench is not feasible, proper erosion control features would be established to eliminate or minimize exposure of sediments to runoff.

This impact is considered less than significant because Williams would not perform in-water work in sensitive drainages, would isolate flow from construction areas in nonsensitive streams, would use aggressive construction BMPs to minimize sediment transport to streams from upland, would compact and regrade affected areas to match adjacent natural areas, and would seed and mulch or allow natural revegetation at constructed sites, as described in Chapter 2, *Project Description*, Williams would apply for authorization under the National Pollutant Discharge Elimination System (NPDES) stormwater permit for general construction activity to the North Coast RWQCB and Central Valley RWQCB. Williams would prepare a SWPPP and implement appropriate erosion control BMPs for all construction activities that could discharge contaminated runoff into offsite stormwater runoff and occur within the rainy season of October 1 to May 1. Williams has also adopted additional mitigation measure B-6, *Avoid Riparian and Wetland Habitats That Support Special-Status Species by Establishing and Observing Exclusion Zones* and measures described under *General Project Commitments* in the *Biological Resources* section above as part of the construction mitigation strategy for the project.

The SWPPP would include measures to minimize erosion and sediment transport to streams and also identifies BMPs (e.g., water diversion and sediment containment devices, protection of trench spoils, installation of water bars), site restoration, postconstruction monitoring of the effectiveness of BMPs, contingency measures, contractor responsibilities, responsible parties, and agency contacts. Erosion control measures include storing trench spoils outside the stream or ditch corridor (above the ordinary high-water mark) and protecting receiving

waters from these erosion source areas with sedimentation fences or other effective sediment control devices. Possible subsurface soil erosion of the trench backfill material would be controlled by using trench plugs. Additionally, stream channels may be protected from surface runoff along the project route with sedimentation fences or other sediment control devices placed in roadside drainage ditches downstream of construction. Trench spoils would be backfilled into the trenches at the end of each work day to minimize sediment exposure to runoff. The surface of the project route would be restored (to a condition appropriate for the location) within 7 days of fiber optic cable installation.

Mitigation Measure. No further mitigation is required.

Impact: Possible Temporary Disruption of Bed and Bank Sediments in Channels during Fiber Optic Conduit and Cable Installation

Trenching across dry drainages or small nonsensitive flowing drainages to install conduit and cable could cause disruption of the bed and bank sediments. This sediment disruption could result in some suspension of sediment in the water column and a corresponding increase in turbidity and sedimentation downstream during subsequent precipitation events that contribute flow to the channel.

As described in Chapter 2, **Project Description**, Williams would use noninvasive construction methods that mitigate significant impacts on water quality at flowing sensitive stream crossings. Conduit and cable installation at these crossings would be limited to boring under sensitive streams, installation of conduit and cable over or under existing culverts, or attaching the conduit to an existing bridge. Possible impacts of installation of conduit at sensitive stream crossings are considered less than significant because Williams would use noninvasive construction methods as part of the project that do not disturb the beds or banks of streams.

Also as noted in Chapter 2, **Project Description**, Williams could install conduit and cable in streams that are dry at the time of construction or in small, nonsensitive flowing streams by plowing or trenching. Although these methods do disturb the bed and banks of streams, the possible impacts of these crossings to water quality are not considered significant because flows, if present, would be small, the drainages would not support resources that are considered sensitive, and if temporary, localized elevations in turbidity should occur or are anticipated, construction BMPs would be implemented. On completion of construction, the site would be restored. Any alterations to the beds and banks would be covered in the DFG streambed alteration agreements.

The possible impacts of installing conduit and cable through dry drainages are considered less than significant because Williams would use construction BMPs and would prepare and implement a SWPPP, which would include regrading and compacting backfilled drainages and trenches to match natural, adjacent site conditions as part of the construction mitigation strategy of the project.

Mitigation Measure. No further mitigation is required.

Impact: Possible Long-Term In-Channel Erosion and Deposition from Decreased Channel Stability

Removing riparian vegetation along drainages could weaken streambank structure and increase susceptibility to erosion. Disturbing the geomorphic characteristics and stability of the channel bed and banks may initiate long-term readjustments (chronic erosion) in self-formed, alluvial channels.

A significant impact could occur if large amounts of riparian vegetation are removed, the channel bed and banks on several crossings of one channel or within one watershed are disturbed, or sensitive crossing sites that have been disturbed mechanically are further disturbed by high-flow events before they are stabilized. However, this impact is considered less than significant because the project route would be within existing disturbed rights-

of-way that generally do not contain riparian vegetation (except where some vegetation has encroached on the rights-of-way) and Williams would use, noninvasive construction methods at flowing sensitive streams as part of the project design. In addition, Williams has adopted mitigation measure B-6, **Avoid Riparian and Wetland Habitats That Support Special-Status Species by Establishing and Observing Exclusion Zones** (described in the **Biological Resources** section) as part of the construction mitigation strategy for the project.

Mitigation Measure. No further mitigation is required.

Impact: Possible Temporary Degraded Water Quality from Accidental Spills of Hazardous Materials during Construction

Hazardous materials associated with the project would be limited to those substances associated with construction equipment, such as gasoline, diesel fuels, engine oil, and hydraulic fluids. Accidental spills of these substances could contaminate drainages, soils, wetlands, and other environmentally sensitive areas.

This impact is considered less than significant because Williams would prepare and implement a SWPPP, including spill prevention measures, that would be strictly implemented as part of the construction mitigation strategy for the project. The contractor would follow the SWPPP and perform measures to ensure that petroleum products are not discharged into drainages or bodies of water. The plan would address measures to minimize the potential for bentonite seeps. Elements of the plan include a description of potentially hazardous and nonhazardous materials that could be spilled accidentally during construction (fuels, equipment lubricant, human waste and chemical toilets, and bentonite); potential spill sources, potential spill causes, proper storage and transport methods, spill containment, spill recovery, agency notification, and responsible parties.

As described in the SWPPP, hazardous substances would be stored in staging areas located at least 150 feet from streams and other surface waters. Refueling and vehicle maintenance would be performed at least 150 feet from these receiving waters. Sedimentation fences, certified weed-free straw bales, sand bags, berms, and baffles would be used as additional sources of protection for waters, ditches, and wetlands.

Mitigation Measure. No further mitigation is required.

Impact: Possible Temporary Water Quality Degradation and Siltation from Accidental Seepage of Bentonite into Streams

As mitigation built into the construction approach, Williams would install conduit and cable under sensitive flowing streams by boring under the streams, installing the conduit under or over existing culverts, or attaching the conduit to existing bridges (see Chapter 2, **Project Description**). During the boring operation, bentonite is used to lubricate the bore and help remove cuttings from the borehole. Although unlikely, the bentonite mixture can seep to the surface within a stream channel. Seepage could happen if bores encounter fractures in the underlying rock, and bentonite pressures are great enough to allow the material to surface.

This impact is considered less than significant because Williams would strictly implement the SWPPP to minimize the potential for bentonite seeps to streams.

Several measures would be included in the SWPPP to minimize the potential for bentonite seeps, including requiring boring crews to strictly monitor drilling fluid pressures, retaining containment equipment onsite, monitoring waters downstream of the crossing sites to identify any seeps quickly, immediately stopping work if a seep into a stream is detected, immediately implementing containment measures, adhering to agency reporting requirements, and identifying responsible parties.

To ensure that the impacts from any accidental seepage of bentonite into streams would be further reduced to a less-than-significant level, Williams has adopted the mitigation measures under **AGeneral Project Commitments** described in the **ABiological Resources** section above as part of the construction mitigation strategy for the project.

Mitigation Measure. No further mitigation is required.

- b. *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (i.e., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?*

The project would consist of the installation of fiber optic cable and conduit through a variety of means. Depth of the fiber optic cable typically would not exceed 48 inches, except under special circumstances such as boring under rivers. It would have no impact on ground water supplies or interfere with groundwater recharge because the project has been designed to avoid this impact.

- c. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite?*

The project has been designed so that no in-water work in sensitive water bodies (i.e., waterbodies supporting critical habitat or listed or proposed species) would occur during the construction of the project. The project would not alter existing drainage patterns through the alteration of a stream or river course or of upland areas, as the rights-of-way will be regarded to preconstruction contours. In all cases, the conduit would either be installed on a bridge or other existing river or stream crossing or will be bored under flowing water courses. No impact would occur because the project has been designed to avoid this impact.

- d. *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?*

The project has been designed so no in-water work in sensitive water bodies (i.e., waterbodies supporting critical habitat or listed or proposed species) would occur during the construction of the project. The project would not alter existing drainage patterns through the alteration of a stream or river course. In all cases, the conduit would either be installed on a bridge or other existing river or stream crossing or bored under flowing water courses. No impact would occur because the project has been designed to avoid this impact.

- e. *Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

The project would not create or contribute runoff water to drainage systems.

- f. *Otherwise substantially degrade water quality?*

The project would not create or contribute to water quality impairment other than the temporary disturbances described for checklist question **Aa**.

- g. *Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

The project would not include the construction or placement of housing within floodplains.

h. Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

The project would not affect floodplain capacity because the fiber optic cable would be installed approximately 4 feet below the ground surface.

i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

The project would not affect any surface water flows nor increase the risk of flooding.

j. Contribute to inundation by seiche, tsunami, or mudflow?

The project would not affect the potential for inundation by seiche, tsunami, or mudflow.

Cumulative Impacts

The cumulative effect of a temporary, small increase in sediment load would be minimal. Because the direct and residual effects of trench spoils erosion would be minor, no cumulative impacts would be expected. Successful spill prevention would result in no cumulative impacts.

IX. LAND USE AND PLANNING

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
IX. LAND USE AND PLANNING - Would the proposed project:				
a. Physically divide an established community?	_____	_____	_____	____/____
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the proposed project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	_____	____/____	_____	_____
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	_____	_____	____/____	_____

Criteria for Determining Significance

The analysis of significance of impacts of the proposed project is based on criteria *a-c* in the environmental checklist and on the following factors:

- # substantial changes to land uses along the project route,
- # incompatibility with long-term uses on adjacent properties, or
- # conflict with applicable land use plans.

Impact Mechanisms

All cities and counties in California are required to adopt a general plan establishing goals and policies for their future development. To implement their plans, local jurisdictions adopt zoning, subdivision, grading, and other

ordinances. A project may have an impact on the local general plan by proposing actions that would conflict with planning goals, policies, or regulations adopted to avoid or minimize environmental impacts. A project may disrupt land use patterns by physically dividing a community (e.g., freeway construction).

Impact Assessment

a. Physically divide an established community?

The proposed project consists of the installation of fiber optic cable within existing, disturbed rights-of-way and construction of three OP-AMP stations on private land. Conduit and cable would be installed either underground or attached to existing bridges and would cause minimal disruption during construction. The project would not create any structures or other features large enough or intrusive enough to divide an established community. Therefore, the project would have no impact.

b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the proposed project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? or

Impact: Possible Conflict with Local Land Use Plans

CEQA evaluates both physical changes in the environment that may result from the implementation of a project and whether those changes are significant (State CEQA Guidelines Section 15378). The project may conflict with local land use plans and regulations adopted for the purpose of avoiding and mitigating an environmental effect. Pursuant to Section 15064(h) of the State CEQA Guidelines, this impact would be less than significant as long as the project complies with these standards. As such, Williams has adopted the following mitigation measure as part of the construction mitigation strategy for the project.

Mitigation Measure LU-1: Obtain and Comply with Local Zoning Permits. Williams would obtain necessary local zoning permits prior to construction of facilities and comply with the applicable conditions of approval.

c. Conflict with any applicable habitat conservation plan or natural community conservation plan?

Impact: Possible Conflict with Habitat Conservation or Natural Community Conservation Plans

The proposed construction within existing rights-of-way would have no impact on local habitat and natural community conservation plans. The two OP-AMP/regenerator stations would be located along the project route east of Clearlake Oaks and north of Arbuckle and would be constructed in largely undeveloped areas. Neither site is designated as a habitat conservation or natural community conservation plan area. The typical building footprint of a OP-AMP/regenerator station would be a pad measuring approximately 30 by 97 feet. Williams estimates that three to eight precast concrete buildings would be installed. Site security would be achieved by placing the stations within 150- by 275-foot fenced areas. As in the design mitigation discussed in Chapter 2, **Project Description**, the stations would be located on sites that do not support sensitive biological or cultural resources. Therefore, this would have a less-than-significant impact.

Mitigation Measure. None required.

Cumulative Impacts

The project would neither result in the physical division of a community or leave evidence of its existence, other than the three OP-AMP/regenerator stations. Further, any necessary discretionary permits would be obtained from state and federal agencies relative to habitat conservation plans, thereby ensuring compliance with such plans, and from local agencies relative to zoning regulations. The project would make little contribution to any cumulative effect.

X. MINERAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
X. <u>MINERAL RESOURCES</u> - Would the proposed project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	_____	_____	_____	_ / _
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	_____	_____	_____	_ / _

Criteria for Determining Significance

The analysis of significance of impacts of the project is based on criteria *a* and *b* in the environmental checklist and the fact that the project is within railroad and road rights-of-way and construction of the project will only require excavation to a shallow depth.

Impact Mechanisms

Projects with the potential for limiting the availability of mineral resources are those that would build over the resources; place sensitive uses such as housing or schools adjacent to surface mines or other resource recovery activities, thereby restricting their operations; or shut off access to the resource.

Impact Assessment

- a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? and*
- b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

The project route is located within existing railroad and road rights-of-way, which limits their availability for surface mining. All of the OP-AMP/regenerator station sites are located on private property outside of rights-of-way. Therefore, the OP-AMP/regenerator sites would have a greater potential for mineral resource recovery. None of the OP-AMP/regenerator stations along the project route would be installed in areas classified as Mineral Resource Zone-3.

Locating OP-AMP/regenerator stations within areas of possible mineral deposits could limit future access to those sites. However, because none of the OP-AMP/regenerator sites are classified as Mineral Resources Zone-3, there is no impact on mineral resources.

Cumulative Impacts

The installation of conduit and cable in existing rights-of-way would not affect the prior ability to access mineral resources within these rights-of-way. The limited number of OP-AMP/regenerator stations that would be installed and Williams' preference to build them at existing substations and keep them out of 100-year floodplains greatly limits the potential that any such station would interfere with an existing or future mineral resource recovery operation. Therefore, the project would not cause any cumulative impact on mineral resources.

XI. NOISE

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XI. NOISE - Would the proposed project:				
1. Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	_____	_____/____	_____	_____
2. Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	_____	_____	_____/____	_____
3. Result in a substantial permanent increase in ambient noise levels in the proposed project vicinity above levels existing without the proposed project?	_____	_____/____	_____	_____
4. Result in a substantial temporary or periodic increase in ambient noise levels in the proposed project vicinity above levels existing without the proposed project?	_____	_____/____	_____	_____
5. Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the proposed project area to excessive noise levels?	_____	_____	_____	_____/____
6. Be located in the vicinity of a private airstrip and expose people residing or	_____	_____	_____	_____/____

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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working in the proposed project area to excessive noise levels?

Criteria for Determining Significance

The analysis of significance of impacts of the project is based on criteria *a-f* in the environmental checklist. In addition, city and county governments typically use noise elements, which are part of the general plan, to evaluate long-term noise-related land use compatibility for development of an area, and noise ordinances to regulate noise from specific sources such as unmuffled automobiles, music and parties, industrial activities, and construction. Because the project falls under the second category typically regulated by noise ordinances, noise element criteria would typically not apply.

Each city and county typically enacts its own noise ordinance standards; however, most noise ordinances are fairly similar. Noise ordinances generally set limits on acceptable noise levels at the property line of the affected land use based on the background noise level, the noise level from the source in question, the duration of the noise event, and the time of day. Noise ordinances often contain exemptions for construction activities, provided that the construction activity occurs during hours specified by affected local jurisdictions. There are no established noise thresholds for wildlife species; accordingly, noise impacts on wildlife are generally addressed qualitatively. For purposes of this analysis, noise environments considered to be acceptable for human use are considered acceptable for wildlife species.

Project-related noise would occur from use of construction equipment and construction activity associated with fiber optic cable installation and operation of support equipment at OP-AMP/regenerator stations. Noise levels along the project route would increase, and noise-sensitive receptors, such as residences, schools, hospitals, places of worship, recreation areas, and wildlife species, located near construction areas could be affected. The effect of increased noise levels would be somewhat diminished because most construction activity is expected to take place during daylight hours, when background noise levels are generally highest and people's tolerance is highest. Because construction crews are expected to move quickly, construction noise would be audible for only one day or less.

For this analysis, a noise impact is considered significant if project-related noise at a noise-sensitive land use or receptor has the potential to exceed typical noise ordinance standards. To keep this analysis reasonably conservative, the analysis does not presume that construction activity is exempt from regulations.

Noise generated from the project would be expected to be less than noise currently generated by trains or automobiles using the various rights-of-way.

Impact Mechanisms

The impact mechanism is the generation of noise by construction equipment, diesel-powered emergency backup generators, or other support equipment at OP-AMP/regenerator stations that would affect nearby noise-sensitive receptors.

Impact Assessment

- a. *Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?*

Noise-generating activities associated with the project would be related primarily to construction activities. Typical construction equipment that would be used includes rubber-tired backhoes, tracked vehicles, tractors, and directional boring equipment. All construction activities would occur during daylight hours, except for possible limited nighttime boring activities in isolated areas.

Construction of OP-AMP/regenerator stations and potential access road improvements would also involve the use of noise-generating equipment. Grading is expected to be the noisiest activity associated with such construction.

Table 5A.XI-1 summarizes typical noise levels produced by the construction equipment that would be expected to be used for grading and in-ground fiber optic cable installation.

Table 5A.XI-1. Summary of Construction Noise Sources

Equipment	Sound Level at 50 Feet (dBA-Leq)
Backhoe	80
Grader	85
Bulldozer	85

Source: Federal Transit Administration 1995.

Noise associated with the project would be expected to come primarily from fiber optic cable installation and construction of OP-AMP/regenerator stations. Noise may also be associated with operation of diesel-powered emergency backup generators and other support equipment, such as heating, ventilation, and air conditioning (HVAC) equipment, at the OP-AMP/regenerator stations. In California, noise from these types of operations is regulated only at the local level.

Impact: Temporary Exposure of Residences and Other Sensitive Receptors to Construction Noise in Excess of Local Standards

A bulldozer would be expected to be the noisiest piece of equipment used at any construction site, and other highly noisy equipment would likely not be used concurrently with a grader. Therefore, the assessment of potential noise impacts associated with in-ground conduit and cable installation or other construction activities is based on a worst-case source level of 85 dBA at 50 feet. Noise levels that could potentially occur in the vicinity of fiber optic cable installation or other construction sites based on this source level are summarized in **Table 5A.XI-2**. This table includes attenuation factors from distance, molecular absorption, and anomalous excess attenuation (Hoover 1996). Locations within approximately 2,000 feet of an active construction site have the potential to be exposed to noise levels exceeding 50 dBA. Many local noise ordinances use sound levels in the range of 50 to 55 dBA as thresholds for violation near residential uses during daylight hours. Lake County uses 55 dBA. Residences or other sensitive receptors would be located within 2,000 feet of many portions of the project route and may be exposed to noise in excess of local standards. Construction noise may substantially increase noise above background sound levels. However, construction within existing railroad or road rights-of-way would typically not be expected to generate noise that would be significantly greater than noise generated by trains or automobiles.

Table 5A.XI-2. Estimated Noise in the Vicinity of an Active Construction Site

Distance to Receptor (feet)	Sound Level at Receptor (dBA)
50	85
100	79
200	73
500	64
600	62
800	60
1,000	57
1,500	53
2,000	50
2,500	47
3,000	44
4,000	40
5,280	36
7,500	29

Notes: The following assumptions were used:

Basic sound level drop-off rate:	6.0 dB per doubling of distance
Molecular absorption coefficient:	0.7 dB per 1,000 feet
Anomalous excess attenuation:	1.0 dB per 1,000 feet
Reference sound level:	85 dBA
Distance for reference sound level:	50 feet

This calculation does not include the effects, if any, of local shielding that may reduce sound levels further.

This impact is considered less than significant because Williams has adopted the following mitigation measure as part of the construction mitigation strategy for the project.

Mitigation Measure N-1: Employ Noise-Reducing Construction Practices. When installing and constructing the fiber optic cable system, Williams would employ the following noise-reducing measures:

- # Restrict construction activities along the project route and at staging areas within 1,000 feet of residences to daytime hours (7:00 a.m. to 7:00 p.m.). No construction would occur within 3,000 feet of an occupied dwelling unit on Sundays, legal holidays, or between the hours of 7:00 p.m. and 7:00 a.m. on other days.
- # All equipment would have sound-control devices that are no less effective than those provided on the original equipment. No equipment will have an unmuffled exhaust.

- # As directed by the local jurisdiction, Williams would implement appropriate additional noise mitigation measures to comply with the applicable local noise ordinance, including, but not limited to, changing the location of stationary construction equipment, shutting off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, or installing acoustic barriers around stationary construction noise sources.
- # If traffic control devices requiring electrical power are employed within 500 feet of sensitive receptors, the devices would be battery/solar powered instead of powered by electrical generators.

b. *Expose persons to or generate excessive groundborne vibration or groundborne noise levels?*

Impact: Temporary Exposure of Residences or Other Sensitive Uses to Localized Groundborne Vibration and Noise

Directional boring and drilling and operation of heavy equipment may generate localized groundborne vibration and noise that could be perceptible at residences or other sensitive uses close to the activity. Groundborne noise is noise radiated by vibrating ground and structures supported on vibrating ground. Construction within active railroad rights-of-way would not create significantly more ground vibration than passing trains. Because potential groundborne vibration and noise would be temporary and would occur only during daylight hours, groundborne vibration and noise impacts are considered less than significant.

Mitigation Measure. None required.

c. *Result in a substantial permanent increase in ambient noise levels in the proposed project vicinity above levels existing without the proposed project?*

Impact: Exposure of Nearby Sensitive Receptors to Excessive Noise Levels from Use of Emergency Backup Generators and Other Support Equipment at OP-AMP/Regenerator Stations

A permanent source of noise associated with ongoing operation of the project would be a diesel-powered emergency backup generator at each OP-AMP/regenerator station to provide power to each station during a power outage. Other support equipment, such as HVAC equipment, may also generate noise. The backup generator would be located outside the precast concrete structure that houses the regeneration equipment and would be operated temporarily only during a power outage or when the backup generator is being tested or serviced. Backup generators used at these facilities are typically powered by a 255-horsepower diesel-driven reciprocating engine. An engine of this type and size would produce a sound level of about 84 dBA at 50 feet (Hoover 1996). HVAC equipment would be used to control the regeneration equipment in the facility to protect electronics. The size, type, and degree of use of this equipment would vary, depending on the climate in which the facility is located.

The backup generators would be installed with a standard sound-attenuating enclosure. A standard enclosure would be expected to provide approximately 15 dB of sound reduction. With an enclosure in place, the 84 dB source level would be reduced to approximately 69 dBA. The noise level produced by HVAC equipment would vary, depending on climate. Noise produced by this equipment could potentially be equal to the noise produced by the backup generator. Based on this source level, noise-sensitive uses within approximately 500 feet of a OP-AMP/regenerator station could be exposed to noise in excess of 50 dBA. Noise-sensitive uses within 1,400 feet of a OP-AMP/regenerator station could be exposed to noise in excess of 40 dBA. An emergency power outage could require extended use of the backup generator and result in exposure of nearby sensitive receptors to noise levels exceeding local day and night noise ordinance standards or to excessive noise increases. Noise from HVAC

equipment could have similar results. This impact is considered less than significant because Williams has adopted the following mitigation measure as part of the construction mitigation strategy of the project.

Mitigation Measure N-2. Design and Locate Emergency Backup Generators and Other Support Equipment to Limit Noise from the Engine Generator. Williams would design and locate the backup generators and other support equipment at OP-AMP/regenerator stations such that the noise produced does not exceed local noise ordinance criteria.

Potential methods for achieving this level include locating the facility away from noise-sensitive uses and using local shielding from the building structure, topography, or sound walls to reduce noise transmission to sensitive receptors.

d. Result in a substantial temporary or periodic increase in ambient noise levels in the proposed project vicinity above levels existing without the proposed project?

Construction activities would result in a temporary increase in noise. Refer to the response to question *a* above.

e. Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the proposed project area to excessive noise levels?

This question is not applicable to the project.

f. Be located in the vicinity of a private airstrip and expose people residing or working in the proposed project area to excessive noise levels?

This question is not applicable to the project.

Cumulative Impacts

There are no cumulative noise impacts associated with the project because noise impacts would be anticipated to be temporary and highly localized.

XII. POPULATION AND HOUSING

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XII. POPULATION AND HOUSING - Would the proposed project:				
1. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and business) or indirectly (e.g., through extension of roads or other infrastructure)?	_____	_____	_____	_____ / _____
2. Displace a substantial number of	_____	_____	_____	_____ / _____

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
existing housing units, necessitating the construction of replacement housing elsewhere?				
3. Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	_____	_____	_____	/

Criteria for Determining Significance

The analysis of significance of impacts of the project is based on criteria *a-c* in the environmental checklist.

Impact Mechanisms

Projects that would introduce substantial population growth or make such growth possible (i.e., new sewer line or road) would significantly affect population and housing. In addition, projects that would displace substantial housing or necessitate the construction of replacement housing might also have a significant impact.

Impact Assessment

- a. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and business) or indirectly (e.g., through extension of roads or other infrastructure)?*

There would be no direct access to the fiber optic cable. The project is not a form of infrastructure like roads, water, or sewer lines that can induce population growth within specific areas. The availability of high-speed, high-volume communications is one factor among many (e.g., cost of living, economic opportunities, market availability, quality of schools, salary levels, tax levels) in the decision by people and businesses to locate in California. Therefore, the proportional contribution of the project to California's future growth would be too remote and speculative for analysis. Also, the volume of traffic originating or terminating in California cannot be differentiated from the amount of traffic passing through California. The indirect impact of this project and others of its type on such growth is only speculative. No impact would occur.

- b. Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere? or*

- c. Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?*

The project would serve existing and future telecommunications demand through a fiber optic cable system and would neither induce substantial population growth in any particular area nor make a cumulatively considerable contribution to population growth. Construction would not displace any housing or numbers of people. The installation process is quick and would not require the construction of new housing. There would be no impact on population or housing as a result of the project.

Cumulative Impacts

The project would neither produce nor displace housing. It would have no impact on population or housing and would not contribute to cumulative impacts.

XIII. PUBLIC SERVICES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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XIII. PUBLIC SERVICES - Would the proposed project:

1. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

Fire protection?	_____	_____	____/____	_____
Police protection?	_____	_____	_____	____/____
Schools?	_____	_____	_____	____/____
Parks?	_____	_____	_____	____/____
Other public facilities?	_____	_____	_____	____/____

Criteria for Determining Significance

The assessment of significance of impacts of the project is based on criterion *a* in the environmental checklist.

Impact Mechanisms

A project that creates a demand for public services can result in the construction of public facilities. Such construction can result in a significant impact when associated with significant adverse physical changes.

Impact Assessment

- a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services: Fire protection? Police protection? Schools? Parks? Other public facilities?*

Impact: The Construction of OP-AMP/Regenerator Facilities Would Have No Impact on Public Services Except Fire Protection, Which Could Be Minimally Affected by a Resulting Increase in Need for Fire Services

The project would be the installation of fiber optic cable and construction of related small facilities along existing rights-of-way. Construction would be temporary, expedited, and self-sustaining. The unstaffed OP-AMP/regenerator stations would require no public services other than electrical power and telephone services. Electrical power, which would be minimal, would be provided by a local utility. The project would not create a new demand for governmental services or facilities or require construction, alteration, or expansion of any such facilities to provide acceptable service levels. The project would incorporate a fire prevention and management plan during construction, where necessary, thereby mitigating the need for new permanent or temporary fire protection facilities (**Appendix J**). The project would have no environmental impacts on public services except for fire protection. The potential impact on fire protection services is considered less than significant because Williams has prepared a fire prevention and management plan, for the project route (**Appendix J**).

Mitigation Measure. No further mitigation is required.

Cumulative Impacts

The project would not require public services. Therefore, it would not contribute to any cumulative impacts.

XIV. RECREATION

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XIV. RECREATION - Would the proposed project:				
1. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	_____	_____	____/____	_____
2. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	_____	_____	____/____	_____

Criteria for Determining Significance

The analysis of significance of impacts of the project is based on criteria *a* and *b* in the environmental checklist.

Impact Mechanisms

A project that creates a demand for recreation can result in the construction or expansion of recreational facilities. This construction can result in a significant effect when associated with significant adverse physical changes.

Impact Assessment

- a. *Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? and*
- b. *Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?*

The project would not result in increased demand for recreation facilities during construction. Accordingly, it would neither result in any increase in the use of parks or recreation facilities or construct or lead to the expansion of any recreational facilities. The project would not affect existing recreational opportunities or facilities.

Impact: Possible Temporary Disruption of Hunting Opportunities

Installation activities along the project route that cross rural areas may affect hunting opportunities for black bear (in the northern Coast Ranges), deer (throughout the state), wild pig (in the Coast Ranges), and upland game birds (throughout the state) by temporarily disturbing game¹. Installation would move quickly along linear routes and would be temporary in nature. Further, the ground crossed would be restored as close to preproject conditions as possible or practicable. Therefore, this impact would have minimal impact on recreational hunting and is considered less than significant.

Mitigation Measure. None required.

Cumulative Impacts

The project would not require recreational services or adversely affect recreational hunting on more than a temporary basis. Therefore, it would not contribute to cumulative impacts.

XV. TRANSPORTATION/TRAFFIC

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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XV. TRANSPORTATION/TRAFFIC - Would the proposed project:

¹ California Department of Fish and Game. 1999. *Hunting Programs and Information*. Online. Revised March 1999. Available: www.dfg.ca.gov/wmd/hunting.html. Access date: March 26, 1999.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
1. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	_____	_____/_____	_____	_____
2. Cause, either individually or cumulatively, a level-of-service standard established by the county congestion management agency for designated roads or highways to be exceeded?	_____	_____	_____/_____	_____
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	_____	_____	_____	_____/_____
4. Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	_____	_____/_____	_____	_____
5. Result in inadequate emergency access?	_____	_____/_____	_____	_____
6. Result in inadequate parking capacity?	_____	_____/_____	_____	_____
7. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	_____	_____	_____	_____/_____

Criteria for Determining Significance

The analysis to determine the significance of transportation and traffic impacts associated with the proposed project is based on criteria *a-g* in the environmental checklist. In addition, the project would have a significant

impact on the environment if it causes a substantial deterioration of the roadway surface because of construction-related activities or causes a substantial increase in traffic delay.

Impact Mechanisms

Projects that create a significant increase in traffic, exceed adopted traffic service standards, increase traffic hazards, result in inadequate emergency access, or exceed parking capacity may result in a significant impact. Typically these are projects that would generate or introduce traffic to a particular location or obstruct the flow of traffic for a given period of time.

Impact Assessment

The project would not use roadways as a means of transportation, but rather as a corridor for the placement of underground fiber optic cable. Urban installations would require trenching and replacement of existing pavement. Fiber optic cable installation along rural and low-density suburban road rights-of-way would be plowed or trenched outside the pavement. Freeway and larger road crossings, as well as certain urban installations, would be accomplished by boring beneath that roadway surface. Transportation and traffic impacts would result from construction-related activities and are considered short-term and temporary in nature. Operation and/or maintenance of project facilities (e.g., OP-AMP/regenerator stations) would require only occasional inspection visits; therefore, operations-related traffic is considered minimal.

a. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?

The fiber optic cable would be either installed within existing road or railroad rights-of-way or hung from existing bridges. Access to the project route would be by existing access roads. Work within railroad rights-of-way would be under agreement with the railroad and would not interrupt rail traffic.

Impact: Temporary Traffic Disruption within Road Rights-of-Way

Nearly all of the project's traffic impacts would result from temporary construction-related work that would occur within road rights-of-way during conduit and cable installation. The only permanent facilities resulting from the project would be unstaffed OP-AMP/regenerator stations that would require only occasional inspection visits. Sufficient vehicle parking area would exist at each station during such visits. Most conduit and cable installations in road rights-of-way would occur on the road shoulder, outside of the paved surface. As discussed in Chapter 2, *Project Description*, road pavement would be cut and replaced (under permit from the appropriate public agency) only where environmental constraints preclude using the road shoulder or other portion of the right-of-way. Major road crossings would be bored, minimizing the need for major road closures during construction.

As discussed in Chapter 2, *Project Description*, the construction crews would be comprised of a preparation crew, a fiber optic cable installation crew, and a cleanup crew. Installations along road rights-of-way, particularly in urban areas, would have less need for the preparation and cleanup crews than installations in non-urban rights-of-way. Most of the traffic and traffic disruption that may occur during fiber optic cable installation would result from the installation crews.

Plowing or trenching methods might be used adjacent to roadways, depending on the physical characteristics of the site. Trenching would be the method of installation within roadways. Typically, the equipment used by a trenching crew would include an asphalt cutter, a backhoe/excavator, a roller/compactor, a spool truck, and

pickup trucks. For comparison, given the narrowness of the required trenching and the types of equipment used, pavement work would generally be less invasive than domestic water main replacement, which typically requires a 24-inch-wide trench. Additionally, Williams would be required to obtain road encroachment permits from various local and state agencies that dictate required traffic control. This impact is considered less than significant because Williams has adopted the following mitigation measure as part of the construction mitigation strategy for the project.

Mitigation Measure T-1: Obtain and Comply with Local and State Road Encroachment Permits.

Williams would obtain all necessary local and state road encroachment permits prior to construction and would comply with the applicable conditions of approval. Traffic control measures, such as the placement of warning signs, the use of traffic control personnel when appropriate, and coordination with local emergency response providers, would be implemented.

b. Cause, either individually or cumulatively, a level-of-service standard established by the county congestion management agency for designated roads or highways to be exceeded?

Impact: Temporary Disruption of Traffic

For the initial screening of impacts resulting from project-related traffic increases, the Institute of Transportation Engineers (ITE) recommends that an impact be examined more closely if it would involve an increase of 50 or more trucks, 100 passenger vehicles, or an equivalent combination of vehicles per hour in the peak direction during the peak hour at any roadway intersection (Institute of Transportation Engineers 1989).

For this analysis, impacts associated with increased project-related traffic may be considered substantial if the number of project-generated vehicle trips would exceed any of these thresholds. Although more than one crew may be working the project route at a given time, because of the length of the project route, trucks and other vehicles would typically gain access to construction sites from different sets of roadways and intersections.

Employee trips by construction workers traveling to and from the sites are not anticipated to exceed 20 per day per crew. Truck trips would be considerably less because the construction equipment would remain at the site during work hours, arriving and leaving once daily from designated staging areas. Spool trucks would make two or three trips per day, depending on the speed of installation and need for conduit.

The project, with its associated vehicles, would temporarily increase traffic and disrupt traffic flow as installation crews move along road rights-of-way. These effects would be less than the study threshold established by the ITE. The increases in traffic would not be substantial and the project's impacts would be less than significant.

The project may temporarily disrupt traffic during installations adjacent to or within traffic lanes. As discussed in Chapter 2, **Project Description**, a traffic control plan would be implemented to minimize the impacts of lane closures, if necessary, and traffic flow disruptions. As a result of the plan, the disruption of traffic would be less than significant.

The project would have only temporary effects on traffic. Level-of-service standards for roads established by the county congestion management agency (CMA) are intended to regulate longer term traffic increases that result from the construction of traffic generators such as offices, stores, and residential developments or projects that result in permanent changes to existing traffic patterns. As such, the project would not exceed level-of-service standards established by the applicable county CMA for designated roads.

Mitigation Measure. None required.

c. *Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

The project would most commonly involve belowground installation of conduit and cable and would not result in construction of any towers or other impediments to air traffic. There would be no impact as a result of the project.

d. *Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

Impact: Temporary Increase in Accident Risk

Heavy equipment operating adjacent to or within a railroad or road right-of-way may increase the risk of accidents. Railroads require safety training of construction crews before they are permitted to work within the railroad rights-of-way. As discussed in Chapter 2, *Project Description*, encroachment and any other necessary permits would be acquired from the appropriate governing agency prior to any construction in a public road right-of-way. As provided in the traffic control plan, described in Chapter 2, *Project Description*, installation crews would comply with roadside safety protocols and with signing and flagging requirements to reduce the risk of accident. Work crews would be trained in their roles and responsibilities before construction begins. Project impacts on the risk of accidents are considered less than significant because Williams has adopted a traffic control plan, will provide safety training, and has adopted the following mitigation measure as part of the construction mitigation strategy for the project.

Mitigation Measure T-1: Obtain and Comply with Local and State Road Encroachment Permits.
Refer to the discussion of this mitigation measure earlier in this section.

e. *Result in inadequate emergency access?*

Impact: Temporary Effects on Traffic Flow

The project would have temporary effects on traffic flow, particularly where the project route located within road rights-of-way. In those limited instances when the installation would encroach on traffic lanes, traffic would be managed in accordance with the traffic control plan described in Chapter 2, *Project Description*, which would allow priority passage by emergency vehicles. Project impacts on emergency access are considered less than significant because Williams has adopted a traffic control plan and the following mitigation measure as part of the construction mitigation strategy for the project.

Mitigation Measure T-1: Obtain and Comply with Local and State Road Encroachment Permits.
Refer to the discussion of this mitigation measure earlier in this section.

f. *Result in inadequate parking capacity?*

Impact: Creation of Limited New, Temporary Vehicle Parking

The project would create limited new temporary parking demand as crews move along the project route. Any vehicle parking during construction would be limited to the right-of-way, as provided in the encroachment permit issued by the appropriate governing agency. Construction equipment would be kept in designated staging areas when not in use and would not create new parking demand. OP-AMP/regenerator stations would be unstaffed and would not create long-term, permanent parking demand. Project impacts on parking are considered less than

significant because Williams has adopted the following mitigation measure as part of the construction mitigation strategy for the project.

Mitigation Measure T-1: Obtain and Comply with Local and State Road Encroachment Permits. Refer to the discussion of this mitigation measure earlier in this section.

g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

The project consists of the installation of conduit and cable and related facilities within or adjacent to existing rights-of-way; and after construction, all affected areas would be returned to their preconstruction state. Using alternative transportation modes for installation crews, such as bicycles or buses, would not be consistent with the project objective of rapid construction or with construction methods. The project would have no lasting impact on demand for alternative transportation or on alternative transportation facilities (e.g., bus stop, park and ride lot).

Cumulative Impacts

The project would not result in any increase in vehicular traffic beyond the marginal temporary increase caused by installation crews. The project may result in temporary obstructions of traffic, but the traffic plan being instituted as part of the project would minimize the impacts of such obstructions on traffic flow and emergency access. As a result, the project would not contribute to a cumulatively considerable transportation or traffic impact.

XVI. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS - Would the proposed project:				
1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	_____	_____	_____	_____/_____
2. Require, or result in the construction of, new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	_____	_____	_____	_____/_____
3. Require, or result in the construction of, new stormwater drainage facilities or expansion of	_____	_____	_____	_____/_____

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
existing facilities, the construction of which could cause significant environmental effects?				
4. Have sufficient water supplies available to serve the proposed project from existing entitlements and resources, or would new or expanded entitlements be needed?	_____	_____	_____	_____ /
5. Result in a determination by the wastewater treatment provider that serves or may serve the proposed project that it has adequate capacity to serve the proposed project's proposed projected demand in addition to the provider's existing commitments?	_____	_____	_____	_____ /
6. Be served by a landfill with sufficient permitted capacity to accommodate the proposed project's solid waste disposal needs?	_____	_____	_____	_____ /
g. Comply with federal, state, and local statutes and regulations related to solid waste?	_____	_____	_____	_____ /

Criteria for Determining Significance

The analysis of significance of impacts of the project is based on criteria *a-g* in the environmental checklist.

Impact Mechanisms

A project that creates a demand for public utilities and service systems can result in the construction or expansion of public facilities such as wastewater treatment facilities, storm drainage facilities, water supplies, and/or landfills. This construction can result in a significant effect when associated with significant adverse physical changes.

Impact Assessment

Construction of the project would occur promptly with no demands on outside utilities. Because of elements of the project design, this project would have no impact on demand for utilities and service systems during construction. Electrical power for the regenerator/OP-AMP stations would be a permanent demand on utilities. However, this demand would be minimal and would have no impact on demand for utilities and service systems.

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

The project would incorporate the requirements of the NPDES in the SWPPP (including an erosion control and spill prevention and countermeasures) prepared for the project route. The plan would specify measures to minimize erosion and production of drainage water and would be prepared to meet the requirements of approval by the applicable RWQCB. Therefore, no impact would occur.

b. Require, or result in the construction of, new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Pursuant to Section 15064(h) of the State CEQA Guidelines, a change in the environment is not significant if it complies with an applicable, publicly adopted, regulatory standard that has been adopted for environmental protection and governs the same environmental resource being affected. Compliance with the NPDES meets the requirement for stormwater quality established by the RWQCB. No wastewater requirements would apply to the project.

c. Require, or result in the construction of, new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The project would not create new, impermeable surfaces that would substantially increase drainage runoff beyond that existing without the project. Accordingly, the project would not require or result in the construction of stormwater drainage facilities.

d. Have sufficient water supplies available to serve the proposed project from existing entitlements and resources, or would new or expanded entitlements be needed?

The project would not require external water supply, so sufficient water supplies exist without requiring new or expanded entitlements.

e. Result in a determination by the wastewater treatment provider that serves or may serve the proposed project that it has adequate capacity to serve the proposed project's proposed projected demand in addition to the provider's existing commitments?

The project would not affect wastewater treatment services, as no wastewater would be generated by the project.

f. Be served by a landfill with sufficient permitted capacity to accommodate the proposed project's solid waste disposal needs?

Plowing would not remove soil from the project route, and any soil removed during trenching would be replaced. Therefore, the project would not require use of a landfill.

g. Comply with federal, state, and local statutes and regulations related to solid waste?

Solid wastes associated with the project would include soil displaced by installation of the conduit, cable, and OP-AMP/regenerator stations, spools, and other packaging material associated with the conduit and cable. The project would not produce substantial amounts of solid waste. Soil removed during trenching operations would be replaced and the surface returned as close to preproject conditions as possible or practicable. Areas around boring operations and around OP-AMP/regenerator stations would similarly be cleaned up during the final stage of the operation. Plowing operations would not remove soil. Spools and other packaging for conduit and cable would be taken away for reuse or recycling. Once installation is complete, the project would produce no solid wastes.

There are no federal, state, or local statutes or regulations applicable to the proposed project that pertain to solid waste. The project would have no impact on solid waste.

Cumulative Impacts

The project would not require utilities or service systems. Therefore, it would not contribute to cumulative impacts.

MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE				
1. Does the proposed project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	_____	_____ / _____	_____	_____
2. Does the proposed project have impacts that are individually limited but cumulatively considerable? (A Cumulatively considerable means that the incremental effects of a proposed project are considerable when viewed in	_____	_____ / _____	_____	_____

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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connection with the effects of past proposed projects, the effects of other current proposed projects, and the effects of probable future proposed projects.)

3. Does the proposed project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

_____ / _____

a. *Does the proposed project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of major periods of California history or prehistory?*

The project would have effects on aesthetics, biological and cultural resources, air quality, human health, water quality, planning, transportation, and noise that are potentially significant; however, these would be mitigated by the design of the project, as contained in Chapter 2, **Project Description**, and by the mitigation measures described in this analysis, which Williams has adopted as part of the construction mitigation strategy for the project. The particular impacts, as well as the project design elements and mitigation measures that would reduce them below a level of significance, are described in respective sections. All impacts have been either avoided or reduced to a less-than-significant level.

b. *Does the proposed project have impacts that are individually limited, but cumulatively considerable?*

CEQA Guidelines Section 15064 provides that when assessing whether a cumulative effect requires preparation of an environmental impact report, the lead agency must consider both whether the cumulative impact is significant and whether the incremental effects of the project are cumulatively considerable. No environmental impact report is required if the project's effects are not cumulatively considerable. The lead agency may determine that a proposed project's contribution is less than cumulatively considerable when either:

- # the contribution would be rendered less than considerable through mitigation measures,
- # the project would comply with the requirements of a previously approved mitigation program or plan that provides specific requirements that would avoid or substantially lessen the project's effects, or
- # the project's incremental impacts are so small that the environmental conditions would be essentially the same whether or not the proposed project was implemented (e.g., *de minimus*).

Several cumulative impacts may be considered significant at either the regional or local level. As discussed in the air quality section, the North Coast and Sacramento Valley air basins are nonattainment areas for one or more criteria air pollutants. Activities that emit criteria pollutants within these air basins have a significant

cumulative impact on air quality. Lake County meets attainment for all criteria. The air quality management districts and air pollution control districts established under state and federal law to preserve air quality have adopted plans intended to reduce pollutant levels over time. These districts have established rules and programs under their air quality plans that limit proposed project-specific contributions to the overall problems. The contributions of the proposed project are not cumulatively considerable because, as mitigated, the proposed project would comply with applicable air district rules and plans for construction activities and any required permits to operate the OP-AMPs/regenerators=back up generators would be obtained before the cable is installed.

Biological resources, particularly threatened, endangered, candidate, and other listed species, are cumulatively affected by development. The state and federal governments, through DFG, the Corps, USFWS, and National Marine Fisheries Service, have promulgated a regulatory scheme that limits impacts on these species. The effects of the proposed project are rendered less than cumulatively considerable due to mitigation requiring compliance with all applicable regulations that protect plant, fish, and animal species. The mitigation measures imposed and the provisions included in the project description (e.g., preconstruction surveys and resource staking, presence of an environmental resource coordinator, contractor training) and Williams= commitment to reroute the cable around or bore under sensitive resources render the proposed projects contribution less than cumulatively considerable.

Placement of structures within 100-year floodplains has cumulative impacts on the potential for flood hazard (refer to AHydrology and Water Quality@). As more development occurs within a floodplain, the capacity to retain flood flows is reduced and the potential for flooding and flood-related damage is increased. The Federal Emergency Management Agency, through the federal flood insurance program, establishes standards that minimize the impacts of and limit development within flood plains. Cities and counties that regulate land uses in conformity with these standards through floodplain zoning ordinances are eligible for participation in the flood insurance program. The project is not cumulatively considerable because required mitigation would include compliance with local floodplain ordinances prior to the installation of any structures in a 100-year floodplain.

At the local level, noise may exceed established standards due to the cumulative contributions of activities within the community. The proposed projects contributions to noise are not cumulatively considerable because of mitigation measures requiring compliance with state and local noise standards and ordinances and the attenuation of diesel backup generators. These measures would keep proposed project noise below established standards.

Temporary traffic-related impacts may occur at the local level for the project route. The temporary traffic disruption resulting from cable installation is not cumulatively considerable because of the traffic control plan that would be implemented as part of the proposed project and the standard traffic control requirements of the state and local encroachment permits that must be obtained prior to installing cable conduit in or adjacent to roads. In the long-term, the impacts of the proposed project would be minimized because, on completion of proposed project, environmental conditions on the overlying roads would be essentially the same as if the proposed project had not been implemented.

The proposed project does not contribute to the statewide cumulative effect of the loss of agricultural land to other uses, including urbanization. The impacts of the proposed project on agricultural land would be limited to the Arbuckle OP-AMP/regenerator station but would have no discernable effect on the rate of agricultural conversion.

California=s continuing and rapid population growth has statewide cumulative impacts on population and housing. The effect of the proposed project on population growth is indistinguishable from the general mix of factors that lead people to move to California and is not a critical component in most such decisions. Public services (e.g., fire protection, police protection) would all have a less-than-significant impact. This proposed

project creates no new demand for those services. Utilities and service systems (e.g., sewer capacity, water supply) are also a less-than-significant impact in that this project creates no new demand for those services.

c. Does the proposed project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The proposed project would not cause substantial adverse effects on human beings. The proposed project would have no effect on housing or recreation. Effects on aesthetics, air quality, cultural resources, noise, and land use have all been determined to be less than significant with implementation of mitigation measures. Potential adverse effects, such as slope destabilization and hazardous materials release, have been determined to be less than significant due to specified elements of the proposed project's design and the mitigation measures identified in this subsequent IS/MND.