

Appendix A

NOP/Comments



Notice of Preparation for an Environmental Impact Report

Santa Barbara County Last-Mile Broadband Program

Notice is hereby given that the Santa Barbara County Association of Governments (SBCAG) will be the lead agency for the preparation of an Environmental Impact Report (EIR) for Santa Barbara County Last-Mile Broadband Program (“Broadband Program” or “Project”). Pursuant to section 15082 of the California Environmental Quality Act (CEQA), SBCAG is soliciting comments from all interested persons, responsible and trustee agencies and organizations concerned with the project as to the scope and content of the of the EIR and the environmental information to be analyzed in connection with the Project. The project description, location, environmental review requirements, and probable environmental issues to be addressed in the EIR are attached. An Initial Study has been prepared for the Project in accordance with State CEQA Guidelines Section 15063(a) and is included as an attachment to this Notice of Preparation (NOP), which is available at the following link: <https://www.sbcag.org/wp-content/uploads/2024/05/Broadband-Program-EIR-Initial-Study.pdf>.

SBCAG will host a virtual EIR Scoping Meeting/Public Workshop. The purpose of the meeting is to solicit input on the scope and content of the environmental analysis that will be included in the EIR, as well as to inform the public about the Project itself. The date, time and virtual location of the meeting is:

- Thursday, June 6, 2024 from noon to 1:00 p.m. (public can log in starting at 11:45 a.m.)
- Register to attend for Zoom meeting information: <https://bit.ly/BroadbandEIR>
- For accommodations and Spanish-language interpretation, contact SBCAG 48 hours in advance at (805) 961-8900 or info@sbcbag.org.

Mail comments to Fred Luna at SBCAG, 260 North San Antonio Road, Suite B, Santa Barbara, CA 93110, or e-mail comments to info@sbcbag.org no later than thirty days after receipt of this notice or by **5:00 p.m. on July 1, 2024**. For more information, please call 805-961-8900.

PROJECT DESCRIPTION AND SCOPE OF ENVIRONMENTAL ANALYSIS

Project Title

Santa Barbara County Last-Mile Broadband Program (“Project”)

Project Location

The area subject to future broadband facility installations under the proposed Project includes the entire County of Santa Barbara, since, with a few exceptions discussed below, the specific locations of future broadband facility installations are currently not known (see **Figure 1, Regional Location**, below). Such future installations would be proposed and implemented as part of the Broadband Program, where appropriate, in order to provide adequate high-speed broadband internet services to underserved and unserved communities as priority communities and funding sources are identified. A total of nine communities in the County have already been identified as “Priority Areas” under the Broadband Program. **Figure 2, Broadband Facility Locations**, below, provides a County-wide view of the Project Area, including the location of existing and/or approved middle-mile broadband facilities in the County, as well as the locations of all nine identified Priority Areas.

Project Description

The Project will include the installation of fiber optic cable in various locations throughout the County. High-level network designs for last-mile connections have been prepared for four Priority Areas. Funding for implementation, low-level design and construction, has been applied for but as of this NOP release, not yet been awarded. If awarded, SBCAG would have the Golden State Connect Authority (GSCA) undertake the work as they prepared the application and are a full-service

broadband infrastructure provider, that would design, permit, construct, operate, and maintain all proposed broadband network facilities in perpetuity within the four Priority Areas. An additional five Priority Area locations are looking to be advanced for high-level network design through SBCAG's agreement with GSCA.

In general, the new fiber optic lines would be installed underground following public or private roadways with the intention to minimize or avoid disturbance of roadway surfaces wherever feasible. However, it is possible some fiber optic lines could be installed directly under roadways in areas with limited shoulder space or where existing conduit under the road may be used, thus avoiding new surface disturbance. The Project also includes installation and construction activities within those areas where lateral lines are installed between public or private roadways and individual businesses or residences. Individual residence or business connections typically would be installed within previously disturbed and/or developed areas (e.g., adjacent to driveways or in landscaped areas), and generally would avoid drainages and sensitive habitats. Lateral alignments would typically follow other utility installations. Although not anticipated, where subsurface installation of fiber optic cable is infeasible, aerial installation along existing utility poles will be undertaken. GSCA's methods of aerial installation will follow General Order 95 pole safety and loading requirements.

Components to be installed/constructed within the four Priority Areas include the following: broadband conduit (i.e., rigid casing to protect fiber optic cables from physical damage and the elements) with diameters between 3/4-inch and 2 inches to be installed within road rights-of-way (ROWs); aboveground, prefabricated walk-in hut/shelters made of aggregate wall materials; small aboveground steel distribution cabinets/enclosures; distribution fiber, splice points, and drops; drop hubs; and small underground structures such as hand holes. Additional Project components that may be necessary to connect end-users to the middle-mile broadband network may include: utility poles with aerial fiber and connection points; underground fiber markers; and signage.

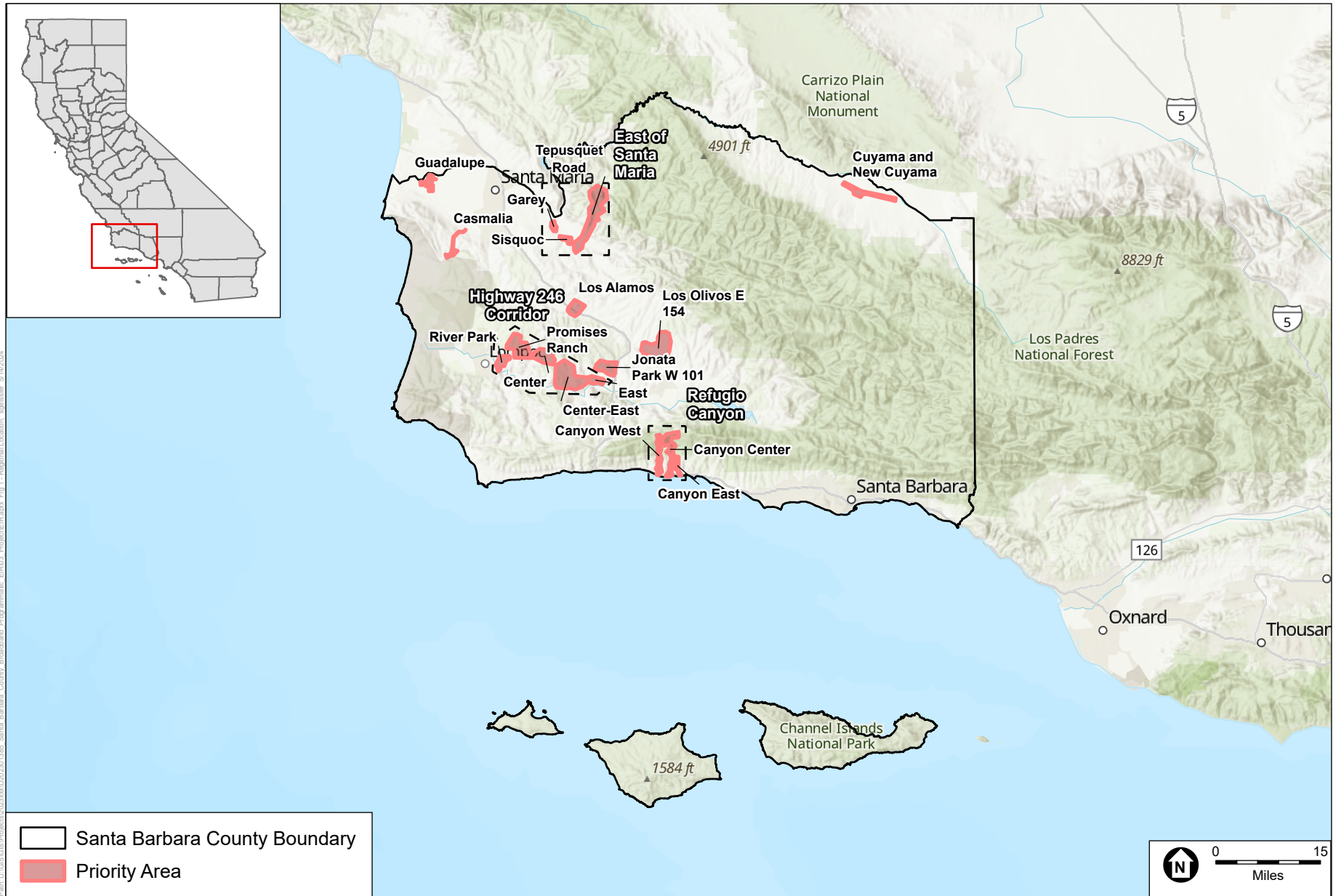
Once constructed, the broadband network components would generally operate passively, with only incidental maintenance typically consisting of weed abatement and periodic accessing of hand holes and splice cases from the ground surface along a given alignment.

Issues to Be Addressed in the EIR

The impact categories listed below have been preliminarily identified as anticipated issues to be addressed in the Program EIR.

- Air Quality
- Biological Resources
- Cultural Resources (including Paleontological Resources)
- Energy
- Greenhouse Gas Emissions/Climate Change
- Noise
- Tribal Cultural Resources
- Utilities and Service Systems (Electrical and Telecommunications Facilities)

As a Program EIR, the EIR will have three primary purposes: (1) to provide a broad overview of the potential environmental consequences of the implementation of the Project on a County-wide basis; (2) to serve as a mid-tier environmental document that will focus and streamline the subsequent project-level review of individual future projects that will be undertaken and in aggregate are referred to as the Project; and (3) to provide detailed project-level analysis of the nine Priority Area project locations that will be evaluated in the PEIR.



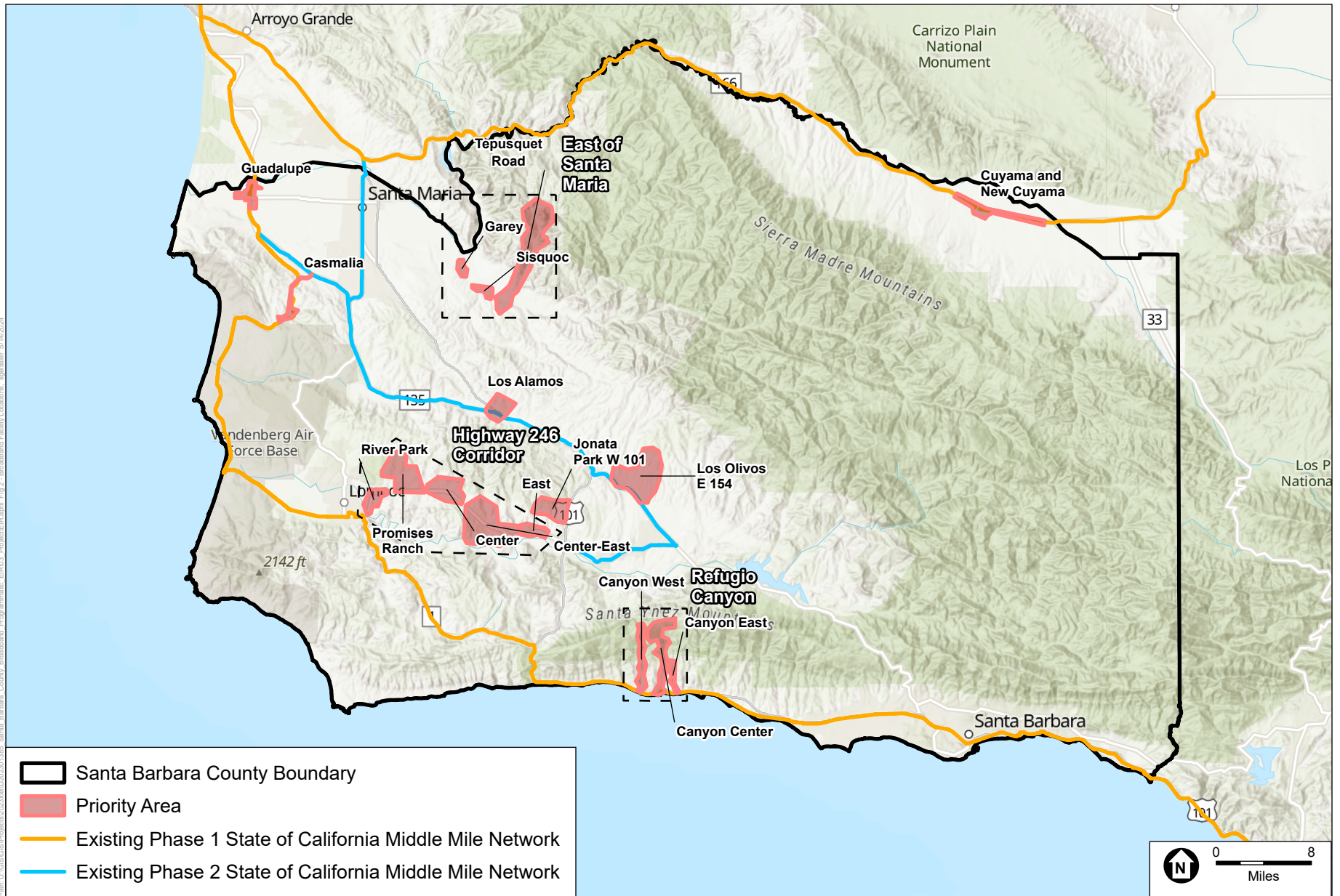
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SOURCE: ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure 1
Regional Location





SOURCE: ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure 2
Broadband Facility Locations



SANTA BARBARA COUNTY LAST-MILE BROADBAND PROGRAM

Initial Study/Notice of Preparation

Prepared for
Santa Barbara County Association of Governments

May 2024



SANTA BARBARA COUNTY LAST-MILE BROADBAND PROGRAM

Initial Study/Notice of Preparation

Prepared for
Santa Barbara County Association of Governments

May 2024

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INITIAL STUDY

Environmental Checklist

Project Details

1. **Project Title:** Santa Barbara County Last-Mile Broadband Program
2. **Lead Agency Name and Address:** Santa Barbara County Association of Governments,
260 North San Antonio Road, Suite B, Santa Barbara,
CA 93101
3. **Contact Person and Phone Number:** Fred Luna, (805) 961-8926
4. **Project Location:** Throughout County of Santa Barbara
5. **Project Sponsor's Name and Address:** Santa Barbara County Association of Governments,
260 North San Antonio Road, Suite B, Santa Barbara,
CA 93101
6. **General Plan Designation(s):** Several
7. **Zoning:** Several
8. **Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)**

See Project Description section below.

9. Surrounding Land Uses and Setting. (Briefly describe the project's surroundings.)

The area subject to future broadband facility installations under the proposed Project includes the entire County of Santa Barbara, both incorporated cities and unincorporated areas, since, with a few exceptions discussed below, the specific locations of future broadband facility installations are currently not known. The currently identified locations for near-term last-mile broadband installations includes the City of Guadalupe and portions of several unincorporated communities within the County including Cuyama/New Cuyama, Casmalia, Los Alamos, Los Olivos, Jonata Park, Refugio Canyon, Highway 246 Corridor (five neighborhoods between Lompoc and Buellton), and East of Santa Maria (including the Garey, Sisquoc, and Tepusquet Road communities). See Project Description below for more detailed information. While land uses throughout the Project Area vary depending by community and specific location therein, typical land uses within and around the identified nine Priority Areas mainly include residential, commercial, agricultural, open space, and industrial uses.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

The following agencies have potential authority over permits and/or other approvals necessary to implement the Project: County of Santa Barbara, City of Guadalupe, City of Santa Maria, City of Lompoc, City of Buellton, City of Solvang, City of Goleta, City of Santa Barbara, City of Carpinteria, California Department of Transportation, California Department of Fish and Wildlife, California Coastal Commission, Central Coast Regional Water Quality Control Board, Santa Barbara County Air Pollution Control District, United States Army Corps of Engineers, United States Fish and Wildlife Service, United States Forest Service, or other affected agencies.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

SBCAG will solicit government-to-government consultation with affected tribal organizations in the County in accordance with Assembly Bill (AB) 52 to determine the potential for tribal cultural resources to be affected by Project activities. A summary of SBCAG's AB 52 tribal consultation efforts will be provided in the Tribal Cultural Resources section of the Program Environmental Impact Report (PEIR). See further discussion in Section XVIII, *Tribal Cultural Resources*, of this Initial Study, below.

Project Description

Introduction

The Santa Barbara County Association of Governments (“SBCAG”), in partnership with the County of Santa Barbara (“County”) is proposing to facilitate the future expansion of the County’s high-speed broadband internet network, referred to herein as the Santa Barbara County Last-Mile Broadband Program (“Broadband Program” or “Project”). The Project would facilitate implementation of future broadband infrastructure installations in various communities across Santa Barbara County that are currently underserved or unserved by high-speed broadband internet services. These broadband facility installations could include both underground and aerial fiberoptic cable as part of proposed “last-mile” broadband facilities, which are intended to reach end users in these affected communities. These last-mile facilities would provide connections to end users in communities across the County, and connect from the State of California’s “middle-mile” broadband network (“Statewide Middle Mile Network”) currently being implemented by the California Department of Technology.

Project Location

The area subject to future broadband facility installations under the proposed Broadband Program (i.e., the “Project Area”) includes the entire County of Santa Barbara, since, with a few exceptions discussed below, the specific locations of future broadband facility installations are currently not known (see **Figure 1**, *Regional Location*). This includes both incorporated cities and unincorporated areas. Such future installations would be proposed and implemented as part of the Broadband Program, where appropriate, in order to provide adequate high-speed broadband internet services to underserved and unserved communities as priority communities and funding sources are identified. As discussed in greater detail below, a total of nine communities in the County have already been identified as “Priority Areas” under the Broadband Program. Four of these communities were initially identified in the Santa Barbara County Broadband Strategic Plan (BSP, see further discussion below) and thus have already been the subject of high-level engineering design, while the design of the proposed networks to serve the remaining five communities is currently in progress. **Figure 2**, *Broadband Facility Locations*, provides a County-wide view of the Project Area, including the location of existing and/or approved middle-mile broadband facilities in the County, as well as the locations of all nine identified Priority Areas.

Background

The State of California has undertaken a significant initiative to build a critical fast-speed internet network and create an equitable, high-speed, open access system. Senate Bill (SB) 156, signed by Governor Gavin Newsom in July 2021, established government pathways and funding mechanisms to acquire, build, maintain, and operate accessible broadband networks. “Middle-mile” broadband network provides that connection from large core internet pipelines (termed the “first-mile” broadband network) to homes and communities (termed the “last-mile” broadband infrastructure). The last mile work looks to provide connections to unserved and underserved communities. Last-mile infrastructure relies on the middle-mile facilities to provide service to broadband customers including residents, large and small businesses, schools, government offices, public safety agencies, and libraries, among others. Therefore, one result of SB 156 was the establishment of the Local Agency Technical Assistance (LATA) grants,

which are available to local jurisdictions to build these last-mile network connections to serve end users within unserved and underserved communities.

The COVID-19 pandemic highlighted stark inequities in internet access across Santa Barbara County. Some rural schools returned to physical workbooks and printed pages for at-home instruction during school shutdowns, due to a lack of reliable, affordable internet access in their communities.

Approximately 25 percent of households with incomes less than \$20,000 per year do not have internet access, and on the whole, approximately nine percent of all households in the County do not have access. Therefore, SBCAG and the County of Santa Barbara, both being partners in the Broadband Alliance of Santa Barbara County (Alliance), collaborated with local agencies, tribal organizations, the Broadband Consortium of the Pacific Coast, and regional economic development organizations to develop the Santa Barbara County Broadband Strategic Plan (BSP) in 2022. Following the strategic planning effort, SBCAG partnered with the County on a LATA grant to facilitate extension of broadband service within the County, and in 2023 the California Public Utilities Commission (CPUC) awarded a LATA grant to the County of Santa Barbara for broadband planning and implementation. The grant funds the creation of a countywide Joint Powers Authority (JPA) to formalize the Alliance, preparation of the necessary California Environmental Quality Act (CEQA) documentation, and completion of high-level design engineering to facilitate and streamline implementation of local broadband projects. In these ways, the LATA grant funds are assisting the County in securing funding to build a last-mile “fiber-to-the-home” network to connect underserved and unserved locations within the County.

High-level network designs for last mile connections have been prepared for four Priority Areas. Funding for implementation, low-level design, and construction of the fiber optic facilities in these areas has been applied for but has not yet been awarded. If awarded, SBCAG would have the Golden State Connect Authority (GSCA) undertake the work, as they prepared the application and are a full-service broadband infrastructure provider, that would design, permit, construct, operate, and maintain all proposed broadband network facilities in perpetuity within the four Priority Areas. An additional five Priority Area locations are looking to be advanced for high-level network design through SBCAG’s agreement with GSCA. As shown in Figure 2, these nine Priority Areas include: the City of Guadalupe and unincorporated communities including portions of Cuyama/New Cuyama, Casmalia, Los Alamos, Los Olivos, Jonata Park, Refugio Canyon, Highway 246 Corridor (five neighborhoods between Lompoc and Buellton), and East of Santa Maria (including the Garey, Sisquoc, and Tepusquet Road communities). In addition, these unincorporated communities are some of the County’s identified Environmental Justice Communities currently being considered in the Environmental Justice Element of the County’s Comprehensive Plan.

Broadband Strategic Plan

The BSP, as mentioned above, was prepared by the Alliance, which was completed in 2022 and is comprised of SBCAG, the County of Santa Barbara, the cities of Buellton, Carpinteria, Goleta, Guadalupe, Lompoc, Santa Barbara, Santa Maria, Solvang, and the Santa Ynez Band of Chumash Indians, Broadband Consortium of the Pacific Coast (BCPC), and regional economic development organizations.

The BSP was intended to identify broadband internet infrastructure and affordability needs in the County. The Alliance intends to continue to leverage the BSP to seek funding opportunities for projects to

improve County-wide affordable access to high-speed broadband in homes, schools, businesses, healthcare, and to connect community anchor institutions

The BSP was created to respond to the regional need for high-speed internet access, which was intensified during the COVID-19 pandemic when schools, businesses, public services, and health care support moved online, and many individuals began working from home. Gaps in access to reliable, affordable high-speed internet disenfranchise households by limiting their access to education, the workforce, health care, and democratic processes. The digital divide defines the gap between those with the capacity to use technology and those left out of opportunities provided by digital access. While residents throughout the County have access to moderate levels of connectivity, all households, businesses, and public institutions would benefit from the faster and more reliable internet access that broadband connections deliver.

The purpose of the BSP is to address the planning needs of the region, encourage infrastructure investments in the County, and present models for investment opportunities made by internet service providers (ISPs), public sector investment, and a combination of public-private investment. The BSP utilized a regional context, aligning with the California State Broadband Action Plan (CBAP) and focused on identifying a middle-mile approach, last-mile priorities, policies and resources for broadband readiness, and future feasibility studies for the County and incorporated cities.

The BSP found, through a comprehensive needs assessment, that approximately 7.9 percent of the County's population does not have access to adequate (25 megabits per second [Mbps] download speed and 3 Mbps upload speed, indicated as "25/3 Mbps") internet services, which corresponds with the population within unserved and priority unserved areas. The analysis initially identified priority unserved areas in remote communities including the Priority Areas of Casmalia, Los Alamos, and Cuyama/New Cuyama, as noted above, but also found various other areas that would become important for last-mile infrastructure development including the remaining five unincorporated Priority Areas noted above (also see Figure 2).

After analysis of the existing infrastructure and needs, the BSP identified a path for moving forward including developing local strategies, attracting collaborative funding, and conducting community actions that support ongoing connectivity and adoption. Another step is conducting a last-mile pilot in order to develop processes for applying technical support at the neighborhood level to achieve access and adoption.

The BSP outlined the roles and responsibilities for the main activities associated with implementation of the BSP, including ensuring funding for the detailed network design, constructing the passive infrastructure, deployment of the active infrastructure, network operations and maintenance (O&M) activities, field maintenance activities, subscriber installation, subscriber management, and customer support. The priorities for middle-mile deployment include ensuring funding for the high-level design of the network in conjunction with stakeholders, coordinating with the work performed by the Santa Ynez Band of Chumash Indians and Econ Alliance for the North County middle-mile analysis and design, and continue coordinating with the State of California as relates to the Statewide Middle-Mile Broadband Network. The last-mile deployment priorities include areas that lack access to 25/3 MBps service based on the data collected; and these areas include portions of the eight unincorporated Priority Area communities of Cuyama/New Cuyama, Casmalia, Los Alamos, Los Olivos, Jonata Park, and Refugio

Canyon, Highway 246 Corridor, and East of Santa Maria (Garey, Sisquoc, and Tepusquet Road communities).

As the California Department of Technology (CDT) continues to build out the Statewide Middle Mile Network in Santa Barbara County, SBCAG and the County have initiated last-mile design efforts as part of the BSP implementation efforts. Those efforts include entering into an agreement with GSCA to prepare last-mile design for all priority areas identified to date, and perhaps other future areas as additional priorities are identified. GSCA has submitted applications to implement the first four areas, which are included as components of the Project. As required, the implementation will involve the use of fiber optics and an open-access model, which will allow GSCA to provide residences and businesses with future-proof broadband technology, and the choice of providers and packages that an open-access system provides, thus offering access to competitive speed offerings and pricing. Internet service offerings are anticipated to include minimum speeds of 100 Mbps symmetrical and maximum speeds, which are only limited by the electronics on either end of the fiber connection, but initially will be offered at up to 10 gigabits per second (Gbps)¹ symmetrical for households and up to 100 Gbps symmetrical for businesses. GSCA's service offerings will not have data caps (i.e., no limits on how much data may be transferred by any given network end user).

Proposed Project Components

The Project will include the installation of fiber optic cable in various locations throughout the County, including within the four Priority Area communities. For the four near-term Priority Areas, GSCA has prepared high-level engineering designs that indicate the location of new broadband lines within each community. **Figure 3**, *Priority Area – Guadalupe*, **Figure 4**, *Priority Area – Casmalia*, **Figure 5**, *Priority Area – Los Alamos*, and **Figure 6**, *Priority Area – Cuyama and New Cuyama*, illustrate the proposed extent and locations for last-mile network installations within each of these communities. It should be noted that GSCA, as a full-service broadband infrastructure provider, would design, permit, construct, operate, and maintain all proposed broadband network facilities in perpetuity within the four Priority Areas.

In general, the new fiber optic lines would be installed underground following public or private roadways with the intention to minimize or avoid disturbance of roadway surfaces wherever feasible. However, it is possible some fiber optic lines could be installed directly under roadways in areas with limited shoulder space or where existing conduit under the road may be used, thus avoiding new surface disturbance.

The Project also includes installation and construction activities within those areas where lateral lines are installed between public or private roadways and individual businesses or residences. Individual residence or business connections typically would be installed within previously disturbed and/or developed areas (e.g., adjacent to driveways or in landscaped areas), and generally would avoid drainages and sensitive habitats. Lateral alignments would typically follow other utility installations.

¹ One gigabit is equal to 1,000 megabits.

Although not anticipated, where subsurface installation of fiber optic cable is infeasible, aerial installation along existing utility poles will be undertaken. GSCA's methods of aerial installation will follow General Order 95 pole safety and loading requirements.

Components to be installed/constructed within the four Priority Areas include the following: broadband conduit (i.e., rigid casing to protect fiber optic cables from physical damage and the elements) with diameters between 3/4-inch and 2 inches to be installed within road rights-of-way (ROWs); aboveground, prefabricated walk-in hut/shelters made of aggregate wall materials and measuring 12 feet long by 10 feet wide with a height of up to 10 feet above grade (placed on a poured concrete pad); aboveground steel distribution cabinets/enclosures ranging in size between 28 by 39 inches and 47 by 128 inches; distribution fiber, splice points, and drops; drop hubs; and small underground structures such as hand holes measuring between less than 12 inches by 12 inches (less than one foot depth below grade) and 45 inches by 32 inches (27-inch depth below grade). Additional Project components that may be necessary to connect end-users to the middle-mile broadband network may include: utility poles with aerial fiber and connection points; underground fiber markers; and signage.

Once constructed, the broadband network components would generally operate passively, with only incidental maintenance typically consisting of weed abatement and periodic accessing of hand holes and splice cases from the ground surface along a given alignment.

Construction Schedule and Assumptions

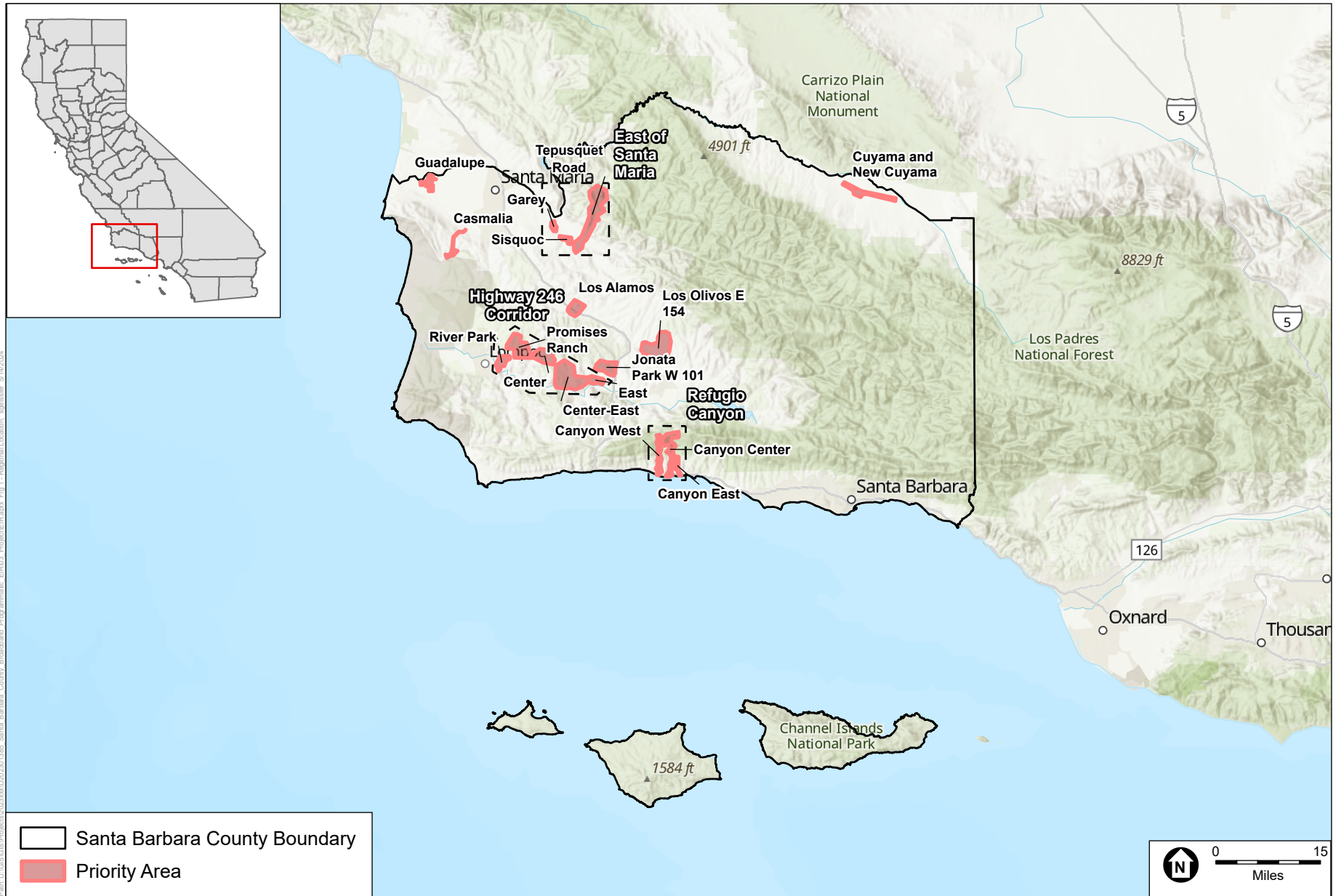
The proposed Broadband Program would involve the construction of new last-mile broadband facilities within communities in greatest need for adequate broadband services. While the specific size and location of all potential future broadband projects under the Broadband Program have not yet been identified, it is assumed that the nature and intensity of such future installation projects would be similar in scope and scale to those identified for the first four Priority Area projects. As such, for the purposes of analysis in this CEQA document, construction activities and methods employed for the initial four Priority Area projects would be comparable to those necessary for the installation of future broadband facilities in other portions of the County consistent with the BSP, including the additional Priority Area projects located in Los Olivos, Jonata Park, and Refugio Canyon, Highway 246 Corridor, and East of Santa Maria (Garey, Sisquoc, and Tepusquet Road communities).

The initial four Priority Area installations would involve installing a total of approximately 52.57 miles of underground conduit/fiber. Construction methods would primarily include horizontal point-to-point underground boring, and if necessary, could include micro-trenching and/or aerial stringing from utility poles. Excavations for boring pits would generally be limited to two feet by two feet (but potentially up to two feet by six feet) and would be temporary in nature, with the ground surface and any paving or landscaping restored to pre-project conditions once construction is complete. Where appropriate, surface trenching (or micro-trenching) excavation widths would typically be limited to between 9 inches and 18 inches, which would result in a very limited construction footprint along the proposed cable alignments.

Construction worker parking, material stockpiling, and equipment staging and storage would occur within appropriate locations for each future broadband installation project, subject to review and approval by the respective local jurisdiction(s) and/or CEQA Lead Agency. It is anticipated that such temporary construction parking, stockpiling, and staging areas would be selected in consideration of a number of

factors including the size and configuration of the property, proximity to active or planned construction areas, sensitivity of resources on or near the site, safety or security concerns, and accessibility by construction workers and equipment, among others.

The four Priority Area projects would be constructed in four phases (i.e., each Priority Area project representing a single phase) over a period of approximately 24 months beginning in Spring 2025, which includes any necessary permitting and construction of the new facilities. Phases of construction may overlap, with work on one or more of the Priority Area projects potentially occurring concurrently. It is anticipated that future broadband projects of similar size and scale located in other areas of the County would require a comparable construction effort in terms of overall intensity, would employ a similar mix of construction methods and equipment, and would result in similar construction durations as those assumed for the four Priority Area projects.



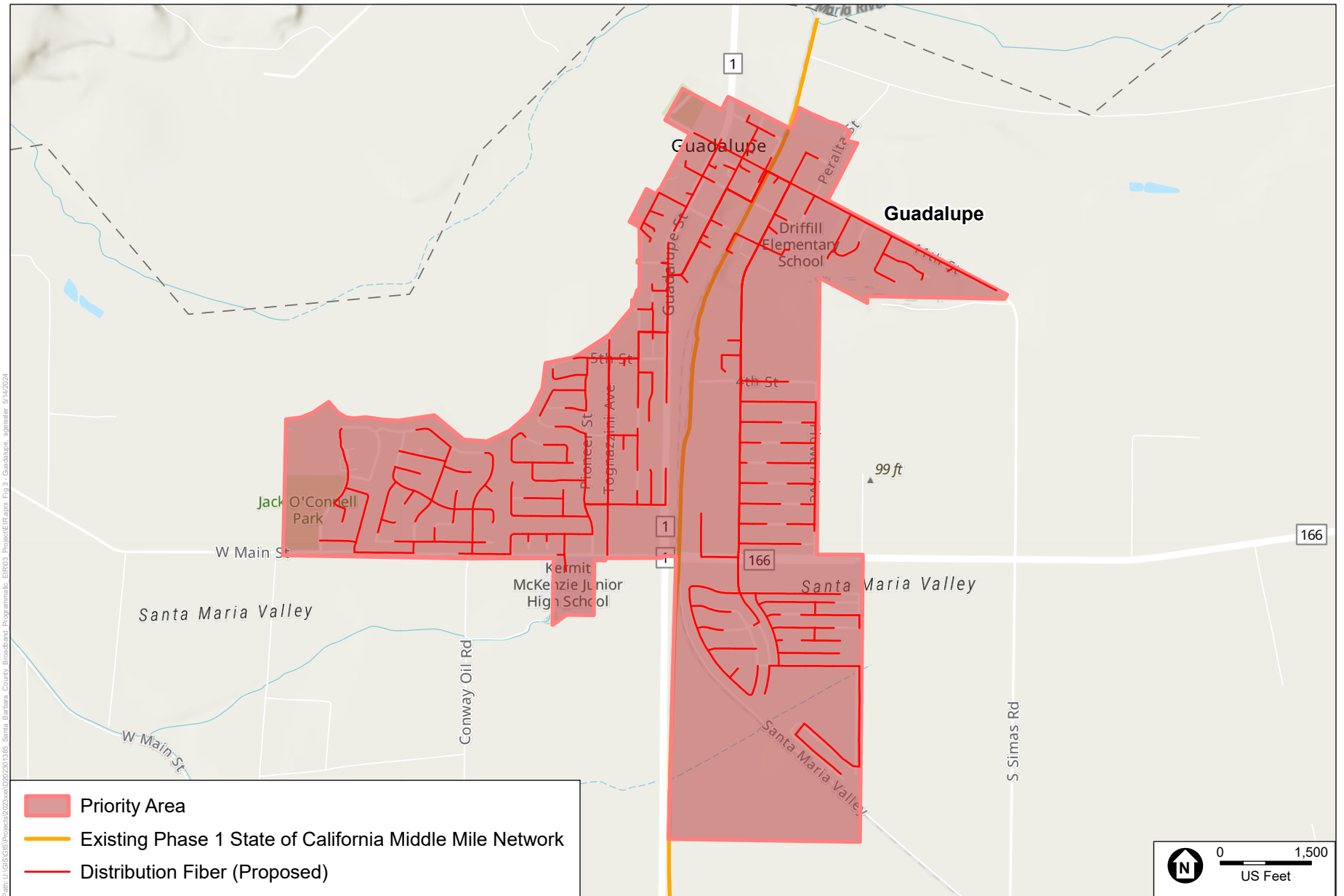
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SOURCE: ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure 1
Regional Location



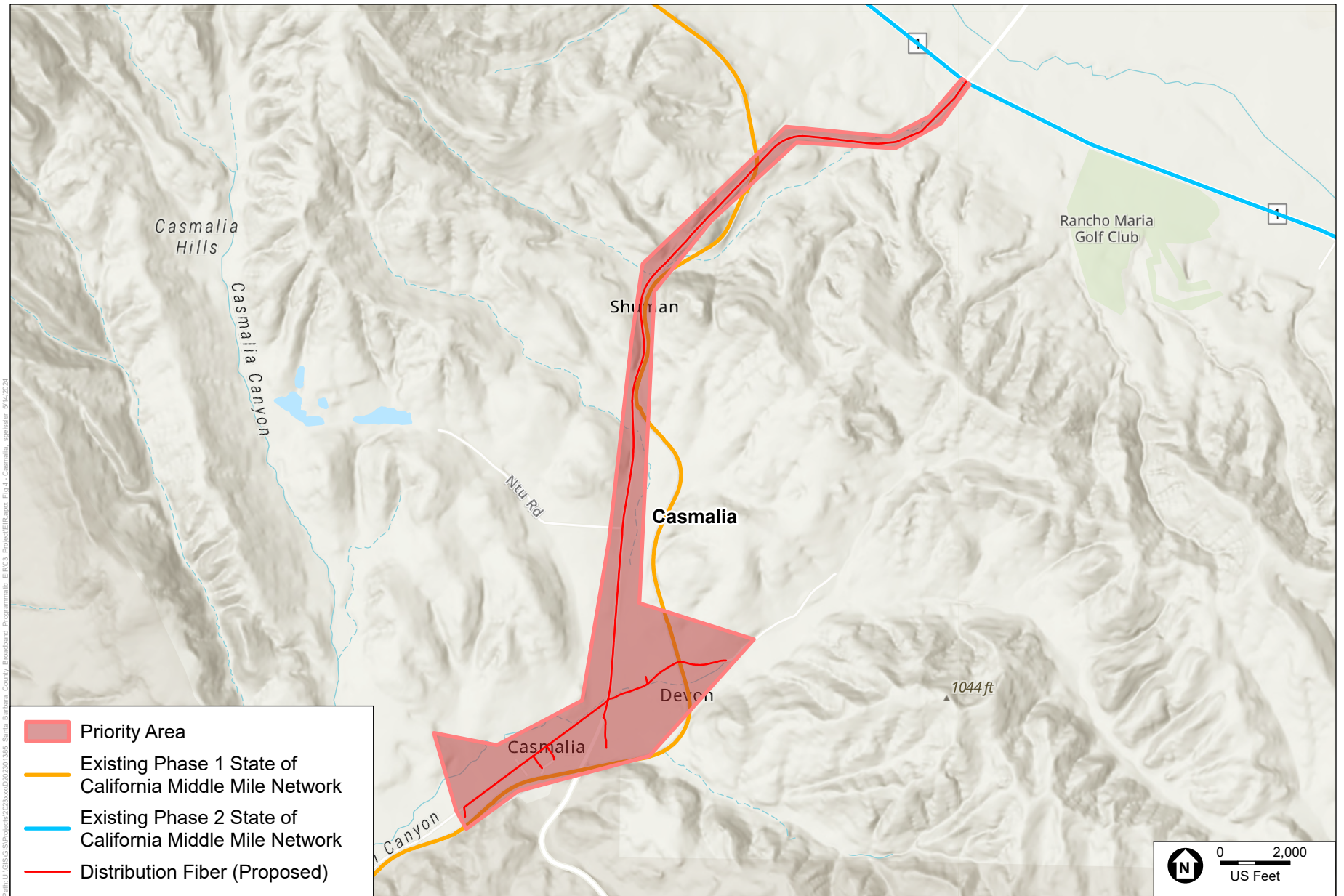


SOURCE: ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure 3
Priority Area – Guadalupe

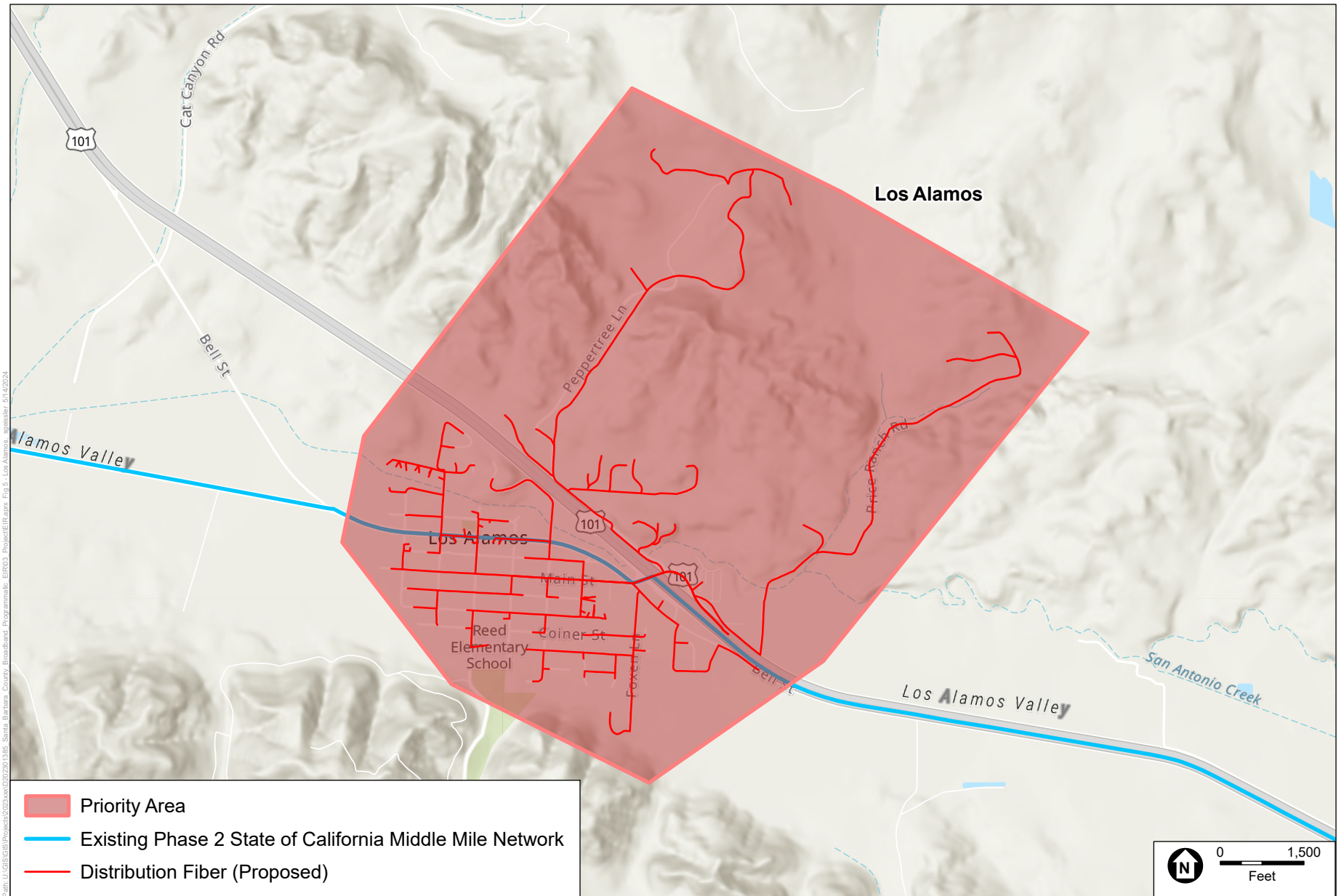




SOURCE: ESA, 2024

Santa Barbara County Last-Mile Broadband Program

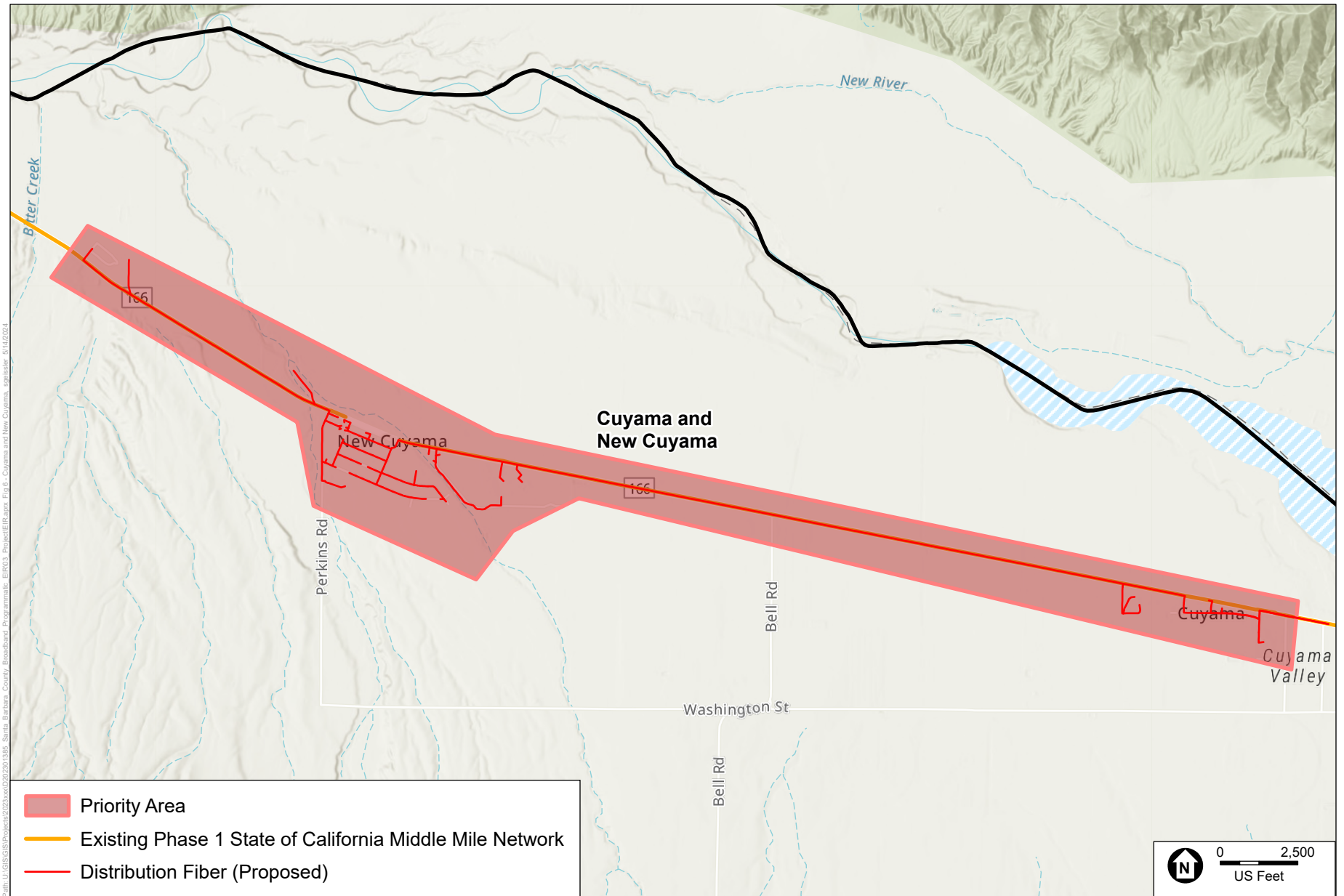
Figure 4
Priority Area – Casmalia



SOURCE: ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure 5
Priority Area – Los Alamos



SOURCE: ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure 6
Priority Area – Cuyama and New Cuyama



Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- | | | |
|---|--|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Energy |
| <input type="checkbox"/> Geology/Soils | <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials |
| <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources |
| <input checked="" type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input checked="" type="checkbox"/> Tribal Cultural Resources |
| <input checked="" type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Wildfire | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial study:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Fred Luna

Signature

May 21, 2024

Date

Environmental Checklist

Aesthetics

<u>Issues (and Supporting Information Sources):</u>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
I. AESTHETICS — Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

The County’s Visual Aesthetics Impact Guidelines classify coastal and mountainous areas, the urban fringe, and travel corridors as “especially important” visual resources. A project may have the potential to create a significantly adverse aesthetic impact if it would impact important visual resources, obstruct public views, remove significant amounts of vegetation, substantially alter the natural character of the landscape, or involve extensive grading visible from public areas. The guidelines address public, not private, views.

- a) **Less Than Significant Impact.** Although the specific site locations of and engineering designs for future broadband installations have not yet been determined with the exception of the initial four Priority Areas, it is anticipated that the proposed new fiber optic lines and appurtenances would be predominantly installed underground typically adjacent to public or private roadways to the extent feasible (i.e., within previously disturbed shoulder areas or parallel utility easements, where available), with the intention being to minimize or avoid disturbance of paved roadway surfaces wherever practicable, or along existing utility poles where feasible and appropriate. Related above-ground features including equipment boxes and small isolated modular buildings would be limited in number and proposed structures would not exceed 12 feet in height. The buildings would be designed in accordance with applicable development standards and design guidelines including landscaping and lighting requirements, in order to minimize the visual effects of these features. While many public locations within the County offer views of scenic resources, including views from public roads and trails or other accessible public property both County-wide and specifically within the nine Priority Areas, given the nature of the proposed improvements, which consist of buried and pole-mounted fiber optic cable and associated appurtenances including above-ground equipment boxes and limited small modular structures, the overall visual effects of construction and operation of the Project would not be substantial. It

should be noted that one of the Refugio Canyon Priority Area intersects with the County's Critical Viewshed Corridor (CVC) Overlay zone, which traverses the three project footprints in this Priority Area in an east-west direction along Highway 101. However, the installation of broadband facilities within the Refugio Canyon Priority Area would not result in adverse impacts to views of the Pacific Ocean, Channel Islands, Santa Ynez Mountains, or other scenic resources from within the CVC Overlay zone since the proposed improvements would not obstruct or detract from views of scenic resources given their limited footprint and chiefly underground installation methods. Similarly, the Santa Barbara County Environmental Resource Management Element (ERME) summarizes various environmental factors analyzed in the Seismic Safety, Conservation, and Open Space Elements, and relates these factors to proposals on County open space preservation (County of Santa Barbara, 2009). According to the Santa Barbara County Land Use and Zoning Map, portions of the Los Alamos, Jonata Park, Los Olivos, Refugio Canyon, Highway 246 Corridor, East of Santa Maria, and New Cuyama and Cuyama Priority Areas are located within the ERME Scenic Corridor (County of Santa Barbara, 2024a). These scenic corridors are classified as having the highest scenic values and urbanization could be permitted only in appropriate instances, subject to project plan review and imposition of specific conditions to protect against hazards and preserve the integrity of the land and environment (County of Santa Barbara, 2009). As discussed above, the Project consists of future broadband infrastructure installations including utility poles, which mainly consist of underground infrastructure, with very little, if any, above-ground improvements such that adverse visual effects within the ERME Scenic Corridor would occur.

While construction activities (construction vehicles, workers, equipment storage and staging areas, signage, fencing, parking areas, etc.) would likely affect localized views in any given area for a limited period of time, such adverse effects on any visible resources would cease upon completion of construction activities. Long-term operational visual effects of the proposed broadband installations would be limited to those associated with the visible above-ground features, which would consist of narrow-gauge cable and limited small equipment boxes and structures, none of which would have the potential to obstruct or substantially detract from the available views of scenic resources in the affected portions of the County. As such, the Project would not have a substantial effect on a scenic vista, nor would it change the visual character of an area that may have scenic views. Therefore, no further analysis is warranted in the EIR.

- b) **Less Than Significant Impact.** Various state scenic highways are located throughout Santa Barbara County including U.S. 101 (Eligible and Officially Designated), State Route (SR) 150 (Eligible), SR 154 (Officially Designated), SR-1 (Eligible), and SR-166 (Eligible) (Caltrans 2024). As noted in Response I. a), above, Project components would include installation of fiber optic cable predominantly located underground in buried conduits and would require only limited above-ground structures. However, when underground installation is determined to not be feasible for specific locations, pole-mounting of cable would also be implemented either on existing utility poles or on newly installed poles. Although the future broadband installations could occur in the vicinity of both eligible and officially designated scenic highways, the Project is not expected to substantially damage any scenic resources. This is due to the fact that, as noted above, construction is anticipated to occur predominantly adjacent to existing public or private roadways, and thus the proposed alignments would generally avoid sensitive habitats or specimen

trees, outcroppings, and historic buildings. Given the relatively small construction footprint of broadband facility installations, as well as the limited visual effect of proposed facilities once constructed, substantial adverse impacts to scenic resources within a state scenic highway are not anticipated to occur, and no further analysis will be included in the EIR.

- c) **Less Than Significant Impact.** Broadband installation could occur in both urbanized and non-urbanized areas; however, the nine Priority Areas that have been identified are primarily within non-urbanized areas. As noted in Response I. a), above, the Project would primarily include installation of underground infrastructure in buried conduits, with installation via pole mounting utilized to a lesser extent where feasible, and limited construction of small above-ground structures where necessary. The presence of construction equipment, workers, and materials could temporarily impact views in discrete locations during construction activities; however, construction worker parking, material stockpiling, and equipment staging and storage would occur within appropriate locations for each future broadband installation project, and would be temporary in nature such that any adverse visual effects would only occur for a limited period of time in any given location within the County. As also discussed in Response I.a., above, operational impacts of the Project with regard to scenic vistas and views of identified scenic resources would be less than significant. The Project is not anticipated to substantially degrade the existing visual character or quality of public views and is also not anticipated to include visually incompatible structures, as any necessary above-grade structures that could potentially affect the visual character or quality of views of the area would be limited in size and scale and would be designed and constructed in accordance with applicable development standards and design guidelines. This issue will not be analyzed further in the EIR.
- d) **Less Than Significant Impact.** Substantial daytime or nighttime glare-producing surfaces or night lighting are not proposed given that the majority of the proposed installations would consist of buried cable and associated appurtenances, or pole-mounted relatively narrow-gauge fiber optic cable. In addition, any above-ground permanent structures anticipated to be constructed would not include notable expanses of windows or other reflective surfaces (as these buildings only house computer network equipment with no human occupancy), and as noted previously would be limited in size and scale and designed and constructed in accordance with applicable development standards and design guidelines, including applicable lighting standards. Therefore, no substantial adverse visual impacts associated with Project-related changes in glare or night lighting would occur, and no further analysis is warranted in the EIR.

References

- Caltrans Scenic Highway Map System. Accessed online April 18, 2024 via <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>
- County of Santa Barbara, 2009. Environmental Resource Management Element (ERME). Available at: <https://www.countyofsb.org/966/Environmental-Resource-Management>. Accessed April 2024.

Agriculture and Forestry Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
II. AGRICULTURE AND FORESTRY RESOURCES —				
In determining whether impacts to 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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) **Less Than Significant Impact.** Areas subject to future broadband facility installations include the entire County of Santa Barbara, and the Priority Areas generally consist of various communities across the County that are currently underserved or unserved by high-speed broadband internet services. Many of the Priority Areas are located adjacent or in proximity to active agricultural land or grazing land. According to the California Department of Conservation (DOC)'s Farmland Mapping and Monitoring Program, while the majority land within the nine Priority Areas is designated as Urban and Built-Up Land or Other Land, and thus is not designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, some portions of the affected communities contain land engaged in agricultural operations or designated as farmland as defined by the DOC (DOC 2022). While some areas that could be physically affected by future projects that will be implemented as part of the Broadband Program contain designated farmland and agricultural operations, it is not anticipated that implementation of broadband installations would result in the conversion of notable amounts of farmland in the County. This is because, as noted previously, the majority of the broadband infrastructure to be constructed would be installed underground following public and private roadways, which would limit the construction footprint to previously disturbed areas or would be mounted to existing or newly installed utility poles where necessary. Other appurtenances such as above- and below-grade vaults and equipment boxes and small modular structures would be very limited in terms of

disturbance footprint. As such, construction of future broadband facilities, including the installations within the nine Priority Areas, would not result in the conversion of measurable amounts of farmland to non-agricultural use. Once constructed, the Project would not impair agricultural land productivity, as broadband facilities would have little to no potential to result in other physical effects on agricultural land or operations. Therefore, implementation of the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, to non-agricultural use; impacts would be less than significant, and no further analysis is warranted in the EIR.

- b) **No Impact.** The Project area is characterized by a wide range of land use and zoning designations across the various jurisdictions, including zoning for agricultural activities such as crop production, grazing, and wine production. Within the nine Priority Areas the land use pattern is predominantly single-family residential (County of Santa Barbara 2024). The Project would not result in the need to modify land use plans or rezone any land within the Project Area, since the proposed broadband installations are very limited in scale and physical footprint and are considered utility improvements that serve all urban land use types and thus are permitted in nearly all land use and zoning designations.

As discussed above in Response II.a), while numerous agricultural uses occur within or adjacent to future broadband sites including the nine Priority Areas, future projects are anticipated to be constructed primarily along roadways and within other public rights-of-way such as utility easements or other appropriate alignments such that conflicts with agricultural zoning or activities does not occur. Similarly, although portions of the Project Area may be enrolled in a Williamson Act contract, the proposed installations would have little potential to result in changes to such contracts or associated agricultural operations on affected parcels. Therefore, implementation of the Project would not conflict with an existing zoning for agricultural use, or a Williamson Act contract, and no further analysis is warranted in the EIR.

- c) **No Impact.** As discussed in Response II.b) above, the Project would result in the future installation of broadband infrastructure to serve unserved and underserved populations, many of which are located in more rural portions of the County where such infrastructure has not yet been constructed. Such rural areas may intersect with land located within the Los Padres National Forest. Of the nine Priority Areas, only one (Refugio Canyon) intersects with National Forest land. No portion of the County is designated as timberland or zoned Timberland Production. Although limited portions of the County where future projects that will be implemented as part of the Broadband Program would occur are located within or proximate to designated forest land, the Project would not result in any land use or zoning changes, and the majority of facilities to be constructed would be installed underground following public and private roadways. Accordingly, the Project would not result in the potential to affect forest land zoning and is not anticipated to impact forest land or timberland. Therefore, implementation of the Project would not cause rezoning of forest land, timberland, or timberland zoned Timberland Production, and no further analysis is warranted in the EIR.

- d) **Less Than Significant Impact.** As discussed above, the affected area for potential future broadband facility installations under the proposed Broadband Program includes the entire County, which includes forest land within the Los Padres National Forest. The nine Priority Areas are located within less populated but generally urbanized portions of the County, with the northern portion of the Refugio Canyon Priority Area located within the Forest itself. . However, since the majority of proposed broadband facilities would be installed underground along roadways or within previously disturbed or developed areas (including small above- or below-ground appurtenances), or alternatively installed along existing or proposed utility poles, the potential to substantially affect forest land is considered minimal. . Therefore, implementation of the Project would not result in the substantial loss of forest land or conversion of forest land to non-forest use, and no further analysis is warranted in the EIR.
- e) **No Impact.** See Responses II.a) and II.b), above. The Project Area, including the nine Priority Areas are located in a generally urbanized setting but adjacent or proximate to agricultural and forest land. However, since the proposed future broadband installations are anticipated to predominantly be constructed along public or private roadways, or within other previously disturbed or developed areas, with a minimal construction footprint, implementation of the Project is not expected to result in the conversion of agricultural land or forest land to non-agricultural and non-forest use. Therefore, implementation of the Project would not result in the conversion of Farmland to non-agricultural use or the conversion of forest to non-forest use, and no further analysis is warranted in the EIR.

References

County of Santa Barbara, 2024. Santa Barbara County Land Use and Zoning Map. Available at: <https://sbcopad.maps.arcgis.com/apps/webappviewer/index.html?id=0f24610ca52d4e28b12e2d76bf61d5ec>. Accessed April 2024.

Department of Conservation (DOC), 2022. California Impact Farmland Finder. Available: <https://maps.conservation.ca.gov/dlrp/ciff/>. Accessed April 2024.

Air Quality

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
III. AIR QUALITY —				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Potentially Significant Impact.** Air pollution control is administered on three governmental levels. The U.S. Environmental Protection Agency (USEPA) has jurisdiction under the Clean Air Act, the California Air Resources Board (CARB) has jurisdiction under the California Health and Safety Code and the California Clean Air Act, and local districts (Santa Barbara County Air Pollution Control District [APCD]) share responsibility with the CARB for ensuring that all State and Federal ambient air quality standards are attained.

The Project is situated in the South Central Coast Air Basin, which encompasses the counties of Ventura, Santa Barbara and San Luis Obispo. Santa Barbara County has been designated as unclassifiable/attainment for all California and Federal ambient air quality standards except the California standards for ozone and particulate matter (PM10).

The 2022 Ozone Plan (2022 Plan) was adopted by the APCD’s Board of Directors in December 2022 and is the tenth triennial update to the initial state Air Quality Attainment Plan (other updates were done in 1994, 1998, 2001, 2004, 2007, 2010, 2013, 2016, and 2019). Each of the plan updates have implemented an “every feasible measure” strategy to ensure continued progress toward attainment of the state ozone standards. Since 1992, Santa Barbara County has adopted or amended more than 30 control measures aimed at reducing emissions from stationary sources of air pollution. These measures have substantially reduced ozone precursor pollutants, which includes NOx and ROC.

The 2022 Plan growth forecasts are generally based on SBCAG’s growth forecasts, and since SBCAG’s regional growth forecasts are based on, among other things, land uses designated in general plans and specific plans, a project that is consistent with the land uses designated in a general plan would also be consistent with the 2022 Plan growth projections. The Project includes installation of broadband facilities in order to provide better internet access throughout the County and would not be anticipated to increase population beyond that projected in the County’s Comprehensive Plan. Therefore, the Project would not result in population growth that would

exceed the regional forecast and would not conflict with the 2022 Plan, so impacts would be less than significant.

The Air Quality Supplement to the Land Use Element of the Santa Barbara County Comprehensive Plan, republished in 2009, provides land use control measures and policies related to air quality. The main goal that is applicable to the Project includes the following (County 2009).

Goal: Significant increases in the use of bicycles, walking, and transit; and reduced use of the automobile.

The Air Quality Supplement notes that “any action that can be taken to reduce automobile use and hence vehicular miles traveled (VMT) will aid in reducing the pollutants contributed by the automobile” (County 2009, page 20). Although many of the policies and actions are more related to the jobs-housing balance within communities, or the availability of bike lanes and transit, the availability of broadband within more rural communities also has the potential to reduce VMT through providing remote work opportunities.

Project construction is not anticipated to generate significant environmental impacts associated with air quality compliance, and the Project would comply with the Comprehensive Plan policies. However, this issue will be analyzed further in the EIR to ensure that the Project complies with all General Plan and Comprehensive Plan policies throughout the County and its individual jurisdictions.

b) **Potentially Significant Impact.** The Santa Barbara County APCD has established Environmental Review Guidelines for the implementation of CEQA (County APCD 2015). The Environmental Review Guidelines provide specific thresholds for air quality emissions as well as greenhouse gas emissions, related to the operation of a Project. The thresholds state that a project would not have a significant impact if it would:

- emit (from all project sources, mobile and stationary) less than the daily trigger for offsets set in the APCD New Source Review Rule for any pollutant and
- emit less than 25 pounds per day of oxides of nitrogen (NOx) or reactive organic compounds (ROC) from motor vehicle trips only; and
- not cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone); and
- not exceed the APCD health risk public notification thresholds adopted by the APCD Board; and
- be consistent with the adopted federal and state Air Quality Plans.

The maximum daily emissions of air pollutants during construction of the Project will be calculated in the EIR. The operational emissions from the Project including maintenance trips will also be analyzed in the EIR, to compare to thresholds for the County.

As discussed earlier, the Santa Barbara County APCD has developed a comprehensive plan, the 2022 Plan, which addresses the region’s cumulative air quality condition. CEQA Guidelines

Section 15064(h)(3) also provides guidance in determining the significance of cumulative impacts. The EIR will include analysis of potentially cumulative impacts from any related projects near the Project site.

- c) **Potentially Significant Impact.** Sensitive receptors are individuals who are considered more sensitive to air pollutants than others. The reasons for greater than average sensitivity may include pre-existing health problems, proximity to emissions sources, or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are considered as relatively sensitive to poor air quality because children, elderly people, and the infirm are more susceptible to respiratory distress and other air quality-related health problems than the general public. Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods of time, with associated greater exposure to ambient air quality.

Since the Project will be occurring throughout the County, there is potential for various sensitive receptors to be located close to future Project sites. However, since air emissions disperse rapidly in the environment and decrease with distance from the source, exposure associated with emissions from construction activities would be limited and temporary in nature. Potential impacts to sensitive receptors, including impacts associated with excessive dust, will be further analyzed in the EIR.

CO Hotspots

Emissions of CO are generated in greatest quantities from motor vehicle combustion of fossil fuels and are usually concentrated at or near ground level because they do not readily disperse into the atmosphere, particularly under cool, stable (i.e., low or no wind) atmospheric conditions. Localized areas where ambient concentrations exceed state and/or federal standards are termed CO hotspots. Impacts related to CO hotspots will be further analyzed in the EIR.

Localized Air Quality Impacts – Toxic Air Contaminants

Toxic air contaminants (TACs) are generally defined as those contaminants that are known or suspected to cause serious health problems, but which do not have a corresponding ambient air quality standard. TACs are also defined as air pollutants that may increase a person's risk of developing cancer and/or serious health effects; however, the emission of a toxic chemical does not automatically create a health hazard. Potential impacts regarding TACs will be analyzed in the EIR.

- d) **Less Than Significant Impact.** During the construction of the Project, diesel trucks and off-road construction equipment may emit odors such as that of diesel exhaust. Such odors would be a temporary source of nuisance to adjacent uses but would not affect a substantial number of people. As odors associated with construction would be temporary and intermittent in nature, the odors would be considered a less-than-significant impact.

uses more likely to produce odors include agriculture, chemical plants, composting operations, dairies, fiberglass molding manufacturing, landfills, refineries, rendering plants, rail yards, and wastewater treatment plants.

The Project would not contain any active manufacturing activities and would not convert current agricultural land to residential land uses. In addition, the Project would not result in the creation of smoke or ash, or excessive dust generation. Therefore, objectionable odors would not be emitted by the proposed uses.

References

Santa Barbara County Comprehensive Plan, Air Quality Supplement to the Land Use Element. Republished in 2009. Accessed online April 19, 2024 via <https://cosantabarbara.app.box.com/s/rnp4ztmr4r9dda9il22fk93nl>.

Santa Barbara County Air Pollution Control District. 2022 Ozone Plan. Accessed online April 18, 2024 via <https://www.ourair.org/wp-content/uploads/2022-Ozone-Plan.pdf>.

Santa Barbara County Air Pollution Control District. Environmental Review Guidelines. Revised April 30, 2015. Accessed online April 19, 2024 via <https://www.ourair.org/wp-content/uploads/APCDCEQAGuidelinesApr2015-1.pdf>.

Biological Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
IV. BIOLOGICAL RESOURCES — Would the project:				
a) 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 Wildlife or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Impact Discussion

- a) **Potentially Significant Impact.** The Project proposes future broadband infrastructure installations in various communities across the County. These installations would include mostly underground fiberoptic cable facilities which are intended to reach end users in underserved or unserved communities, with a possibility for some limited above-ground fiber optic cable installations. Since underground installation are anticipated to occur along existing roadways, or within previously disturbed areas, the Project would have limited potential to impact habitat including critical habitat for special-status wildlife and sensitive plant communities, or unique or threatened plant communities, throughout the County. During construction, potential removal of vegetation and habitat, including non-native vegetation, as well as use of heavy equipment within the Priority Areas and future areas throughout the County, could result in impacts to biological resources, including special status, sensitive plant communities, and migratory birds protected under the Federal Migratory Bird Treaty Act of 1918 and Section 3513 of the California Fish and Game Code. Operation and maintenance activities, including vegetation removal, and erosion repair in some areas, could have the potential to affect special-status plants, wildlife species, and sensitive plant communities due to the extent and type of work associated with the Project. In addition, unique, threatened, or rare plant communities could be impacted during construction and vegetation maintenance related to operation, if necessary. Therefore, Project implementation

would have a potentially significant impact to special-status species and further analysis of this issue is warranted in the EIR.

- b) **Potentially Significant Impact.** As discussed in the Project Description, the Project proposes future broadband infrastructure installations in various communities throughout the County, including the nine Priority Areas, as well as future projects throughout the County whose locations have yet to be determined. The four near-term Priority Areas would be constructed in four phases (each Priority Area project representing a single phase) over a period of 24 months. In Santa Barbara County, riparian habitat occurs in and along the County's four major rivers (Santa Ynez, Santa Maria, Cuyama, and Sisquoc) and in and along the County's many creeks and streams. However, the Project would not involve pesticides, animal life, human life, or non-native plants that would interfere with existing habitat. According to the National Wetlands Inventory Mapper, all nine of the Priority Areas are located within areas that contain one or more protected wetland resources (USFW 2023). Accordingly, the Project could have the potential to affect nearby creeks and streams which support riparian habitat and sensitive natural communities. Additionally, according to the Santa Barbara County Land Use and Zoning Map, the Priority Areas do not traverse through the Environmental Sensitive Habitat (ESH) and Riparian Corridor (RC) Overlays in the County (County of Santa Barbara 2024). Construction of the future broadband infrastructure installations could require removal of vegetation and could potentially impact riparian habitat. Operation and maintenance of the broadband infrastructure installations could require brush and weed removal which could affect riparian habitat. Therefore, implementation of the Project could have a potentially significant impact to riparian habitat, or other sensitive natural communities and further analysis of this issue is warranted in the EIR.
- c) **Potentially Significant Impact.** According to the National Wetlands Inventory Mapper, the nine Priority Areas contain protected wetlands, mainly consisting of natural creek drainages and small wetlands and freshwater ponds (USFW 2023). Additionally, the Project would potentially affect other areas throughout the County beyond the nine noted Priority Areas, which could have the potential to affect nearby creeks and streams that support riparian habitat and sensitive natural communities. As such, the Project could have potential impacts to riparian habitat or other sensitive natural community during construction and operation activities. Therefore, implementation of the Project would have potentially significant impacts and further analysis of this issue is warranted in the EIR.
- d) **Potentially Significant Impact.** Wildlife corridors are features that exist as topographical or structural pinch points that, among other purposes, are utilized by wildlife for travel between one geographical area to the next. While these resources may support limited biological function and are perhaps utilized strictly for travel purposes, for example, a dry culvert under a roadway or bridge; more often, they contain natural vegetation and habitats that support foraging, roosting, and breeding activities, as well. Very often, particularly in the case of riparian corridors, aquatic species depend entirely on these features to persist. Wildlife corridors and designated essential connectivity areas are present throughout Santa Barbara County. None of the Priority Areas are located within a designated wildlife corridor (CDFW 2023a); however, future projects could occur throughout the County, but would be primarily located along public and private roadways. Since Project components would almost entirely be located underground with limited above-

ground improvements proposed, and thus no substantial barriers to wildlife movement are anticipated to result from Project implementation. However, given other factors that could reduce wildlife movement including fencing, noise, or lighting, which would potentially occur during construction activities for broadband installation, impacts are considered potentially significant.

Additionally, construction activities could require tree removal within each of the nine Priority Areas and may also require tree removal in other future project areas. However, the Project would be required to comply with the Migratory Bird Treaty Act (MBTA), which regulates vegetation removal during the nesting season to ensure that significant impacts to migratory birds would not occur. Additionally, California Department of Fish and Game Code 3513 provides protection to the birds listed under the MBTA, essentially all native birds. Other Fish and Game Codes provide further protection to certain types of birds, such as raptors. While these regulations are generally protective of nesting and migratory birds, there is the potential given the unknowns regarding the nature and location of future construction work that impacts to migratory species could occur. Therefore, implementation of the Project could have a potentially significant impact on wildlife corridors and further analysis of this issue is warranted in the EIR.

- e) **Potentially Significant Impact.** Implementation of the Project could require the removal and encroachment of protected trees, although the exact number is unknown since future projects could occur throughout the County. At the time of this Initial Study, Project plans are in a preliminary stage and full impacts to protected and native specimen trees are unknown. However, as construction activities could require vegetation and tree removal, the Project would have the potential to impact biological resources. Therefore, implementation of the Project would have a potentially significant impact on local policies or ordinances protecting biological resources and further analysis of this issue is warranted in the EIR.
- f) **Potentially Significant Impact.** The nine identified Priority areas do not have any adopted local, regional, or state Natural Community Conservation Plans that are applicable, as none are adopted for Santa Barbara County (CDFW 2023b). However, there are several other conservation plans and programs intended to address habitat conservation for various threatened and endangered species. Therefore, implementation of the Project would have the potential to conflict with adopted conservation plans and further analysis of this issue is warranted in the EIR.

References

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Cultural Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
V. CULTURAL RESOURCES — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Potentially Significant Impact.** Under CEQA, a project may have a significant effect on the environment if it may cause “a substantial adverse change in the significance of an historical resource” (Public Resources Code Section 21084.1; 14 California Code of Regulations (CCR; henceforth referenced as CEQA Guidelines) 15064.5(b)). If a site is listed or eligible for listing in the California Register of Historical Resources (CRHR), or included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of Public Resources Code Section 5024.1(q)), it is a historical resource and is presumed to be historically or culturally significant for the purposes of CEQA (CEQA Guidelines Section 15064.5(a)).

As discussed, the Project proposes future broadband infrastructure installations in order to provide adequate high-speed broadband internet services to the Priority Areas and other areas throughout the County. A Cultural Report is being prepared, which will include analysis of any potential historic resources within the Priority Areas, and other potential future project areas in the County. Due to the nature and extent of the Project, construction and regular maintenance activities for the broadband infrastructure could have a potential to impact cultural resources within the Priority Areas and in future project areas throughout the County. Therefore, implementation of the Project could have potentially significant impact to historical resources and further analysis of this issue is warranted in the EIR.

- b) **Potentially Significant Impact.** Archaeological resources are features, such as tools, utensils, carvings, fabric, building foundations, etc., that document evidence of past human endeavors and that may be historically or culturally important to a significant earlier community. The Project proposes future broadband infrastructure installations within the Priority Areas, which have been identified as underserved or unserved communities. Construction activities would include horizontal point-to-point underground boring, and if necessary, could include micro-trenching and/or aerial stringing from utility poles. Excavations for boring pits would generally be limited to two feet by two feet (but could be up to two feet by six feet) and would be temporary in nature, with the ground surface and any paving or landscaping restored to pre-project conditions once construction is complete. Although the maximum depth of excavation is likely to be to a depth of only four feet, the construction of the future installations could cause inadvertent discovery of archaeological resources beneath the potential project areas. Therefore, implementation of the

Project would have potentially significant impact to an archaeological resource and further analysis of this issue is warranted in the EIR.

- c) **Less Than Significant Impact.** As previously indicated, the Project proposes future installations countywide, initially within the four identified Priority Areas. Nevertheless, the Project would require excavation that could extend into native soils, with the potential to encounter previously unknown human remains. A number of regulatory provisions address the handling of human remains inadvertently uncovered during excavation activities. These include State Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98, and CEQA Guidelines Section 15064.5(e). Pursuant to these codes, in the event of the discovery of unrecorded human remains during construction, excavations shall be halted, and the County Coroner shall be notified. If the human remains are determined to be Native American, the California Native American Heritage Commission (NAHC) would be notified within 24 hours and the guidelines of the NAHC would be adhered to in the treatment and disposition of the remains. Compliance with these regulatory protocols would ensure that impacts on human remains would be less than significant and therefore this issue is not warranted in the EIR.

References

N/A

Energy

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
VI. ENERGY — Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Potentially Significant Impact.** The Project would result in energy demand from the use of construction equipment for a temporary period, which for the initial four Priority Areas would occur over a duration of approximately 24 months (with comparable durations of construction assumed for future projects elsewhere in the County). Energy demand from the use of transportation fuels from construction activities would be generated by the operation of vehicles and equipment used for various construction activities, such as excavation and grading. Electricity would be consumed to power the construction sites, conveyance of water for dust control, and any electrically driven construction equipment. Construction-related energy and transportation fuel demand from construction equipment would vary depending on factors such as the type and number of equipment and the time duration that each equipment is powered on and used. Electricity would only be used for necessary construction-related activities and would be limited to working hours. Natural gas would not be consumed during construction of the future installations of the Project. Construction equipment and trucks would be required to comply with applicable provisions of regulations to improve fuel efficiency. Furthermore, trucks would need to comply with the 2004 CARB Airborne Toxic Control Measure (ATCM) (CARB 2004a) to limit heavy-duty diesel motor vehicle idling to 5 minutes or less at any given location. However, due to the nature and extent of the future installations, construction of the Project could result in potentially significant impacts pertaining to the wasteful, inefficient, or unnecessary consumption of transportation fuel resources and further analysis of this issue is warranted in the EIR. In addition, the EIR will analyze whether construction of the Project will create an increase in energy demand, especially during peak hour periods, and whether the Project would create a need to expand new sources of energy.

Operation of the Project would generate periodic trips from maintenance workers traveling to and from the potential project areas. Given the nature of the Project, additional trips would result in an increase in vehicle fuel usage by construction workers. During operation of the Project, electricity would be consumed during routine maintenance, but such electricity usage would be minimal. No natural gas would be used during operational activities. Given the energy consumption of the Project, operation and routine maintenance trips from maintenance workers would result in an increase in energy consumption and could result in the wasteful, inefficient, or unnecessary consumption of electricity resources. Therefore, implementation of the Project would result in potentially significant impacts and further analysis of this issue is warranted in the EIR.

- b) **Potentially Significant Impact.** During construction, the Project would include energy consumption sources that are directly subject to state or local energy efficiency plans. On-road and off-road vehicles used during construction would be required to meet the ongoing federal and state fuel efficiency requirements. Additionally, construction equipment and trucks are required to comply with CARB regulations regarding heavy-duty truck idling limits of five minutes per occurrence. These limitations would result in an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines. Although these requirements are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in the efficient use of construction-related energy. As previously discussed, the Project proposes future broadband infrastructure installations in various communities throughout the County and construction of such installations would require energy consumption initially over a period of approximately 24 months for the first four Priority Areas. Due to the extent and nature of the Project, it is unknown at the time of this Initial Study the amount of energy consumption generated by the Project. Thus, implementation of the Project could conflict with or obstruct a state or local plan for renewable energy or energy efficiency and further analysis of this issue is warranted in the EIR.

References

N/A

Geology and Soils

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
VII. GEOLOGY AND SOILS — Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

a.i) **Less Than Significant Impact.** Fault rupture is a plane or surface in the earth where failure has occurred and materials on opposite sides have moved relative to one another in response to the accumulation and release of stress. The U.S. Geological Survey defines active faults as those that have had surface displacements within the Holocene epoch (about the last 11,000 years). Potentially active faults are those that have had surface displacement during the Quaternary period, within the last 1.6 million years. The Project areas are located within an area of the Central Coast Region with numerous active and potentially active faults of the north-northwest trending San Andreas Fault system and the east-west trending Transverse Ranges Fault System.

As mentioned above, the Project proposes future broadband infrastructure installations in various communities throughout the County, however, the specific locations of future broadband facility installations are currently not known, with the exception of the nine identified Priority Areas. Based on the Alquist-Priolo Earthquake Fault Zones Map, the Priority Areas are not located within an Alquist-Priolo Special Study Zone (CGS, 2024a). However, the Los Alamos Priority Area is in proximity to the Zaca Creek Alquist-Priolo Earthquake Fault, located east of the

community, and the East of Santa Maria Priority Area intersects with segments of the Bradley Canyon Fault, Garey Fault, and Foxen Canyon Fault (CGS, 2024a).

In Casmalia, the major fault strands bordering the community are the Casmalia Fault to the north and northwest and Lions Head Fault (Late Quaternary) to the east and south (CGS, 2024a). There are no major fault strands bordering or within proximity to the City of Guadalupe and New Cuyama/Cuyama (CGS, 2024a). The Project consists of the installation of broadband infrastructure throughout various communities within the County and would not include development of any habitable structures or any development that would directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death. In addition, the Project does not include substantial soil disturbance beyond trenching; and extensive grading, removal of topsoil, extraction of mineral ore, creation of excessive spoils, and permanent changes to topography would not occur. In addition, all proposed improvements would be carried out in accordance with applicable regulations and design standards to address seismic safety for infrastructure installations. Therefore, implementation of the Project would cause less than significant impacts. No further analysis of this issue is warranted in the EIR.

- a.ii) **Less Than Significant Impact.** The Project areas are located in Central Coast Region of California, an area that is subject to seismic ground shaking. Seismically induced ground acceleration is the shaking motion that is produced by an earthquake. As noted in Response VII.a.i) above, based on the Alquist-Priolo Earthquake Fault Zones Map, the identified Priority Areas are not within an Alquist-Priolo Special Study Zone (CGS, 2024a). While some of the Priority Areas are located near or intersect with known active faults in the region, the Project consists of the installation of broadband infrastructure throughout various communities within the County and would not include construction of any habitable structures or any development beyond installation of cables underground or on above-ground utility poles and associated appurtenances including utility vaults and boxes and limited modular equipment structures. The proposed Project would largely operate passively once constructed and operation of the proposed broadband facilities would have little potential to result in substantial adverse effects, including the risk of loss, injury, or death involving seismic ground shaking. As such, implementation of the Project would result in less than significant impacts related to strong seismic shaking. No further analysis is warranted in the EIR.
- a.iii) **Less Than Significant Impact.** Liquefaction is the phenomenon in which saturated granular sediments temporarily lose their shear strength during periods of earthquake-induced strong ground shaking. The susceptibility of a site to liquefaction is a function of the depth, density, and water content of the granular sediments, and the magnitude and frequencies of earthquakes in the surrounding region. Saturated, unconsolidated silts, sands, and silty sands within 50 feet of the ground surface are most susceptible to liquefaction. Liquefaction-related phenomena include lateral spreading, ground oscillation, flow failures, loss of bearing strength, subsidence, and buoyancy effects. In addition, densification of the soil resulting in vertical settlement of the ground can also occur. This phenomenon can result in damage to infrastructure, including foundations.

The four Priority Areas are not located in a Seismic Hazard Area for liquefaction according to the California Earthquake Zones of Required Investigation Map (CGS, 2024b). Furthermore, the Project proposes future broadband infrastructure installations within various communities throughout the County, with no planned development of habitable structures. Therefore, implementation of the Project would not result in substantial adverse impacts as the Project does not propose construction of any habitable structures that can be affected by liquefaction and result in potential loss, injury, or death. No further analysis is warranted in the EIR.

- a.iv) **Less Than Significant Impact.** The geologic and topographic characteristics of an area often determine the potential for landslides. Landslides (or slope failures) are the dislodging and failing of a mass of soil or rocks along a sloped surface. Generally, small-scale slope failure typically occurs along stream banks, margins of drainage channels, and similar settings where steep banks or slopes occur, the relatively flat terrain of the Project areas minimizes this potential geologic hazard. The identified Priority Areas are not located in a Seismic Hazard Area for Landslide potential according to the California Earthquake Zones of Required Investigation Map (CGS, 2024b). Furthermore, the Project proposes future broadband infrastructure installations within various communities throughout the County, with limited, if any, above-ground structural development, and no habitable structures involved. The Project construction and grading activities would include open-trench construction and horizontal point-to-point underground boring and could include micro-trenching and/or aerial stringing from utility poles and excavations for boring pits, limited to a maximum of up to two feet by six feet. Given the topography of the known Priority Areas, the absence of proposed habitable or sizeable structural development, and the maximum excavation depths proposed, seismically induced landslides would not pose a danger to people or structures on-site or in the vicinity of future Priority Area projects. Therefore, implementation of the Project would result in less than significant impacts from landslides. No further analysis is warranted in the EIR.
- b) **Less Than Significant Impact.** The Project proposes future broadband infrastructure installations within various communities throughout the County, with no planned development beyond the installation of underground infrastructure and limited above-ground appurtenances and modular support structures to house network computer equipment. The Project construction and grading activities would include open-trench construction and horizontal point-to-point underground boring and may also include micro-trenching and/or aerial stringing from utility poles and excavations for boring pits, limited to a maximum of up to two feet by six feet. Ground disturbance for the installation of the utility poles would excavate a minimal amount of soil within each Priority Area as well as future project areas and would generally be located along public and private roadways. There is no planned development which would lead to soil erosion or the loss of topsoil. During construction, however, construction activities would be required to implement various requirements including those of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, Caltrans Stormwater Permit, or NPDES Municipal Separate Storm Sewer System (MS4) Permit including implementation of best management practices (BMPs), which would be utilized to reduce any potential erosion or loss of topsoil due to proposed construction activities or long-term maintenance activities associated with future projects. Therefore, implementation of the Project is not anticipated to result in substantial soil erosion or the loss of topsoil. No further analysis is warranted in the EIR.

- c) **Less Than Significant Impact.** Unstable geologic units or soils commonly occur when there is the potential for landslides, lateral spreading, subsidence/collapse, or liquefaction to occur in a given location.

Landslides

See Response VII.a.iv), above. The geologic and topographic characteristics of an area often determine the potential for landslides. Landslides (or slope failures) are the dislodging and failing of a mass of soil or rocks along a sloped surface. Generally, small-scale slope failure typically occurs along stream banks, margins of drainage channels, and similar settings where steep banks or slopes occur, the relatively flat terrain of the identified Priority Areas would generally minimize this potential geologic hazard. The identified Priority Areas are not located in a Seismic Hazard Area for Landslide potential according to the California Earthquake Zones of Required Investigation Map (CGS, 2024b). Furthermore, the Project proposes future broadband infrastructure installations within various communities throughout the County, with no planned development beyond the installation of buried broadband cables, pole-mounted cables, and limited below- and above-grade appurtenances including limited modular equipment structures. The Project construction and grading activities would include open-trench construction, horizontal point-to-point underground boring, and may also include micro-trenching and/or aerial stringing from utility poles and excavations for boring pits, limited to a maximum of up to two feet by six feet. Given the Project Area's general topography, absence of notable structural development, and the maximum excavation depths proposed, seismically induced landslides would not pose a danger to people or structures on-site or in the vicinity of future broadband installation projects. Therefore, implementation of the Project would result in less than significant impacts from landslides. No further analysis is warranted in the EIR.

Lateral Spreading

See Response VII.a.iii) above. Lateral spreading movement occurs when a soil mass slides laterally on liquefied soil layers, moving downslope or towards a free face. The identified Priority Areas are not located within a liquefaction hazard zone (CGS, 2024b). Additionally, the Project proposes future broadband infrastructure installations within various communities throughout the County, with no notable structural development and no habitable structures proposed. Given the Project nature and absence of proposed habitable structural development within the Priority Areas or elsewhere within the County, the Project would not result in substantial adverse impacts relating to lateral spreading. No further analysis is warranted in the EIR.

Subsidence/Collapse

Subsidence or collapse is the sinking of the ground surface caused by the compression of earth materials resulting from man-made activities such as groundwater or oil and gas withdrawal. The resulting compression typically occurs only once within affected soils and cannot be reversed or repeated due to fluctuations of the groundwater level. The National Earthquake Hazards Reduction Program (NEHRP) rates soils from hard to soft and gives the soils ratings from Type A through Type E, with the hardest soils being Type A, and the softest soils rated at Type E (Santa Barbara County 2017). According to the Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan, the soils in the County are type A-C, with some areas having type D (Santa

Barbara County 2017). Additionally, there is no evidence of significant subsidence or problems related to subsidence in the County; however, due to the limited information available, subsidence could be occurring in these areas but if so, it is not significant since no problems have been reported (Santa Barbara County 2023). As mentioned above, the Project proposes future broadband installations in various communities throughout the County, with very limited, if any, planned structural development, and no habitable structures proposed. However, the specific locations of the installations are currently not known beyond the nine Priority Area projects currently proposed. The Project construction and grading activities would include open-trench construction and horizontal point-to-point underground boring and may also include micro-trenching and/or aerial stringing from utility poles and excavations for boring pits, limited to a maximum of up to two feet by six feet. As such, the Project does not propose construction of any habitable structures that could be affected by subsidence and/or collapse. Therefore, implementation of the Project would result in less than significant impacts relating to subsidence/collapse. No further analysis is warranted in the EIR.

Liquefaction

As discussed above, liquefaction is a phenomenon that occurs when soil undergoes transformation from a solid state to a liquefied condition due to the effects of increased pore-water pressure. There is no historical evidence of liquefaction in the County, most of the low coastal plain and valley bottoms underlain by alluvium were given a moderate (2) rating with respect to liquefaction potential (Santa Barbara County 2023). As mentioned in Response VII.a.iii), above, none of the nine identified Priority Areas are located in a Seismic Hazard Area for liquefaction according to the California Earthquake Zones of Required Investigation Map (CGS 2024b). The Project proposes future broadband installations in various communities throughout the County, with no planned habitable structural development. However, the specific locations of the installations are currently not known aside from those within the nine Priority Areas. Nonetheless, compliance with applicable grading and engineering design requirements, which include remediation of liquefiable soils and other hazardous soil conditions, as recommended by requisite geotechnical investigations for future projects would preclude the potential for adverse physical effects associated with liquefaction. There is no presence of liquefaction hazards within the nine Priority Areas, and while future broadband installation projects may be located in areas susceptible to liquefaction, given the nature of Project-related improvements and construction methods employed (consistent with geotechnical investigation recommendations, where applicable), the Project is anticipated to result in less than significant impacts associated with liquefaction at future project sites. No further analysis is warranted in the EIR.

- d) **Less Than Significant Impact.** Expansive soil is characterized by a clay composition whereby clay particles expand dramatically upon wetting. Structures constructed on expansive soils require special design considerations that are identified within the California Building Code. According to the Seismic Safety and Safety Element, expansive soils are fairly common in the County and are present in areas of current development such as the foothills of the South Coast (Summerland to Gaviota) and the Santa Ynez Valley (vicinity of Los Olivos, Ballard, Santa Ynez) (County of Santa Barbara 2023). Portions of the nine Priority Areas, as well as potential future broadband installation project sites, may be located within areas susceptible to expansive soils. However, as

mentioned in Response VII.c), above, the Project proposes future broadband installations in various communities throughout the County, with no planned habitable structural development, and predominantly involving the installation of relatively small underground fiber optic cable in conduit with limited above-ground improvements and small modular equipment structures where necessary. All engineering design and construction methods for each project would be based on the results of soil investigations and geotechnical evaluation by licensed professionals and would include recommendations for soil remediation where necessary including removal of expansive soils. Therefore, given the limited nature and intensity of the proposed broadband installations and compliance with accepted grading and engineering design requirements, implementation of the Project would result in less than significant impacts associated with expansive soil materials. No further analysis is warranted in the EIR.

- e) **No Impact.** As noted above, the Project proposes future broadband installations in various communities throughout the County, with no planned habitable structural development that would necessitate the provision of sewer connections or on-site wastewater treatment systems. The Project does not involve the installation of any septic tanks or alternative wastewater disposal systems. Therefore, implementation of the Project would result in no impact related to soils incapable of adequately supporting the use of septic tanks or wastewater disposal systems. No further analysis is warranted in the EIR.
- f) **Potentially Significant Impact.** As discussed previously, the Project proposes future broadband installations in various communities throughout the County involving the installation of fiber optic cable in underground conduit or along existing or proposed utility poles, as well as associated below- and above-grade appurtenances and minor modular structures. Aside from the nine Priority Areas, the specific locations of future broadband installations are currently not known and thus, at the time of this Initial Study, a paleontological resources database search was not conducted.

However, based on the Seismic Safety and Safety Element, the County is underlain by up to 35,000 feet of marine sedimentary rocks of late Mesozoic and Cenozoic ages. The sedimentary rocks are diverse but are dominated by great thickness of sandstone and shale with lesser amounts of conglomerate, alluvial fan deposits, dune sand, and diatomite (Santa Barbara County 2023). Additionally, based on the Society of Vertebrate Paleontology, the geologic types in the County could have the potential for paleontological resources (SVP 2024).

The Project proposes future broadband installations in various communities throughout the County, with no limited structural development. However, the specific locations of the installations are currently not known, other than for the four near-term Priority Area projects, though for all future projects in the County the likely general location of broadband installations being along existing public and private roadways. Should paleontological resources be encountered during construction activities, the Project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Given the widespread potential for Project-related excavations to encounter geologic formations with high sensitivity for fossil resources, the Project could result in potentially significant adverse impacts to paleontological resources and thus this issue will be further analyzed in the Cultural Resources section of the EIR.

References

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Greenhouse Gas Emissions

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
VIII. GREENHOUSE GAS EMISSIONS — Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Potentially Significant Impact.** The Project proposes future broadband infrastructure installations in communities throughout the County. The Project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. During construction, the Project would generate greenhouse gas (GHG) emissions through the use of construction vehicles and equipment, haul trips, and transport of workers and materials to and from the construction sites. During operation, the Project would not be expected to substantially increase GHG emissions as only minimal routine maintenance would be required. Due to the limited information pertaining to GHG emissions analysis available at the time of this Initial Study, construction and operation GHG emissions generated by the Project could either directly or indirectly have a significant impact on the environment. Therefore, implementation of the Project would have potentially significant impacts and further analysis of this issue is warranted in the EIR.

- b) **Potentially Significant Impact.** As previously discussed, due to the limited information available pertaining to GHG emissions at the time of this Initial Study, the Project could conflict with an applicable plan, policy or regulation of an agency adopted for the purposes of reducing GHG emissions. The Project proposes future broadband infrastructure installations in various communities throughout the County, which would generate GHG emissions over the length of the respective construction period for each project. However, due to the nature of the Project, such GHG emissions could conflict with applicable plans, policies, or regulations adopted for the purpose of reducing emissions GHGs. During operation, the Project would generate a minimal increase in GHG emissions as routine maintenance would be provided as necessary. Therefore, implementation of the Project would have potentially significant impacts on GHG emissions and further analysis of this issue is warranted in an EIR.

References

N/A

Hazards and Hazardous Materials

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
IX. HAZARDS AND HAZARDOUS MATERIALS —				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) 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 it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a 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 project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Less Than Significant Impact.** Exposure of the public or the environment to hazardous materials could occur through improper handling or use of hazardous materials or hazardous wastes particularly by untrained personnel, a transportation accident, environmentally unsound disposal methods, or fire, explosion, or other emergencies. The severity of potential effects varies with the activity conducted, the concentration and type of hazardous material or wastes present, and the proximity of sensitive receptors. As mentioned above, the Project proposes future broadband installations in various communities throughout the County, with minimal, if any, structural development required for each project. However, the specific locations of the installations are currently not known beyond those of the four near-term Priority Area projects.

The Project construction could expose construction workers and the public to temporary hazards related to the transport, use, and maintenance of construction materials (i.e., oil, diesel fuel, and transmission fluid), and/or import/export of soils. However, these activities would be short-term, and the materials used would not be in such quantities or stored in such a manner as to pose a significant safety hazard. The Project would be in full compliance with all applicable federal, state, and local requirements concerning the use, storage, and management of hazardous materials, including, but not limited to the Resource Conservation and Recovery Act (RCRA),

Hazardous Materials Transportation Act (HMTA), California Hazardous Waste Control Law, federal and state Occupational Safety and Health Acts, and permits and associated conditions issued by Santa Barbara County and the City of Guadalupe. Therefore, the Project construction activities would demonstrate compliance with the applicable laws and regulations governing the use, storage, and transportation of hazardous materials/waste, ensuring that all potentially hazardous materials are used and handled in an appropriate manner. The Project is not anticipated to create a potential public health hazard, cause exposure to oil or gas pipelines or oil well facilities or contaminate public water supply.

Operation of the Project would involve the routine maintenance of vegetation removal, as needed. As such, the Project would not involve the routine transport, use, and disposal of large quantities of hazardous materials. The Project's limited use of common hazardous materials can typically be disposed of at Class II or III landfills, which accept most common waste materials. In addition, all hazardous materials used on the Project during operation would be used, stored, and disposed of in accordance with all applicable federal, state, and local requirements. Compliance with applicable regulations would ensure that operational impacts are less than significant.

Therefore, implementation of the Project would result in less than significant impacts through the routine transport, use, or disposal of due to the Project nature. No further analysis is warranted in the EIR.

- b) **Less Than Significant Impact.** At the time this Initial Study was prepared a Phase I Environmental Site Assessment was not conducted. However, a review of the California Environmental Protection Agency (CalEPA) Department of Toxic Substances Control (DTSC)'s Envirostor Database indicates that none of the nine identified Priority Areas are located in proximity to known hazardous materials sites with the potential to result in adverse effects associated with hazardous materials releases (DTSC 2024). During excavation and broadband installation, hazardous materials such as fuel and oils associated with construction equipment could be used, and therefore, would require proper handling and management and, in some cases, disposal. The use, handling, storage, and disposal of these materials could increase the opportunity for hazardous materials releases and, subsequently, the exposure of construction workers and the environment to hazardous materials. However, as previously discussed, all potentially hazardous materials used during broadband infrastructure installation be used and disposed of in accordance with manufacturers' specifications and instructions, thereby reducing the risk of hazardous materials use. In addition, the Project would comply with all applicable federal, State, and local requirements concerning the use, storage, and management of hazardous materials. Based on the above, compliance with existing regulations would ensure the Project construction activities would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Operation of the Project would involve the routine maintenance of vegetation removal and potentially utility pole maintenance, as needed. As stated previously, activities involving the handling and disposal of hazardous waste would occur in compliance with all applicable federal, state, and local requirements concerning the handling and disposal of hazardous waste. With

applicable regulations and requirements compliance, operational activities would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, implementation of the Project would result in less than significant impacts related to the release of hazardous materials into the environment. No further analysis is warranted in the EIR.

- c) **Less Than Significant Impact.** Some populations (e.g., children, elderly, sick or disabled persons) are more susceptible to health effects of hazardous materials than the general population. Hazardous materials used near schools, day care centers, senior living communities, hospitals, etc., must consider potential health effects to these populations, often referred to as “sensitive receptors.” Construction or redevelopment on contaminated properties that could potentially generate vapors or fugitive dust containing contaminants may potentially pose a health risk to these populations. In addition, commercial businesses in proximity to sensitive receptors may have hazardous emissions or handle hazardous or acutely hazardous materials or wastes that could pose a health risk to these sensitive receptors.

There are numerous schools located within a 0.25-mile radius of the four identified near-term Priority Areas. In Los Alamos, the nearest existing school within the Priority Area is Olga Reed Elementary, located at 480 Centennial Street (Orcutt Union School District, 2024). In Casmalia, the nearest existing school within the Priority Area is Pine Grove Elementary, located at 1050 E Rive Ranch Road (OUSD, 2024). In the City of Guadalupe, the nearest existing schools within the Priority Area are the Mary Buren Elementary School, located at 1050 Peralta Street, and Kermit McKenzie Intermediate School, located at 4710 W. Main Street (GUSD, 2024). Additionally, in New Cuyama/Cuyama, the nearest existing schools within the Priority Area are Cuyama Valley High School, located at 7670 Cuyama Hwy; Cuyama Elementary School, located at 2300 CA-166; and Cuyama Headstart Preschool, located at CA-166.

The on-site use of hazardous materials at the Project installation sites would be limited to typical construction fuels and materials. The materials used by construction crews would be in small quantities and stored in compliance with state and federal requirements. Therefore, implementation of the Project would result in less than significant impacts as no substantial amounts of hazardous materials would be used or stored onsite. No further analysis of this issue is warranted in the EIR.

- d) **Less Than Significant Impact.** Section 65962.5 of the California Government Code requires the California Environmental Protection Agency to develop and update annually the Cortese List, which is a “list” of hazardous waste sites and other contaminated sites. While Section 65962.5 makes reference to the preparation of a “list,” many changes have occurred related to web-based information access since 1992 and information regarding the Cortese List is now compiled on the websites of multiple agencies, such as DTSC the State Water Board, and CalEPA. As noted above, DTSC maintains the EnviroStor database (DTSC 2024), which includes sites on the Cortese List and also identifies potentially hazardous sites where cleanup actions (such as a removal action) or extensive investigations are planned or have occurred. The database provides a listing of Federal Superfund sites (National Priorities List); State Response sites; Voluntary Cleanup sites; and School Cleanup sites. Geotracker is the State Water Resources Control

Board's data management system for managing sites that impact groundwater, especially those that require groundwater cleanup (USTs, Department of Defense, Site Cleanup Program) as well as permitted facilities such as operating USTs and land disposal sites. CalEPA's database includes lists of sites with active Cease and Desist Orders or Cleanup and Abatement Orders from the State water board.

The Project proposes future broadband installations in various communities throughout the County. However, aside from the four near-term Priority Area projects, the specific locations of the installations are currently not known, although all broadband installations under the Project are anticipated to generally occur predominantly along public and private roadways. At the time of this Initial Study, a Phase I Environmental Site Assessment was not conducted; however, as noted above, a review of the DTSC Envirostor Database indicated that no significant hazardous materials sites are located in the vicinity of any of the nine identified Priority Areas. Construction methods would primarily include horizontal point-to-point underground boring, and if necessary, could include micro-trenching and/or aerial stringing from utility poles. Excavation for boring pits would generally be limited to two feet by two feet (but up to a maximum of two feet by six feet) and would be temporary in nature over a period of several months depending on the number of properties being served. Thus, based on the anticipated nature and extent of Project construction activities, it is unlikely that the Project would be located on a site which is included on a list of hazardous material sites that could create a significant hazard to the public or the environment from the release of hazardous materials. Therefore, implementation of the Project would result in less than significant impacts. No further analysis of this issue is warranted in the EIR.

- e) **No Impact.** The Project proposes future broadband infrastructure installations in various communities throughout the County. The Priority Areas identified are not within the vicinity of a private airstrip, heliport, or helistop or within an airport land use plan or within two miles of a public or private airport (County of Santa Barbara 2024). Furthermore, the proposed broadband improvements would not place additional habitable structures or population in proximity to any airports, airstrips, or aircraft operations such that adverse effects could occur. Therefore, implementation of the Project would result in no impacts to airport-related safety hazards or excessive noise for people residing or working in the Project area. No further analysis of this issue is warranted in the EIR.
- f) **Less Than Significant Impact.** The Project proposes future broadband installations in various communities throughout the County. However, while nine Priority Areas have been identified for broadband installations in the near future, the specific locations of additional future installations are currently not known. Irrespective of the timing and location of these future projects, construction activities would typically take place outside of, but parallel and adjacent to, existing public and private roadways. While temporary construction activities within or adjacent to public ROW could result in short-term decreases in traffic flow, such effects would be necessarily localized and would be at least partially addressed by adherence to standard construction practices for traffic control and safety (e.g., Greenbook: Standard Specifications for Public Works Construction or similar guidance). As such, construction activities associated with future broadband installations would not be expected to result in temporary blockage or closure of local

access routes within the Priority Areas such that adverse impacts to an adopted emergency response plan or emergency evacuation plan would result. In fact, given the relatively rural nature of many of the Priority Areas and other future areas that are unserved or underserved by broadband service in the County, the potential for significant traffic congestion to result from Project-related construction activities that could in turn affect implementation of an adopted emergency response plan or emergency evacuation plan is considered low. Therefore, implementation of the Project would result in less than significant impacts with an adopted emergency response plan or emergency evacuation plan. No further analysis is warranted in the EIR.

- g) **Less Than Significant Impact.** The majority of the identified Priority Areas are located in urbanized settings but within a relatively rural context with sparse development density and extensive open space areas in the surrounding vicinity. According to CAL FIRE, several of the nine Priority Areas are located within a designated Fire Hazard Severity Zone (FHSZ). Portions of the nine Priority Areas are located in moderate, high, and very high FHSZs within State Responsibility Areas (SRAs) served by CAL FIRE, as well as within Local Responsibility Areas (LRAs) served by County or local fire departments, and within Federal Responsibility Areas (FRAs) such as Vandenberg Space Force Base and the Los Padres National Forest (CalFire 2024). As such, elevated fire risks are present throughout the Project Area where future broadband installations would occur.

The Project proposes future broadband infrastructure installations in various communities within the County and does not propose any other associated development. The Project broadband infrastructure would consist of new fiber-optic lines installed underground following public or private roadways and would not involve installation of high-voltage power lines or other facilities that could result in ignition of urban structure fires or wildfires. The Project would also include construction activities within those areas where lateral lines are installed between public or private roadways and individual businesses or residences. The broadband installations would avoid sensitive habitats, including areas of thick vegetation or trees (i.e., potential wildfire fuel sources) wherever feasible. Construction and operation activities would require regular vegetation removal and maintenance, minimizing wildland fire risks. Additionally, the Project would be required to comply with all applicable fire codes and other safety requirements in the design, construction, and operation of proposed facilities. Thus, as no permanent population or habitable structures are proposed, the Project would have less than significant impacts regarding the significant risk of loss, injury, or death involving wildland fires. No further analysis is warranted in the EIR.

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Hydrology and Water Quality

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
X. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Less Than Significant Impact.** The Project proposes future broadband infrastructure installation in various communities throughout the County. Construction activities would include horizontal point-to-point underground boring, and if necessary, could include micro-trenching and/or aerial stringing from utility poles. Excavations for boring pits would generally be limited to two feet by two feet (but up to a maximum of two feet by six feet) and would be temporary in nature, with the ground surface and any paving or landscaping restored to pre-project conditions once construction is complete. During excavation, exposed and stockpiled soils could be subject to wind and water conveyance into nearby storm drains during storm events, and on-site water activities for dust suppression purposes could contribute to pollutant loading, as a result of runoff from the site. The County would be required to comply with the National Pollutant Discharge Elimination System (NPDES) General Construction Permit, including the preparation of a Storm Water Pollution Prevention Plan (SWPPP) and implementation of best management practices (BMPs) to minimize soil erosion/sedimentation and other runoff from the Project areas from entering the storm drains during the construction period. Compliance with all applicable federal, State, and local requirements would reduce the potential for Project construction to result in the release of contaminants into the storm drain system or groundwater, which would preclude the

Project from causing a violation of any adopted water quality standards or waste discharge or treatment requirements during construction activities. Therefore, the Project would not violate water quality standards and discharge requirements or otherwise substantially degrade water quality. Operational impacts would be less than significant as there is no planned development, and operation would only require periodic maintenance. Therefore, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality and impacts regarding water quality and discharge requirements would be less than significant. No further analysis of this issue is warranted in the EIR.

- b) **Less Than Significant Impact.** The County has nine groundwater basins that are utilized to provide a portion of the domestic water supply for its residents, with the main groundwater units underlying the nine Priority Areas being the San Antonio Creek Valley Basin, Santa Ynez River Valley Basin, Santa Maria River Valley Basin, and Cuyama Valley Basin (SBCWA 2019). Construction activities would include open-trench construction and horizontal point-to-point underground boring, and if necessary, could include micro-trenching and/or aerial stringing from utility poles. Excavations for boring pits would generally be limited to two feet by two feet (but up to a maximum of two feet by six feet) and would be temporary in nature. The Project would not result in the introduction of notable impervious surface area to the future project sites given the limited footprint of proposed broadband facilities to be installed and associated construction footprint and lack of substantial paving or structural improvements. Therefore, implementation of future broadband installations is not expected to measurably reduce groundwater recharge associated with introduction of impervious surfaces.

If groundwater is encountered during Project excavation, temporary dewatering would be required, and the construction contractor would be expected to manage the groundwater/dewatering process, including any disposal of wastewater in accordance with the NPDES Construction General Permit, Caltrans Stormwater Permit, and other requirements, as applicable. Any dewatering would be temporary and cease when excavation is complete. Thus, dewatering during excavation would not affect groundwater recharge as there would be a minimal net deficit in groundwater volume or lowering of the local groundwater table level based on the nature of the Project. Thus, excavation impacts would be less than significant. Therefore, implementation of the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge due to the nature of the Project improvements and facilities to be constructed. No further analysis of this issue is warranted in the EIR.

- c. i) **Less Than Significant Impact.** See Response VII.b), above. The Project does not propose any alteration to a stream or river course. Soil disturbance would temporarily occur during excavation activities. Disturbed soils may be susceptible to erosion from wind and rain, however, compliance with the NPDES Construction General Permit, which requires the preparation and implementation of a project-specific SWPPP, which would prescribe BMPs to prevent sediment and other pollutants from leaving the site and entering waterways. As noted previously, the Project proposes future broadband installations consisting of underground cable and conduit construction and mounting of cables from utility poles in various communities throughout the County, with only very limited above-ground improvements and small modular equipment structures proposed. The Project would not substantially alter the existing drainage pattern of the

site or area given compliance with NPDES Construction General Permit and MS4 Permit requirements, as well as any applicable Low Impact Development (LID) requirements. Although the specific locations for all future broadband installations are not known at this time, it is unlikely that the Project would have the potential to generate substantial amounts of sediment and stormwater runoff based on the limited construction footprints associated with broadband facilities and assuming compliance with applicable stormwater regulations and associated requirements discussed above. Therefore, implementation of the Project would not alter the course of a stream or river, in a manner which would result in on- or off- site flooding or would exceed the capacity of existing or planned stormwater drainage systems, and impacts would be less than significant. No further analysis of this issue is warranted in the EIR.

- c. ii) **Less Than Significant Impact.** See Response X.b), above. The Project proposes future broadband infrastructure installation in various communities throughout the County. Construction activities would include horizontal point-to-point underground boring, and if necessary, could include micro-trenching and/or aerial stringing from utility poles. Excavations for boring pits would generally be limited to two feet by two feet (but up to a maximum of two feet by six feet) and would be temporary in nature. The Project would not notably alter the existing topography or drainage patterns on- or off-site due to the nature of proposed construction activities associated with the Project, which would result in relatively low amounts of disturbed surface area and would be restored to pre-project conditions upon completion of construction activities. Additionally, according to the Santa Barbara County Safety Element Map, the portions of the identified Priority Areas are located within a Flood Hazard Area (FA) Overlay Zone (Santa Barbara County 2024a). The FA Overlay Zone includes areas within a 100-year flood plain (Santa Barbara County 2024b). Additionally, Guadalupe is within a Dam Inundation Zone (Santa Barbara County, 2024a). Implementation of future broadband installations within the Project Area would not introduce substantial amounts of impervious surfaces or directly or indirectly alter the course of a stream or river such that the Project would result in substantial flooding on- or off-site. The Project areas would remain predominantly pervious, allowing water to percolate into underlying soils in the event of a flood. Therefore, implementation of the Project would not result in an increase of surface runoff in a manner which would result in flooding on- or off-site, and impacts would be less than significant. No further analysis of this issue is warranted in the EIR.
- c. iii) **Less Than Significant Impact.** As mentioned in Responses X.a.i) and X.a.ii), above, the Project would not meaningfully alter the drainage pattern of the affected Project areas. The Project proposes future broadband infrastructure installation in various communities throughout the County. Construction activities would include horizontal point-to-point underground boring, and if necessary, could include micro-trenching and/or aerial stringing from utility poles. Excavations for boring pits would generally be limited to two feet by two feet (but up to a maximum of two feet by six feet) and would be temporary in nature. In terms of polluted runoff, future broadband infrastructure installations would not generate substantial amounts of pollutants that could potentially be carried in stormwater runoff and enter the receiving water. Furthermore, compliance with the NPDES Construction General Permit, which requires the preparation and implementation of a SWPPP and BMPs to minimize soil erosion/sedimentation and other runoff, would minimize the likelihood of polluted runoff entering the watercourse. Additionally,

compliance with applicable LID requirements that limit the amount and rate of stormwater discharges from a project site, as well as the limited amount of impervious surface area involved in the proposed broadband installations, would preclude the potential for substantial increases in stormwater flow rates or volumes generated by future broadband projects that could exceed the capacity of stormwater drainage facilities serving the various future project sites. Therefore, implementation of the Project would not create or contribute additional runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial sources of polluted runoff, and impacts would be less than significant. No further analysis of this issue is warranted in the EIR.

- c. iv) **Less Than Significant Impact.** The Project would not notably alter existing drainage patterns in the Project Area, as discussed in Responses X.c.i) through X.c.iii), above. Although portions of the Project Area are located within designated flood hazard areas including dam inundation areas, the Project proposes future broadband infrastructure installations in various communities throughout the County, the vast majority of which would be located underground and would have minimal increases in impervious surfaces that could contribute to flooding hazards or the potential to impede or redirect flood flows. Therefore, implementation of the Project would not have the potential to impede or redirect flood flows and impacts would be less than significant. No further analysis of this issue is warranted in the EIR.
- d) **Less Than Significant Impact.** According to the Santa Barbara County Safety Element Map, portions of the identified Priority Areas are located within a Flood Hazard Area (FA) Overlay Zone, and all Priority Areas except the southernmost portion of the Refugio Canyon Priority Area are located outside of a Tsunami Hazard Area (Santa Barbara County 2024a). No portions of identified Priority Areas are located immediately adjacent to or downstream of a large, enclosed body of water that could be subject to seiche effects in the event of a strong seismic event. As mentioned previously, the Project proposes future broadband infrastructure installations and does not propose any other associated development or habitable structures and therefore, would not have a significant impact on people or structures during the event of a tsunami. Therefore, implementation of the Project would not expose people or structures to a significant risk of loss, injury, or death involving flood hazard, tsunami, or seiches, and impacts would be less than significant. No further analysis of this issue is warranted in the EIR.
- e) **Less Than Significant Impact.** As discussed in the various responses above, the Project proposes future broadband infrastructure installation in various communities throughout the County. Construction activities would include horizontal point-to-point underground boring, and if necessary, could include micro-trenching and/or aerial stringing from utility poles. Excavations for boring pits would generally be limited to two feet by two feet (but up to a maximum of two feet by six feet) and would be temporary in nature. Construction and operation of future broadband facilities would be carried out in accordance with applicable requirements including NPDES and LID requirements, which would include installation of applicable stormwater BMPs to maintain water quality in stormwater discharges throughout construction and operation of the Project, which would preclude the potential for the Project to conflict with the Water Quality Control Plan for the Central Coast Basin (Basin Plan). As also discussed above, the Project would have little potential to interfere with groundwater recharge or result in substantial groundwater

use such that conflicts with a sustainable groundwater management plan could result from Project implementation. The Project, therefore, does not have the potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan and impacts would be less than significant. No further analysis is warranted in the EIR.

References

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Land Use and Planning

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XI. LAND USE AND PLANNING — Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Less Than Significant Impact.** The Project areas are generally located in underserved and unserved communities throughout the County. The identified Priority Areas have several land use designations, for which the land use pattern is predominantly single-family residential (County of Santa Barbara 2024a). As mentioned above, the Project consists of future broadband infrastructure installations in nine identified Priority Areas, as well as future additional projects throughout the County. These Priority Areas are established communities adjacent to main roads, which contain the middle-mile broadband facilities to which the proposed facilities would connect. The future broadband installations would be installed within existing County maintained road right-of-way, public utility easements, and/or overhead public utility easements throughout the County. The Project does not propose development that could physically divide an established community. Rather, the Project is intended to provide additional connectivity to existing County residents and would not include construction of sizeable above-ground structures that would cause land use divisions. Therefore, implementation of the Project would not physically divide an established community and impacts would be less than significant. No further analysis is warranted in the EIR.
- b) **Less Than Significant Impact.** The Project has several general plan land use and zoning designations within the nine identified Priority Areas and throughout other parts of the County. Public roads are currently designated in City and County general plans, zoning codes, and ordinances to accommodate utility infrastructure. The future broadband installations would be used to connect existing communities that are currently unserved or underserved in the County. The installation of broadband infrastructure would not require changes to land use or zoning designations or conflict with other requirements such as development standards and design guidelines of affected local jurisdictions. Prior to issuance of use permits, grading, and/or encroachment permits by Santa Barbara County or other local jurisdiction, as applicable, the Project would be required to demonstrate compliance with all applicable laws, regulations, policies, and ordinances. The following provides a discussion of the Project’s consistency with various applicable planning documents.

City of Guadalupe 2042 General Plan

The City of Guadalupe 2042 General Plan, adopted on November 22, 2022, provides a blueprint for the use and development of land within the City through 2042. The Project would be

consistent with the Guadalupe General Plan, Economic Development Element **Goal ED-5** to develop a sustainable broadband middle mile infrastructure model with the community to support resilience, emergency services homeland security, economic growth, and business development. As previously discussed, the Project consists of future broadband infrastructure installations in communities classified as unserved and underserved; thus, the Project would support this goal (City of Guadalupe 2022). Additionally, according to the City of Guadalupe Figure 2-2, Land Use Diagram, the City's westside neighborhood is located within the Coastal Zone Boundary; however, as the Project does not propose development that could have a significant impact to people and structures, no conflict would occur (City of Guadalupe 2021).

Los Alamos Community Plan and Design Guidelines

The Los Alamos Community Plan, Public Facilities and Services Chapter, guides development in planning, road maintenance and design, building and development review, fire and police, and parks and recreation (County of Santa Barbara, 2011a). The Project would be consistent with **Goal SERV-LA-2** to provide universal residential and business access to broadband internet services for education, economic development, and healthcare. The Project would also be consistent with **Policy SERV-LA-2.1** for improving and expanding community-wide access to high-speed internet and telecommunication infrastructure (e.g. wireless, fiber-optic, cable) (County of Santa Barbara 2011a). Additionally, Los Alamos has a Design Control (D) Zoning Overlay, intended to ensure well designed development and to protect scenic qualities, property values, and neighborhood character along Bell Street (County of Santa Barbara 2024b). The Project would be consistent with the Los Alamos Bell Street Design Guidelines since most, if not all, of the infrastructure would be underground and would not be visible to the public. If there are any above-ground structures, the Street Design Guidelines would be followed through inclusion of screening from general public view with non-reflective material and screened to the greatest extent feasible (County of Santa Barbara 2011b).

Santa Barbara County Environmental Resource Management Element (ERME)

The Santa Barbara County ERME summarizes various environmental factors analyzed in the Seismic Safety, Conservation, and Open Space Elements, and relates these factors to proposals on County open space preservation (County of Santa Barbara 2009). According to the Santa Barbara County Land Use and Zoning Map, portions of the Los Alamos, Jonata Park, Los Olivos, Refugio Canyon, Highway 246 Corridor, East of Santa Maria, and New Cuyama and Cuyama Priority Areas are located within the ERME Scenic Corridor (County of Santa Barbara, 2024a). These scenic corridors are classified as having the highest scenic values and urbanization could be permitted only in appropriate instances, subject to project plan review and imposition of specific conditions to protect against hazards and preserve the integrity of the land and environment (County of Santa Barbara, 2009). As previously discussed, the Project consists of future broadband infrastructure installations which is mostly planned as underground infrastructure, and no additional development is planned as this time. Nonetheless, the Project would comply with all project plan review and specific conditions for each appropriate jurisdiction to ensure consistency.

In addition, the Project would not include development that is incompatible with existing land uses, induce substantial population growth or concentration, cause the loss of open space, or create an economic or social effect that would result in a physical change. The Project would comply with all existing land use plans and regulations and would not have any significant impact on the environment due to any conflicts with such plans and regulations. No further analysis is warranted in the EIR.

References

City of Guadalupe, 2021. Figure 2-2, Land Use Diagram. Available at: <https://cityofguadalupe.org/wp-content/uploads/2023/10/Final-Fig-2-2-Land-Use-Diagram-1-17-23.pdf>. Accessed April 2024.

City of Guadalupe, 2022. City of Guadalupe 2042 General Plan. Adopted November 22, 2022. Available at: <https://cityofguadalupe.org/wp-content/uploads/2023/05/City-of-Guadalupe-2042-General-Plan-Final-English.pdf>. Accessed April 2024.

County of Santa Barbara, 2009. Environmental Resource Management Element (ERME). Available at: <https://www.countyofsb.org/966/Environmental-Resource-Management>. Accessed April 2024.

County of Santa Barbara, 2011a. Los Alamos Community Plan. Available at: <https://www.countyofsb.org/929/Los-Alamos-Community-Plan>. Accessed April 2024.

County of Santa Barbara, 2011b. Los Alamos Bell Street Design Guidelines. Available at: <https://content.civicplus.com/api/assets/6272f0ab-5da7-47a8-a539-f820498b6fbc>. Accessed April 2024.

County of Santa Barbara, 2024a. Santa Barbara County Land Use and Zoning Map. Available at: <https://sbcopad.maps.arcgis.com/apps/webappviewer/index.html?id=0f24610ca52d4e28b12e2d76fb1d5ec>. Accessed April 2024.

County of Santa Barbara, 2024b. Land Use Code. Chapter 21- Land Division. Design Control Zoning Overlay. Available at: <https://www.countyofsb.org/1043/Land-Use-Code>. Accessed April 2024.

Mineral Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XII. MINERAL RESOURCES — Would the 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) **No Impact.** The Project would not 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. According to the Department of Conservation (DOC), Mineral Land Classification Map, the identified Priority Areas are not located within a Mineral Resource Zone where geologic data indicates the presence of significant mineral resources (DOC, 2023). The Priority Areas are located within or adjacent to several identified Oil & Gas Fields (DOC 2023b). The identified Priority Areas have several land use designations, although the land use pattern in these communities is predominantly single-family residential (County of Santa Barbara 2024). The identified Priority Areas are not utilized for mineral extraction activities, nor are they planned for mineral extraction activities, and would not result in the loss of availability of known mineral resources. In addition, since future broadband installation projects are anticipated to occur along existing public and private roadways or within utility easements or other linear alignments, these areas are not anticipated to be classified as mineral resource zones and Project-related improvements would not affect the availability of a known mineral resource. Therefore, implementation of the Project would result in no impact regarding the loss of availability of mineral resources, and no further analysis is warranted in the EIR.
- b) **No Impact.** The Project would not 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 Priority Areas that have been identified are located in locally urbanized settings, but within relatively rural areas of the County that are currently underserved or unserved by high-speed broadband internet services. According to the DOC Mineral Land Classification Map, the identified Priority Areas are not located within a Mineral Resource Zone where geologic data indicates the presence of significant mineral resources (DOC 2023). Additionally, according to the DOC Geologic Energy Management Division Well Finder Map, numerous oil and gas wells and associated well fields are located within the County, but none of the Priority Areas or other potential future broadband project sites are zoned for mineral resource recovery (County of Santa Barbara 2024). In addition, as noted above, future projects are anticipated to occur along existing public and private roadways or within utility easements or other linear alignments and would not be expected to interfere with locally important mineral resource recovery sites. Therefore, implementation of the Project would not result in loss of known mineral resources of local importance, and no further analysis is warranted in the EIR.

References

County of Santa Barbara, 2024. Santa Barbara County Land Use and Zoning Map. Available at: <https://sbcopad.maps.arcgis.com/apps/webappviewer/index.html?id=0f24610ca52d4e28b12e2d76bf61d5ec>. Accessed April 2024.

Department of Conservation (DOC). 2023a. California Geologic Survey Information Warehouse, Mineral Land Classification. Available at: <https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=mlc>. Accessed April 2024.

Department of Conservation (DOC), 2023b. Well Finder. Available at: <https://maps.conservation.ca.gov/doggr/wellfinder/>. Accessed April 2024.

Noise

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XIII. NOISE — Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or 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 project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) **Potentially Significant Impact.** As previously discussed, the Project proposes future broadband infrastructure installations in various communities throughout the County and surrounding uses could be identified as sensitive receptors. During construction, the Project would require the use of heavy construction equipment that would generate noise on a short-term basis. During operation, the Project would involve routine maintenance of infrastructure which would generate minimal long-term impacts. Therefore, implementation of the Project could generate a temporary increase in ambient noise levels in excess of applicable standards for nearby sensitive receptors in various communities throughout the County, and further analysis of this issue is warranted in the EIR.
- b) **Potentially Significant Impact.** The Project would include construction of future broadband infrastructure installations in various communities throughout the County which could generate temporary groundborne noise and vibration during the installation of utility poles, where applicable. As mentioned in the Project Description, the Project installations would predominantly involve installing underground conduit and fiber optic cable. Construction methods would primarily include horizontal point-to-point underground boring, and if necessary, could include micro-trenching and/or aerial stringing from utility poles. Excavation for boring pits would generally be limited to two feet by two feet (but up to a maximum of two feet by six feet) and would be temporary in nature over a period of several months. Additionally, construction equipment would also generate noise and vibration due to the use of heavy equipment. Therefore, implementation of the Project could generate excessive groundborne noise and vibration, and further analysis of this issue is warranted in the EIR.
- c) **No Impact.** The Project proposes future broadband infrastructure installations in various communities throughout the County. The Priority Areas identified are not within an Airport Land Use Plan (County of Santa Barbara 2024). Construction and operation of the Project would not place people or habitable structures in proximity to an airport or private airstrip, and thus would not have the potential to expose people to excessive airport- or aircraft-related noise levels.

Therefore, implementation of the Project would result in no impact and no further analysis of this issue is warranted in the EIR.

References

County of Santa Barbara, 2024. Santa Barbara County Land Use and Zoning Map. Available at: <https://sbcopad.maps.arcgis.com/apps/webappviewer/index.html?id=0f24610ca52d4e28b12e2d76fb1d5ec>. Accessed April 2024.

Population and Housing

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XIV. POPULATION AND HOUSING — Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Less Than Significant Impact.** The Project consists of future broadband infrastructure installations within various communities in the County. The Project does not propose any residential uses that would introduce a new permanent population to the Project areas as construction workers would likely come from the wider area and not need to relocate for the purpose of working on the Project. During construction activities, for the four near-term Priority Areas, approximately three to five construction workers per day per Priority Area project would be present at the respective work areas over the course of approximately 24 months. It is anticipated that this nominal amount of construction workers would be typical for similar broadband installation projects within the County and that the workers employed on such projects would come from the local labor force and therefore would not introduce a permanent population to the Project areas. Therefore, implementation of the Project would not induce unplanned direct or indirect population growth in the area and impacts in this regard would be less than significant. No further analysis of this issue is warranted in the EIR.
- b) **Less Than Significant Impact.** The Project consists of installation of broadband infrastructure throughout the County, including within the nine Priority Areas, which have historically been under-resourced and lack consistent, reliable internet access. The Project would not involve demolition or removal of any existing housing or otherwise result in the displacement of people within the nine Priority Areas or the County at large, as the proposed improvements would be limited primarily to existing street ROW, utility easements, or other public property with a limited construction footprint. The relatively small scale of broadband installation activities would generally preclude the necessity to remove any existing structures, including housing. Therefore, implementation of the Project would not necessitate the construction of replacement housing elsewhere. No further analysis of this issue is warranted in the EIR.

References

N/A

Public Services

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XV. PUBLIC SERVICES —				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a.i) **No Impact.** Various public agencies, including CAL FIRE, Santa Barbara County Fire Department (SBCFD), US Space Force, U.S. Forest Service, and local fire departments provide fire protection services within the County. The four identified near-term Priority Areas are served by the SBCFD, the City of Guadalupe Fire Department, and U.S. Forest Service, respectively (County of Santa Barbara, 2024). Specifically, Los Alamos is served by SBCFD Station No. 24, located at 99 Centennial Street; Casmalia is served by SBCFD Station No. 21, located at 335 Union Ave., Orcutt, California; Guadalupe is served by the City of Guadalupe Fire Station No. 2, located at 918 Obispo Street, Guadalupe California; and New Cuyama and Cuyama are served by the U.S. Forest Service Station, located at 30 Newsome Street, New Cuyama, and SBCFD Station No. 41, located at 41 Newsome Street, New Cuyama (County of Santa Barbara, 2024). As previously discussed, the Project consists of future broadband infrastructure installation in various communities throughout the County. Construction activities would primarily occur adjacent to existing public and private roadways, and no street closures are anticipated that would potentially impact service ratios, response times, or other fire department or U.S. Forest Service performance objectives. Given the potential presence of flammable materials on site, albeit in limited quantities, the Project would comply with applicable state, federal, and local laws and regulations to reduce potential risks from flammable materials. Additionally, as discussed above, the Project would not induce population growth in the affected areas and would not result in a substantial increase in the demand for fire protection services since the infrastructure would primarily be located underground and would operate passively once constructed. Therefore, implementation of the Project would not exacerbate the potential for fire hazards and would not increase demand for fire services. No further analysis is warranted in the EIR.
- a.ii) **No Impact.** A number of law enforcement agencies provide police protection services within the County, including the Santa Barbara County Sheriff’s Office (SBCSO) and other local police departments. The four near-term Priority Areas are served by the SBCSO and City of Guadalupe

Police Department (GPD), respectively. Specifically, Los Alamos and Casmalia are served by the SBCSO Station located at 812 W Forest Rd, Santa Maria; Guadalupe is served by the GPD, located at 4490 10th Street; and New Cuyama and Cuyama are served by the SBCSO station located at 70 Newsome Street, Cuyama. As previously discussed, the Project would not directly or indirectly induce population growth and, therefore, would not result in a substantial increase in the demand for police protection services. Construction activities would occur adjacent to public and private roadways, and no street closures are anticipated that may potentially affect service ratios, response times, or other police department performance objectives. Therefore, implementation of the Project would not require new or expanded police facilities that would cause significant environmental impacts. No further analysis is warranted in the EIR.

- a.iii) **No Impact.** A number of school districts serve the Project Area (Santa Barbara County Education Office, 2024). Specifically, for the four near-term Priority Areas, Los Alamos and Casmalia are served by Orcutt Union School District; Guadalupe is served by Guadalupe Union School District; and New Cuyama and Cuyama are served by Cuyama Joint Unified School District (Santa Barbara County Education Office, 2024). The Project does not propose any residential development that would introduce new permanent student residents to the Priority Areas or other areas within the County. There is no additional planned development that would occur in conjunction with the Project. As discussed above, the Project does not propose development that would introduce new families with school-aged children into the various school districts serving County residents, which could necessitate construction or expansion of school facilities. As such, implementation of the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities. In fact, the broadband installation, in some cases, is intended to provide greater internet access to schools in rural communities, which would be a beneficial impact to schools by facilitating expanded remote learning opportunities in affected communities. Therefore, implementation of the Project would not require new or expanded school facilities that would cause significant environmental impacts. No further analysis is warranted in the EIR.
- a.iv) **No Impact.** The Project would not induce population growth in the area that could cause an increase in the use of existing parks or recreational facilities. The Project would not introduce residential uses and would not generate a new residential population that would regularly utilize nearby parks and recreational facilities. As previously discussed, during construction activities, between three and five construction workers per day would be expected to be present over a period of several months for each future project. While some of the construction workers may utilize local parks and recreational facilities during the workday, such use would be anticipated to be limited and would not trigger the need for new or expanded facilities. Therefore, implementation of the Project would not require the construction of new or expanded park facilities. No further analysis is warranted in the EIR.
- a.v) **No Impact.** The Project would not introduce residential uses and would not generate a new residential population that would require other public facilities, such as libraries or healthcare facilities. Therefore, implementation of the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered public facilities. No further analysis is warranted in the EIR.

References

County of Santa Barbara, 2024. Santa Barbara County Safety Element Map. Available at: <https://www.countyofsb.org/974/Seismic-Safety-Safety>. Accessed April 2024.

Santa Barbara County School Districts, 2024. MapIt. Districts and Schools Overview. Available at: <https://www.sbceo.org/districts/overview>. Accessed April 2024.

Recreation

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XVI. RECREATION —				
a) Would the project 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a) **No Impact.** As noted in discussions above, the Project could result in broadband installation projects occurring throughout the County over the course of many years. The identified Priority Areas are served by various recreational facilities provided by the Santa Barbara County and local jurisdictions. Specifically, with regard to the four near-term Priority Areas, the nearest recreational facility to Los Alamos is Los Alamos Park, located at 500 Drum Canyon Rd, and provides picnic areas, play structures, turf play area, hiking trail, volleyball and horseshoes (County of Santa Barbara 2024a). The nearest recreational facilities to Casmalia are the Shack Paintball Field, located at 4040 Highway 101, Santa Maria and Rancho Maria Golf Course, located at 1950 Cabrillo Hwy, Santa Maria (County of Santa Barbara 2024a). Recreational facilities in the City of Guadalupe include the renovated Leroy Park Community Center, located at 11th Street; Central Park; Tognazzini Avenue Park; and Jack O’Connel Park (County of Santa Barbara 2024a; City of Guadalupe 2022). The nearest recreational facilities to New Cuyama and Cuyama are Richarson Park, located at Wasioja Street, providing picnic sites, horseshoes/volleyball, tot lot play structure, turf play area, and hiking trail; and the Joseph Centeno Cuyama Aquatics Complex, located at 290 Wasioja Street, providing a four-lane by the 25-yard pool along with an 18-inch deep wading pool and spray structure (County of Santa Barbara 2024a, 2024b).

As previously discussed, the Project consists of future broadband infrastructure installations in various communities throughout the County. The Project would not induce population growth in the areas, and therefore, would not cause an increase in the use of existing parks or recreational facilities. During construction activities, it is anticipated that between three and five construction workers per day would be present for a period of several months for each project being constructed, or a total of approximately 24 months for completion of the four near-term Priority Area projects. While some of the construction workers may utilize local parks and recreational facilities during the workday, such use would be anticipated to be limited. Since the Project is located along roadways, there is the possibility that some bike lanes may be impacted during broadband cable installation; however, this would be temporary and alternative routes would be determined and communicated to the public. Therefore, implementation of the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities. No further analysis is warranted in the EIR.

- b) **No Impact.** The Project would not include construction of recreational facilities. Furthermore, the Project is not expected to induce substantial population growth that would result in increased demand for or increased use of existing recreational facilities. No increase in permanent residents would occur. Therefore, implementation of the Project would not necessitate the expansion of recreational facilities. No impacts would occur and no further analysis is warranted in the EIR.

References

City of Guadalupe, 2022. City of Guadalupe 2042 General Plan, Figure 5-8 Public Facilities and Parks. Adopted November 22, 2022. Available at: <https://cityofguadalupe.org/wp-content/uploads/2023/05/City-of-Guadalupe-2042-General-Plan-Final-English.pdf>. Accessed April 2024.

County of Santa Barbara, 2024a. Parks Map. Available at: <https://www.countyofsb.org/1204/Parks-Map>. Accessed April 2024.

County of Santa Barbara, 2024b. Joseph Centeno Aquatics Center. Available at: <https://www.countyofsb.org/950/Joseph-Centeno-Aquatics-Center>. Accessed April 2024.

Transportation

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XVII. TRANSPORTATION — Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Less Than Significant Impact.** SBCAG’s 2040 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) (SBCAG, 2013) and the County’s Comprehensive Plan, zoning ordinances, capital improvement programs, and other planning documents contain transportation and circulation programs, plans, ordinances, and policies. Threshold question “a” considers a project in relation to those programs, plans, ordinances, and policies that specifically address multimodal transportation, complete streets, transportation demand management (TDM), and other vehicle-miles-traveled (VMT)-related topics.

The County and CEQA Guidelines Section 15064.3(a) no longer consider automobile delay or congestion (i.e., “Level of Service” [LOS]) an environmental impact. Therefore, threshold question “a” does not apply to provisions that address LOS or similar measures of vehicular capacity or traffic congestion. A transportation impact occurs if a project conflicts with the overall purpose of an applicable transportation and circulation program, plan, ordinance, or policy, including impacts to existing transit systems and bicycle and pedestrian networks pursuant to Public Resources Code Section 21099(b)(1). In such cases, applicants must identify project modifications or mitigation measures that eliminate or reduce inconsistencies with applicable programs, plans, ordinances, and policies.

Since the Project includes the installation of broadband infrastructure, no new land uses that could generate notable amounts of vehicle travel are included in the Broadband Program. Additionally, while construction activities under the Project could result in temporary lane closures or detours while construction work within or along public or private streets or trails is occurring, such effects would only occur for a short duration and overall implementation of proposed future broadband installations would not have a measurable effect on the circulation system including transit, roadway, bicycle and pedestrian facilities. Therefore, the Project would not create a demand for or result in adverse effects to transportation facilities, and thus would not conflict with local or regional transportation planning efforts or transportation services and facilities. Impacts would be less than significant, and no further analysis is warranted in the EIR.

- b) **Less Than Significant Impact.** As the Project is limited to the installation of broadband infrastructure, the Project would not generate any new long-term VMT or vehicle trips. Up to 40 (20 incoming and 20 outgoing) construction-related vehicle trips may occur on a peak day, which is less than the 110 daily trip screening threshold recommended by the Governor’s Office of Planning and Research (OPR 2024). Therefore, the Project is consistent with Section 15064.3 of the State CEQA Guidelines. No further analysis is warranted in the EIR.
- c) **Less Than Significant Impact.** While temporary construction activities could result in temporary lane closures or detours while construction within or adjacent to the street ROW is underway, standard construction traffic measures would be employed to minimize the potential for safety hazards to vehicles, cyclists, and pedestrians, as applicable, in order to preclude the potential for temporary construction-related safety hazards. Furthermore, the Project would not involve any changes to the design or operation of any roadways or include the development of any incompatible uses; therefore, increases in traffic hazards from long-term operation of the Project are not anticipated. A less than significant impact is anticipated, and no further analysis is warranted in the EIR.
- d) **Less Than Significant Impact.** As noted above, the Project locations are anticipated to occur along existing public and private roadways within the County, which could temporarily result in lane closures or traffic detours in construction zones, thus potentially limiting localized emergency vehicle access. However, construction would be temporary with any one location only affected for a number of days or weeks at most, and the roadways would not be impacted once construction is complete. Therefore, the Project would not create conditions that would result in inadequate emergency access for adjacent land uses. A less than significant impact is anticipated, and no further analysis is warranted in the EIR.

References

Governor’s Office of Planning and Research (OPR). SB 743 Frequently Asked Questions. Accessed online April 22, 2024 via <https://opr.ca.gov/ceqa/sb-743/faq.html>.

Tribal Cultural Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XVIII. TRIBAL CULTURAL RESOURCES —				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- a.i) **Potentially Significant Impact.** Assembly Bill (AB) 52 requires that prior to release of an EIR for a project, the lead agency shall consult with Native American Tribes to identify, evaluate, and mitigate impacts to tribal cultural resources if a Tribe has formally requested consultation (OPR, 2017). At the time of this Initial Study, a record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was not completed for the Project, and thus no results are available. As such, to allow for compliance with AB 52, which mandates Native American consultation, further analysis of this issue is warranted in the EIR.
- a.ii) **Potentially Significant Impact.** As noted above, the Project may have the potential to adversely affect tribal cultural resources in proximity to the nine Priority Areas and future broadband installation project sites. As such, in compliance with AB 52, which mandates Native American consultation if requested, further analysis of this issue is warranted in the EIR.

References

Governor’s Office of Planning and Research (OPR). AB 52 And Tribal Cultural Resources In CEQA. June 2017. Accessed April 2024.

Utilities and Service Systems

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XIX. UTILITIES AND SERVICE SYSTEMS —				
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Potentially Significant Impact.** The Project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, and natural gas facilities. The Project proposes future broadband infrastructure installations in various communities throughout the County. Thus, the Project would require or result in the relocation or construction of new or expanded electric power and telecommunication facilities. As mentioned in the Project Description, the proposed installations located within the nine identified Priority Areas would require construction efforts in terms of providing additional electric power and telecommunication services.

The Priority Areas and nearby communities are currently served and would continue to be served by GenOn Energy, Pacific Gas & Electric Company, and Southern California Edison (SCE) for its electricity needs. It is anticipated that existing power facilities would be sufficient to support the Project's needs based on the systems being designed to operate using a combination of storage and transmission capabilities to meet customer demand. As such, it is also anticipated that various upgrades to offsite power facilities may be required to adequately serve the four Priority Areas and other future broadband installation sites in the County. Therefore, the Project could require or result in the relocation or construction of new or expanded power facilities, the construction or relocation of which could cause significant environmental effects. Therefore, implementation of the Project would have potentially significant impacts, and further analysis of this issue is warranted in the EIR.

Regarding telecommunications, the identified Priority Areas are located in relatively rural areas of the County that are not currently served by existing broadband telecommunication services. The Project proposes future broadband infrastructure installations in communities throughout the County and thus would require the installation of new underground telecommunication lines (for internet, telephone, and other services), as needed, to serve the Priority Areas. Construction impacts associated with the installation of new telecommunication infrastructure would likely involve trenching to place the lines below ground surface. When considering impacts resulting from the installation of any required telecommunications infrastructure, all impacts are of a relatively short duration and would cease to occur when installation is complete. Installation of new telecommunications infrastructure, if needed, is expected to be limited to on-site telecommunications distribution and minor off-site work associated with connections to the broader infrastructure system. Due to the Priority Areas being undeveloped and the absence of current telecommunication services, it is anticipated that additional telecommunication facilities would be required to adequately serve the nine identified Priority Areas. Thus, the Project would require or result in the relocation or construction of new or expanded telecommunication facilities, the construction of relocation of which could cause significant environmental effects. Therefore, implementation of the Project would result in potentially significant impacts, and further analysis of this issue is warranted in the EIR.

- b) **Less Than Significant Impact.** The Project would not generate a substantial increase in demand for water as the Project does not propose development that could increase demand for water services. During construction activities, a small amount of water may be used for dust suppression and fire suppression, as needed. The Project would use existing water supplies on-site to suppress dust, negating the need for temporary water to be brought to the sites. During operation and maintenance, no water use would be required. Since the Project's projected required water supplies would represent a minimal amount of water demand during construction and operation, implementation of the Project would have a less than significant impact on available water supplies and no further analysis of this issue is warranted in the EIR.
- c) **Less Than Significant Impact.** During construction activities, portable restrooms would be available for construction workers and would not contribute to wastewater flows to the public wastewater system. The Project would not exceed the wastewater treatment capacity of the Wastewater Reclamation Plants serving the Priority Areas. There would be no other wastewater other than the storm runoff. No new or expanded wastewater treatment facilities would be required for the Project as the Project does not propose the construction of permanent buildings. Therefore, implementation of the Project would result in less than significant impacts, and no further analysis is warranted in the EIR.
- d) **Less Than Significant Impact.** During construction, the Project would temporarily generate minimal construction debris such as trash, scrap metal, abrasive material, concrete, and general construction scrap which would be disposed of and recycled according to all federal, State, and local solid waste requirements, including AB 939 and the CALGreen Building Code. CALGreen stipulates that 65 percent of construction waste shall be diverted, while AB 939 specifies 50 percent. Compliance with all applicable statutes and regulations would ensure that Project impacts are less than significant. All construction debris would be exported to Buttonwillow

Landfill in Kern County, located northwest of the Project. The Buttonwillow facility serves a wide variety of customers throughout California, with a permitted landfill capacity of 950,000 cubic yards (Clean Harbors). Since the Project proposes future broadband infrastructure installations with no planned development at this time, the Project would generate a minimal amount of solid waste for a temporary period of 24 months and no new additional waste beyond existing conditions would be generated as a result of the Project. Therefore, implementation of the Project would result in less than significant impacts related to solid waste capacity and further analysis of this issue is not warranted in the EIR.

- e) **Less Than Significant Impact.** During construction, the Project would be required to comply with all applicable regulations pertaining to solid waste disposal. These regulations include AB 939 which requires each city in the State to divert at least 50 percent of their solid waste from landfill disposal through source reduction, recycling, and composting (CalRecycle, 2024). Therefore, the Project would comply with federal, State, and local statutes and regulations related to solid waste. Therefore, implementation of the Project would result in less than significant impacts regarding compliance with federal, State, and local solid waste regulations and no further analysis of this issue is warranted in the EIR.

References

California Department of Resources Recycling and Recovery (CalRecycle) 2024. AB 939 Enforcement. Available at: <https://calrecycle.ca.gov/LGCentral/Enforcement/>. Accessed April 2024.

Clean Harbors. Transportation and Disposal- Buttonwillow Facility. Available at: <https://www.cleanharbors.com/sites/g/files/bdczcs356/files/pdffdocuments/Buttonwillow%2C%20CA%20Facility%20Fact%20Sheet%20-%20880437.pdf>. Accessed April 2024.

Wildfire

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XX. WILDFIRE — If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Less Than Significant Impact.** As discussed previously in Response IX.f), emergency response services within the identified Priority Areas are provided by the SBCFD, GFD, U.S. Forest Service, SBCSO, and GPD, as applicable by jurisdiction (County of Santa Barbara, 2024). The Project proposes future broadband infrastructure installations in various communities throughout the County, consisting of underground cables and pole-mounted cables and associated appurtenances within the nine Priority Areas and other site within the County yet to be determined, with construction occurring predominantly along existing public and private roadways. Project construction activities would be contained entirely within the defined Project areas and served by the SBCFD, GFD, U.S. Forest Service, SBCSO, and the GPD for fire protection, police protection, and emergency medical services, as appropriate, depending on the specific location of construction activities. All construction activities would take place outside of main public roadways to the extent feasible, with work within the ROW occurring only where necessary. While some construction activities could result in temporary lane closures or local detours while construction activities are occurring, complete blockage or closure of local access routes within the Priority Areas are not anticipated to be necessary. While such temporary traffic effects would result in localized slowing or even minor congestion during peak periods during the construction workday, the proposed construction activities would not be expected to result in substantial impairment of an adopted emergency response plan or emergency evacuation plan. Therefore, impacts would be less than significant, and no further analysis is warranted in the EIR.
- b) **Less Than Significant Impact.** Refer to the discussion provided above in Response IX.g). According to CAL FIRE, most of the nine Priority Areas are located within a designated Fire Hazard Severity Zone (FHSZ) under the jurisdiction of various fire protection agencies.

As noted above, the Project proposes future broadband infrastructure installations in various communities within the County and does not propose any development. The Project broadband infrastructure would consist of new fiber-optic lines installed underground following public or private roadways with the intention to minimize or avoid disturbance of roadway surfaces wherever feasible. The Project would also include installation of construction activities within those areas where lateral lines are installed between public or private roadways and individual businesses or residences. The broadband installations would avoid sensitive habitats, including areas with extensive vegetation and trees that could serve as fuel sources for wildfires, wherever feasible. Construction and operation activities would require periodic vegetation removal and maintenance, minimizing wildland fire risks within the nine Priority Areas and the areas surrounding future broadband installation projects. Additionally, the Project would not involve the installation of new power lines or other potential sources of ignition, and future projects would occur in areas with established utility infrastructure (including water supply for firefighting) and existing fire protection services and facilities. Therefore, implementation of the Project would not exacerbate wildfire risks or expose people or structures to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Impacts would be less than significant, and no further analysis is warranted in the EIR.

- c) **Less Than Significant Impact.** As noted in Response XX.b), above, the identified Priority Areas are largely located within FHSZs (CalFire, 2024). The Project includes future broadband infrastructure installation and would only include installation of new utility poles in limited circumstances. Since the broadband installations are intended to occur predominantly underground, the Project components would not have the potential to exacerbate wildfires in Moderate, High, and Very High FHSZ since fiber optic cables, even if mounted on poles above-ground, lack the capacity to create a spark or overheat such that ignition of a fire could result from operation of the broadband facilities. In addition, Project construction and operation would include vegetation removal to minimize wildfire risks and the Priority Areas, as well as future broadband project areas, would be served by adequate fire protection and emergency services that already serve these established, albeit relatively rural, communities. The Project does not propose installations of fuel breaks, emergency water sources, or other utilities that may result in temporary or ongoing impacts to the environment. Therefore, implementation of the Project would result in less than significant impacts associated with installation and maintenance of associated utilities. No further analysis is warranted in the EIR.
- d) **Less Than Significant Impact.** For the reasons set out in the Geology and Soils and Hydrology and Water Quality sections of this Initial Study, less than significant impacts to people or structures would occur due to significant risks, including exposing people or structures to downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, less than significant impacts related to downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would occur. No further analysis is warranted in the EIR.

References

County of Santa Barbara, 2024. Santa Barbara County Safety Element Map. Available at: <https://www.countyofsb.org/974/Seismic-Safety-Safety>. Accessed April 2024.

California Department of Forestry and Fire Services (CalFire), 2024. Available at: <https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008>. Accessed April 2024.

Mandatory Findings of Significance

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
XXI. MANDATORY FINDINGS OF SIGNIFICANCE —				
a) Does the project have the potential to substantially 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, substantially 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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Potentially Significant Impact.** As noted in Sections IV, V, and VIII, above, implementation of the Project could have the potential to degrade the quality of the environment and reduce the habitat of protected species. Although construction is anticipated to mostly occur along existing roadways within disturbed areas, the potential exists for impacts to occur to biological resources, cultural resources, and tribal cultural resources. Therefore, these issues will be evaluated further in the EIR.
- b) **Potentially Significant Impact.** Implementation of the proposed Project throughout the County could contribute to cumulatively considerable impacts. Potentially significant impacts are discussed throughout this Initial Study and cumulative effects will be evaluated for those topics requiring further analysis in the EIR.
- c) **Potentially Significant Impact.** Environmental effects that may cause a potentially significant impact on human beings, either directly or indirectly, will be evaluated further in the EIR.

References

N/A

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June 6, 2024

Santa Barbara County Last- Mile Broadband Program

**Environmental Impact Report
Public Scoping Meeting**





Santa Barbara County Last-Mile Broadband Program

Environmental Impact Report Public Scoping Meeting

Meeting Facilitators/Agency Representatives:

- **Fred Luna**, Director of Project Delivery and Construction, SBCAG
- **Lauren Bianchi Klemann**, Government Affairs/Public Information Manager, SBCAG
- **Jasmine McGinty**, Principal Analyst – County Executive Office, County of Santa Barbara
- **David Crook**, AICP, Principal Planner – Environmental Science Associates (Consultant)

June 6, 2024

Why we are here

Purpose:

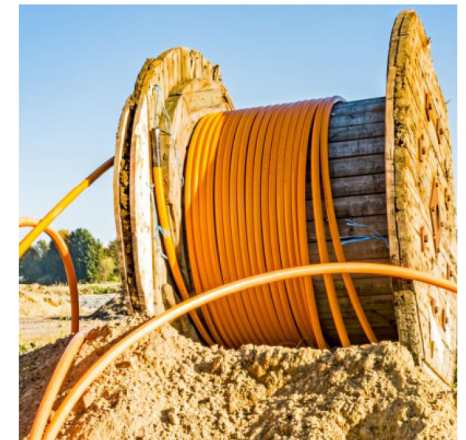
- CEQA requires a scoping meeting as part of the Notice of Preparation process

Objectives:

- Provide Project Background, Project Location, and Project Description
- Discuss proposed scope of the PEIR for the Project
- Solicit input and refine scope of the environmental analysis

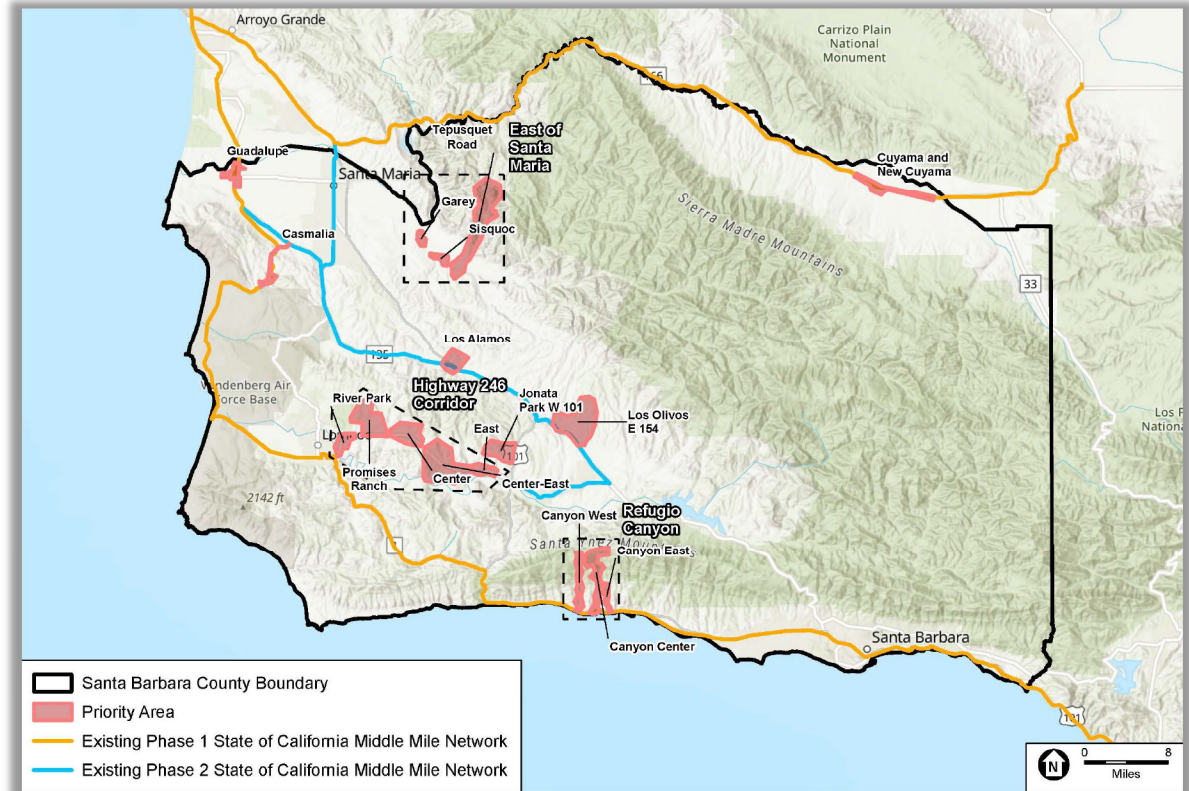
Project Background

- **Broadband Strategic Plan**
 - Broadband Alliance prepared the countywide Broadband Strategic Plan
 - Goal to expand broadband internet access to unserved and underserved
- **Local Agency Technical Assistance Grant (LATA)**
 - Funds received by SBCAG and County of SB for implementation
 - Includes funding for a Program Environmental Impact Review (PEIR)
 - PEIR evaluated last mile installations across SB County
- SBCAG released the Notice of Preparation (NOP) of a PEIR for a 30-day public review and comment period on **May 30, 2024, through July 1, 2024.**



Project Location

- Across Santa Barbara County with focus on unserved/ underserved communities
- Priority Areas - 9 locations
 - Four near-term Priority Areas already designed
 - Five additional areas to be designed
- Additional Future project locations to be determined based on need and funding for projects



Project Description

New fiber optic installations

- Underground
- Adjacent to public or private roadways
- Limited installation under roadways
- Typically installed within previously disturbed and/or developed areas
- Avoids drainages and sensitive habitats.

New Aerial Installations

- Not anticipated but could be undertaken in limited circumstances.

Project Description (Cont.)

Project components

- Broadband conduit with diameters between $\frac{3}{4}$ -inch and 2 inches
- Aboveground, prefabricated walk-in hut/shelters
- Small aboveground steel distribution cabinets/enclosures
- Distribution fiber, splice points, and drops; drop hubs; and small underground structures such as hand holes

Operations and Maintenance

- Incidental maintenance
- Weed abatement
- Periodic accessing of hand holes and splice cases



CEQA Process

- SBCAG - Lead Agency for PEIR to facilitate future broadband project implementation in the County
- PEIR is a “first-tier” CEQA document that may serve as a foundation for subsequent, site-specific environmental review documents
- PEIR
 - County-wide program level assessment with project-level analysis of Priority Areas
 - Includes program- and project-level mitigation measures
 - Includes a range of reasonable alternatives to the Project that would feasibly attain most of the basic objectives.

PEIR Scope of Environmental Effects

20 Potential Environmental Factors

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology, Soils
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology and Water Resources
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

PEIR Scope of Environmental Effects

Issues Selected for PEIR Analysis

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources (including Paleontological Resources)
- Energy
- Geology, Soils
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology and Water Resources
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

Timeline/Next Steps



Public Participation

Mail written comments to SBCAG by 5p.m., **July 1, 2024**, to the address below:

Santa Barbara County Association of Governments
Attn: Fred Luna
260 North San Antonio Road, Suite B
Santa Barbara, CA 93110

OR submit comment electronically to:

info@sbcag.org

OR provide verbal comments TODAY





Thank You!

*For more information and to review Project documents,
Please scan the QR code or follow the link:*

Website:
www.sbcag.org

Webpage:
<https://www.sbcag.org/last-mile-broadband-program-notice-of-preparation-for-environmental-impact-report/>



All written, verbal, and electronic comments/questions received from the scoping meeting and staff responses will be available on the SBCAG website.



air pollution control district
SANTA BARBARA COUNTY

June 27, 2024

Fred Luna
SBCAG
260 North San Antonio Road, Suite B
Santa Barbara, CA 93110

Sent Via Email: info@sbcag.org

Re: Air Pollution Control District Response to Notice of Preparation of an Environmental Impact Report for the Santa Barbara County Last-Mile Broadband Program

Dear Fred Luna:

The Santa Barbara County Air Pollution Control District (District) appreciates the opportunity to provide comments on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for the Santa Barbara County Last-Mile Broadband Program. The Santa Barbara County Association of Governments (SBCAG) proposes installing fiber optic cable in various locations throughout the County focusing in nine priority areas. The project involves working with a broadband infrastructure provider that would design, permit, construct, operate, and maintain all proposed network facilities. New fiber optic lines would be installed underground following public or private roadways, and aerial installation when subsurface installation is not feasible. Once constructed, the broadband network would operate passively with minimum maintenance.

District staff reviewed the Initial Study and NOP of a Draft EIR, and concurs that air quality impacts should be addressed in the EIR. The District's guidance document, entitled *Scope and Content of Air Quality Sections in Environmental Documents* (updated January 2022), is available online at www.ourair.org/land-use. This document should be referenced for general guidance in assessing air quality impacts in the Draft EIR. The EIR should evaluate the following potential impacts related to the project:

1. Attainment Status and Consistency with the District's Ozone Plan. Attainment status for the County is posted on the District website at www.ourair.org/air-quality-standards. The most recent Ozone Plan (previously known as the Clean Air Plan) was adopted in December 2022 and is available at www.ourair.org/clean-air-plans. The District website should be consulted for the most up-to-date air quality information prior to the release of the Public Draft EIR.

Consistency with local and regional plans, including the District's 2022 Ozone Plan, is required under CEQA for all projects. Consistency with the Ozone Plan should be evaluated on a case-by-case basis, and the EIR should include an assessment of whether the proposed project will be consistent with the Ozone Plan. The Ozone Plan relies primarily on land use, population, and on-road emissions projections provided by the California Air Resources Board (CARB) as a basis for vehicle emission forecasting. All development projects should be evaluated to determine whether direct and indirect emissions

associated with the project are accounted for in the Ozone Plan's emissions growth assumptions, and whether the project is consistent with policies adopted in the Ozone Plan.

Many industrial and manufacturing sources, as well as buildings with large heating devices or generator engines, may be subject to District rules and permit requirements. Commercial or industrial stationary source projects will generally be considered consistent with the Ozone Plan if they are consistent with District rules and regulations. Large industrial stationary sources may be found inconsistent if their emissions are not considered in the Plan's stationary source emission inventory.

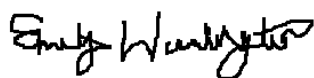
2. Construction Impacts. The EIR should include a description and quantification of potential air quality impacts associated with construction activities for the proposed project. The District's January, 2022 *Scope and Content of Air Quality Sections in Environmental Documents*,¹ Section 6, presents recommended mitigation measures for fugitive dust and equipment exhaust emissions associated with construction projects. Construction mitigation measures should be enforced as conditions of approval for the project. The EIR should include a Mitigation Monitoring and Reporting Plan that explicitly states the required mitigation and establishes a mechanism for enforcement.

3. Asbestos Reporting Requirements. If the project will involve any demolition or renovation of existing structures, the EIR should include a discussion of how materials will be removed in compliance with District Rule 1001 – National Emission Standards for Hazardous Air Pollutants (NESHAP) – Asbestos. Advance notification to the District may be required before asbestos is disturbed and/or removed. For additional information regarding asbestos notification requirements, please visit our website at www.ourair.org/asbestos.

If the project area to be disturbed: a) is located in a geographic ultramafic rock unit; b) has naturally-occurring asbestos, serpentine, or ultramafic rock as determined by the owner/operator; or c) is discovered by the owner/operator, a registered geologist, or the Air Pollution Control Officer to have naturally-occurring asbestos, serpentine, or ultramafic rock after the start of any construction or grading; then appropriate abatement measures must be undertaken pursuant to the requirements of the Air Resources Board Air Toxic Control Measure (ATCM) for Construction, Grading, Quarrying and Surface Mining Operations (see www.arb.ca.gov/toxics/asbestos/asbestos.htm).

We hope you find our comments useful. We look forward to reviewing the Draft EIR. Please contact me at (805) 979-8334 or via email at WaddingtonE@sbcapcd.org if you have questions.

Sincerely,



Emily Waddington,
Air Quality Specialist
Planning Division

cc: Planning Chron File

¹ Available at www.ourair.org/wp-content/uploads/ScopeContentJanuary2022-LimitedUpdates.pdf



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201
wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director



June 28, 2024

Fred Luna
Santa Barbara County Association of Governments
260 North San Antonio Road, Suite B
Santa Barbara, California 93110
info@sbacag.org

SUBJECT: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE SANTA BARBARA COUNTY LAST-MILE BROADBAND PROGRAM, SCH NO. 2024051301, SANTA BARBARA COUNTY, CA

Dear Fred Luna:

The California Department of Fish and Wildlife (CDFW) received and reviewed the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) from the Santa Barbara County Association of Governments (SBCAG) for the Santa Barbara County Last-Mile Broadband Program (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines¹.

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish, wildlife, plants, and their habitats. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines, § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Fish & G. Code, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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Santa Barbara County Association of Governments
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projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW may also act as a Responsible Agency under CEQA (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law² of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.) or the Native Plant Protection Act (NPPA; Fish & G. Code, §1900 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

Proponent: Santa Barbara County Association of Governments (SBCAG)

Objective: The objective of the Project is to install fiber optic cable in various locations throughout Santa Barbara County (County) to facilitate the future expansion of the County's high-speed broadband internet network.

The Project will include the installation of fiber optic cables in various locations throughout the County. High-level network designs for last-mile connections have been prepared for four Priority Areas, while an additional five Priority Area locations are looking to be advanced for high-level network design. Components to be installed/constructed within the four Priority Areas include the following: broadband conduit with diameters between ¾-inch and 2 inches to be installed within road rights-of-way; aboveground, prefabricated walk-in hut/shelters made of aggregate wall materials; small aboveground steel distribution cabinets/enclosures; distribution fiber, splice points, and drops; drop hubs; and small underground structures such as hand holes. Additional Project components that may be necessary to connect end-users to the middle-mile broadband network may include utility poles with aerial fiber and connection points; underground fiber markers; and signage. Once constructed, the broadband network components would generally operate passively, with only incidental maintenance typically consisting of weed abatement and periodic accessing of hand holes and splice cases from the ground surface along a given alignment.

In general, the new fiber optic lines would be installed underground following public or private roadways with the intention to minimize or avoid disturbance of roadway surfaces wherever feasible. The Project also includes installation and construction activities within those areas where lateral lines are installed between public or private roadways and individual businesses or residences. These connections would be

² "Take" is defined in Section 86 of the Fish and Game Code as, "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

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Santa Barbara County Association of Governments
June 28, 2024
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installed within previously disturbed and/or developed areas, and generally would avoid drainage and sensitive habitats.

Construction methods would primarily include horizontal point-to-point underground boring and, if necessary, could include micro-trenching and/or aerial stringing from utility poles.

Location: The area subject to future broadband facility installations under the proposed Project includes the entire County of Santa Barbara. With a few exceptions, the specific locations of future broadband facility installations are not currently known.

Timeframe: The four Priority Area Projects would be constructed over a period of approximately 24 months beginning in Spring 2025. It is anticipated that future broadband Projects of similar size and scale located in other areas of the County would result in similar construction durations as those assumed for the four Priority Area Projects.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist SBCAG in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources.

Specific Comments

1. The NOP indicates that the DEIR for this Project will be a Program DEIR. The NOP states the Program DEIR will:
 - a. provide a broad overview of the potential environmental consequences of the implementation of the Project on a County-wide basis;
 - b. serve as a mid-tier environmental document that will focus and streamline the subsequent project-level review of individual future projects that will be undertaken and in aggregate are referred to as the Project; and
 - c. provide detailed Project-level analysis of the nine Priority Area Project locations that will be evaluated in the DEIR.

CDFW is unable to provide substantive Project-specific comments due to the limited Project information provided to us. Many special-status plant and animal species in the proposed Project area have been reported to the California Natural Diversity Database and should be considered as part of the DEIR this Project.

CDFW is available to meet with SBCAG ahead of the DEIR preparation to discuss potential impacts and possible mitigation measures, including site specific impacts and mitigation measures, for some or all the resources that may be analyzed in the DEIR.

Fred Luna
Santa Barbara County Association of Governments
June 28, 2024
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General Comments

1. Disclosure. The DEIR should provide an adequate, complete, and detailed disclosure about the effects which the proposed Project is likely to have on the environment (Pub. Resources Code, § 20161; CEQA Guidelines, § 15151). Such disclosure is necessary so CDFW may provide comments on the adequacy of proposed avoidance, minimization, or mitigation measures, as well as to assess the significance of the specific impact relative to plant and wildlife species impacted (e.g., current range, distribution, population trends, and connectivity).
2. Project Description and Alternatives. To enable adequate review and comment on the proposed Project from the standpoint of the protection of fish, wildlife, and plants, CDFW recommends the following information be included in the DEIR:
 - a. A complete discussion of the purpose and need for, and description of, the proposed Project.
 - b. A range of feasible alternatives to the Project location to avoid or otherwise minimize direct and indirect impacts on sensitive biological resources and wildlife movement areas. CDFW recommends SBCAG select Project designs and alternatives that would avoid or otherwise minimize direct and indirect impacts on biological resources. CDFW also recommends SBCAG consider establishing appropriate setbacks from sensitive and special status biological resources. Setbacks should not be impacted by ground disturbance or hydrological changes from any future Project-related construction, activities, maintenance, and development. As a general rule, CDFW recommends reducing or clustering a development footprint to retain unobstructed spaces for vegetation and wildlife and provide connections for wildlife between properties and minimize obstacles to open space.

Project alternatives should be thoroughly evaluated, even if an alternative would impede, to some degree, the attainment of the Project objectives or would be more costly (CEQA Guidelines, § 15126.6). The DEIR shall include sufficient information about each alternative to allow meaningful evaluation, public participation, analysis, and comparison with the proposed Project (CEQA Guidelines, § 15126.6).

- c. Where the Project may impact aquatic and riparian resources, CDFW recommends SBCAG select Project designs and alternatives that would fully avoid impacts to such resources. CDFW also recommends an alternative that would not impede, alter, or otherwise modify existing surface flow, watercourse and meander, and water-dependent ecosystems and natural communities. Project designs should consider elevated crossings to avoid channelizing or narrowing of watercourses. Any modifications to a river, creek, or stream may

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cause or magnify upstream bank erosion, channel incision, and drop in water level, which may cause the watercourse to alter its course of flow.

3. Biological Baseline Assessment. An adequate biological resources assessment should provide a complete assessment and impact analysis of the flora and fauna within and adjacent to the Project site and where the Project may result in ground disturbance. The assessment and analysis should place emphasis on identifying endangered, threatened, rare, and sensitive species; regionally and locally unique species; and sensitive habitats. An impact analysis will aid in determining the Project's potential direct, indirect, and cumulative biological impacts, as well as specific mitigation or avoidance measures necessary to offset those impacts. CDFW also considers impacts to Species of Special Concern (SSC) a significant direct and cumulative adverse effect without implementing appropriate avoidance and/or mitigation measures. The DEIR should include the following information:
 - a. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region (CEQA Guidelines, § 15125(c)). The DEIR should include measures to fully avoid and otherwise protect Sensitive Natural Communities. CDFW considers Sensitive Natural Communities as threatened habitats having both regional and local significance. Natural communities, alliances, and associations with a State-wide rarity ranking of S1, S2, and S3 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by visiting the [Vegetation Classification and Mapping Program - Natural Communities](#) webpage³.
 - b. A thorough, recent, floristic-based assessment of special status plants and natural communities following CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*⁴. Botanical field surveys should be comprehensive over the entire Project site, including areas that will be directly or indirectly impacted by the Project. Adjoining properties should also be surveyed where direct or indirect Project effects could occur, such as those from fuel modification, herbicide application, invasive species, and altered hydrology. Botanical field surveys should be conducted in the field at the times of year when plants will be both evident and identifiable. Usually, this is during flowering or fruiting. Botanical field survey visits should be spaced throughout the growing season to accurately determine what plants exist in the Project site. This usually involves multiple visits to the Project site (e.g., in early, mid, and late season) to capture the floristic diversity at a level necessary to determine if special status plants are present.

³ <https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities>

⁴ <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline>

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- c. Floristic alliance- and/or association-based mapping and vegetation impact assessments conducted in the Project site and within adjacent areas. The [Manual of California Vegetation](#), second edition, (Sawyer, Keeler-Wolf, & Evens, 2009) should also be used to inform this mapping and assessment. Adjoining habitat areas should be included in this assessment where the Project's construction and activities could lead to direct or indirect impacts offsite.
 - d. A complete and recent assessment of the biological resources associated with each habitat type in the Project site and within adjacent areas. A full literature review includes but is not limited to [CDFW's California Natural Diversity Database](#)⁵ (CNDDDB). The CNDDDB should be accessed to obtain current information on any previously reported sensitive species and habitat. An assessment should include a minimum nine-quadrangle search of the CNDDDB to determine a list of species potentially present in the Project site. A nine-quadrangle search should be provided in the Project's CEQA document for adequate disclosure of the Project's potential impact on biological resources.
 - e. A complete, recent, assessment of endangered, rare, or threatened species and other sensitive species within the Project site and adjacent areas, including SSC and California Fully Protected Species (Fish & G. Code, §§ 3511, 4700, 5050, and 5515). Species to be addressed should include all those which meet the CEQA definition of endangered, rare, or threatened species (CEQA Guidelines, § 15380). Seasonal variations in use of the Project site should also be addressed such as wintering, roosting, nesting, and foraging habitat. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, may be required if suitable habitat is present. See CDFW's [Survey and Monitoring Protocols and Guidelines](#)⁶ for established survey protocol. Acceptable species-specific survey procedures may be developed in consultation with CDFW and USFWS.
 - f. A recent wildlife and rare plant survey. A lack of records in the CNDDDB does not mean that rare, threatened, or endangered plants and wildlife do not occur. Field verification for the presence or absence of sensitive species is necessary to provide a complete biological assessment for adequate CEQA review (CEQA Guidelines, § 15003(i)). CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of the proposed Project may warrant periodic updated surveys for certain sensitive taxa, particularly if Project implementation build out could occur over a protracted time frame or in phases.
4. [Direct and Indirect Impacts on Biological Resources](#). The DEIR should provide a thorough discussion of direct and indirect impacts expected to affect biological

⁵ <https://wildlife.ca.gov/Data/CNDDDB>

⁶ <https://wildlife.ca.gov/conservation/survey-protocols>

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resources with specific measures to offset such impacts. The DEIR should address the following:

- a. A discussion of potential impacts from lighting, noise, temporary and permanent human activity, and exotic species, and identification of any mitigation measures. A discussion regarding Project-related indirect impacts on biological resources. These include resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or proposed or existing reserve lands.
 - b. A discussion of both the short-term and long-term effects of the Project on species population distribution and concentration, as well as alterations of the ecosystem supporting those species impacted (CEQA Guidelines, § 15126.2(a)).
 - c. Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in areas adjacent to the Project, should be fully analyzed and discussed in the DEIR.
 - d. A discussion of post-Project fate of drainage patterns, surface flows, and soil erosion and/or sedimentation in streams and water bodies. The discussion should also address the potential water extraction activities and the potential resulting impacts on habitat supported by the groundwater. Measures to mitigate such impacts should be included.
 - e. An analysis of impacts from proposed changes to land use designations and zoning, and existing land use designation and zoning located nearby or adjacent to natural areas that may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the DEIR.
5. Cumulative Impact. Cumulative impacts on biological resources can result from collectively significant projects. The Project, when considered collectively with prior, concurrent, and probable future projects, may have a significant cumulative effect on biological resources. The Project may have the potential to substantially reduce the number or restrict the range of endangered, rare, or threatened species. Accordingly, CDFW recommends the DEIR evaluate the Project's potential cumulative impacts on biological resources. The Project may have a "significant effect on the environment" if the possible effects of the Project are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (Pub. Resources Code, § 21083(b)). SBCAG's conclusions regarding the significance of the Project's cumulative impact should be justified and supported by evidence to make those conclusions. Specifically, if SBCAG concludes that the Project would not result in cumulative impacts on

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biological resources, SBCAG, “shall identify facts and analysis supporting the Lead Agency’s conclusion that the cumulative impact is less than significant” (CEQA Guidelines, § 15130(a)(2)).

6. Mitigation Measures. Public agencies have a duty under CEQA to prevent significant, avoidable damage to the environment by requiring changes in a project through the use of feasible alternatives or mitigation measures (CEQA Guidelines, §§ 15002(a)(3), 15021). Pursuant to CEQA Guidelines section 15126.4, an environmental document shall describe feasible measures which could mitigate impacts below a significant level under CEQA. Mitigation measures must be feasible, effective, implementable, and fully enforceable/imposed by the lead agency through permit conditions, agreements, or other legally binding instruments (Pub. Resources Code, § 21081.6(b); CEQA Guidelines, § 15126.4).
 - a. The DEIR should provide mitigation measures that are specific and detailed (i.e., responsible party, timing, specific actions, location) in order for a mitigation measure to be fully enforceable and implemented successfully via a mitigation monitoring and/or reporting program (Pub. Resources Code, § 21081.6; CEQA Guidelines, § 15097).
 - b. Disclosure of Impacts. If a proposed mitigation measure would cause one or more significant effects, in addition to impacts caused by the proposed Project, the DEIR should include a discussion of the effects of proposed mitigation measures (CEQA Guidelines, § 15126.4(a)(1)). In that regard, the DEIR should provide an adequate, complete, and detailed disclosure about the Project’s proposed mitigation measure(s). Adequate disclosure is necessary so CDFW may assess the potential impacts of proposed mitigation measures.
7. Compensatory Mitigation. The DEIR should include compensatory mitigation measures for the Project’s significant direct and indirect impacts to sensitive and special status plants, animals, and habitats. Mitigation measures should emphasize avoidance and minimization of Project-related impacts. For unavoidable impacts, on-site habitat restoration or enhancement should be discussed in detail. If on-site mitigation is not feasible or would not be biologically viable and therefore inadequate to mitigate the loss of biological functions and values, off-site mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed. Areas proposed as mitigation lands should be protected in perpetuity with a conservation easement and financial assurance and dedicated to a qualified entity for long-term management and monitoring.
8. Long-term Management of Mitigation Lands. For proposed preservation and/or restoration, the DEIR should include measures to protect the targeted habitat values in perpetuity. The mitigation should offset Project-induced qualitative and quantitative losses of biological resources. Issues that should be addressed include (but are not limited to) restrictions on access, proposed land dedications, monitoring

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and management programs, control of illegal dumping, water pollution, and increased human intrusion. An appropriate endowment should be set aside to provide for long-term management of mitigation lands.

9. Nesting Birds. To avoid impacts to nesting birds, CDFW recommends that clearing of vegetation occur outside of the peak avian breeding season, which generally runs from February 1 through September 1 (as early as January 1 for some raptors). If Project construction is necessary during the bird breeding season, a qualified biologist with experience in conducting breeding bird surveys should conduct weekly bird surveys for nesting birds, within three days prior to work in the area, and ensure no nesting birds in the Project area would be impacted by the Project. If an active nest is identified, a buffer shall be established between the construction activities and the nest so that nesting activities are not interrupted. For the given Project site, CDFW generally recommends a 100-foot buffer from common avian species, 300 feet for listed or highly sensitive, and 500 feet for raptors. The buffer should be delineated by temporary fencing and remain in effect as long as construction is occurring. No Project construction shall occur within the fenced nest zone until the young have fledged, are no longer being fed by the parents, have left the nest, and will no longer be impacted by the Project. Expansions or reductions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.
10. Translocation/Salvage of Plants and Animal Species. Translocation and transplantation is the process of removing plants and wildlife from one location and permanently moving it to a new location. CDFW generally does not support the use of translocation or transplantation as the primary mitigation strategy for unavoidable impacts to endangered, rare, or threatened plants and animals. These efforts are experimental and the outcome unreliable. CDFW has found that permanent preservation and management of habitat capable of supporting these species is often a more effective long-term strategy for conserving plants and animals and their habitats.
11. CESA. CDFW considers adverse impacts to a species protected by CESA to be significant without mitigation under CEQA. As to CESA, take of any endangered, threatened, candidate species, or NPPA-listed plant species that results from the Project is prohibited, except as authorized by state law (Fish & G. Code, §§ 2080, 2085; Cal. Code Regs., tit. 14, §786.9). Consequently, if the Project or any Project-related activity will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, CDFW recommends that the Project proponent seek appropriate take authorization under CESA prior to implementing the Project. Appropriate authorization from CDFW may include an Incidental Take Permit (ITP) or a consistency determination in certain circumstances, among other options (Fish & G. Code, §§ 2080.1, 2081, subds. (b) and (c)). Early consultation is encouraged, as significant modification to a Project and mitigation measures may be required to obtain a CESA Permit. Revisions to the

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Fish and Game Code, effective January 1998, may require that CDFW issue a separate CEQA document for the issuance of an ITP unless the Project CEQA document addresses all Project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP. For these reasons, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements of a CESA ITP.

12. Scientific Collecting Permit. A scientific collecting permit would be necessary if there is a plan to capture and relocate wildlife. Pursuant to the California Code of Regulations, title 14, section 650, qualified biologist(s) must obtain appropriate handling permits to capture, temporarily possess, and relocated wildlife to avoid harm or mortality in connection with Project-related activities. CDFW has the authority to issue permits for the take or possession of wildlife, including mammals; birds, nests, and eggs; reptiles, amphibians, fish, plants; and invertebrates (Fish & G. Code, §§ 1002, 1002.5, 1003). A Scientific Collecting Permit is required to monitor Project impacts on wildlife resources, as required by environmental documents, permits, or other legal authorizations; and, to capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with otherwise lawful activities (Cal. Code Regs., tit. 14, § 650). For more information, please see the [Scientific Collecting Permits website](#)⁷.
13. Lake and Streambed Alteration. CDFW has regulatory authority over activities in streams that will divert or obstruct the natural flow, or change the bed, channel, or bank (which may include associated riparian resources) of any river, stream, or lake or use material from a river, stream, or lake. For any such activities, the Project applicant (or “entity”) must provide written notification to CDFW pursuant to section 1600 et seq. of the Fish and Game Code. Based on this notification and other information, CDFW determines whether a Lake and Streambed Alteration Agreement (LSAA) with the applicant is required prior to conducting the proposed activities. CDFW’s issuance of an LSAA for a Project that is subject to CEQA will require CEQA compliance actions by CDFW as a Responsible Agency. CDFW recommends that SBCAG assess whether notification is appropriate. A Notification package for an LSAA may be obtained by accessing the [Lake and Streambed Alteration Program website](#)⁸.
14. Wetland Resources. CDFW, as described in Fish and Game Code section 703(a), is guided by the Fish and Game Commission’s (Commission) policies. Through its [Wetlands Resources Policy](#)⁹, the Commission “...seek[s] to provide for the protection, preservation, restoration, enhancement, and expansion of wetland habitat in California”. It is the policy of the Fish and Game Commission to strongly discourage development in or conversion of wetlands. It opposes, consistent with its

⁷ <https://wildlife.ca.gov/Licensing/Scientific-Collecting>

⁸ <https://wildlife.ca.gov/Conservation/Environmental-Review/LSA>

⁹ <https://fgc.ca.gov/About/Policies/Miscellaneous#Wetlands>

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legal authority, any development or conversion that would result in a reduction of wetland acreage or wetland habitat values. To that end, the Commission opposes wetland development proposals unless, at a minimum, Project mitigation assures there will be 'no net loss' of either wetland habitat values or acreage. The Commission strongly prefers mitigation which would achieve expansion of wetland acreage and enhancement of wetland habitat values.”

- a. The Wetlands Resources policy provides a framework for maintaining wetland resources and establishes mitigation guidance. CDFW encourages avoidance of wetland resources as a primary mitigation measure and discourages the development or type conversion of wetlands to uplands. CDFW encourages activities that would avoid the reduction of wetland acreage, function, or habitat values. Once avoidance and minimization measures have been exhausted, a Project should include mitigation measures to assure a “no net loss” of either wetland habitat values, or acreage, for unavoidable impacts to wetland resources. Conversions include, but are not limited to, conversion to subsurface drains, placement of fill or building of structures within the wetland, and channelization or removal of materials from the streambed. All wetlands and watercourses, whether ephemeral, intermittent, or perennial, should be retained and provided with substantial setbacks, which preserve the riparian and aquatic values and functions benefiting local and transient wildlife populations. CDFW recommends mitigation measures to compensate for unavoidable impacts be included in the DEIR and these measures should compensate for the loss of function and value.
- b. The Fish and Game Commission’s Water policy guides CDFW on the quantity and quality of the waters of this State that should be apportioned and maintained respectively so as to produce and sustain maximum numbers of fish and wildlife; to provide maximum protection and enhancement of fish and wildlife and their habitat; encourage and support programs to maintain or restore a high quality of the waters of this State; prevent the degradation thereof caused by pollution and contamination; and, endeavor to keep as much water as possible open and accessible to the public for the use and enjoyment of fish and wildlife. CDFW recommends avoidance of water practices and structures that use excessive amounts of water, and minimization of impacts that negatively affect water quality, to the extent feasible (Fish & G. Code, § 5650).

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity

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Database. The CNNDDB field survey form and instructions on submitting information can be found on the [CNDDDB website](#)¹⁰.

To submit information on special status native plant populations and sensitive natural communities, the *Combined Rapid Assessment and Relevé Form* should be completed and submitted to CDFW's [Vegetation Classification and Mapping Program](#)¹¹. SBCAG should ensure data collected for the preparation of the DEIR is properly submitted.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying Project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP to assist SBCAG in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Kelly Fisher¹², Environmental Scientist.

Sincerely,

DocuSigned by:

5991E19EF8094C3...
Victoria Tang
Environmental Program Manager
South Coast Region

EC: California Department of Fish and Wildlife
Jennifer Turner, Senior Environmental Scientist (Supervisory)

Office of Planning and Research
State.Clearinghouse@opr.ca.gov

¹⁰ <https://wildlife.ca.gov/Data/CNDDDB>

¹¹ <https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Submit>

¹² Phone: 858-354-5083; email: Kelly.Fisher@wildlife.ca.gov

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REFERENCES

Sawyer, J. O., Keeler-Wolf, T., & Evens, J. M. (2009). *A Manual of California Vegetation* (Second ed.). Sacramento, CA: California Native Plant Society. Retrieved from <https://vegetation.cnps.org/>

David Crook

Subject: Last Mile High Speed Internet

From: RON FREEMAN <ronhfreeman@mac.com>

Sent: Thursday, June 6, 2024 3:51 PM

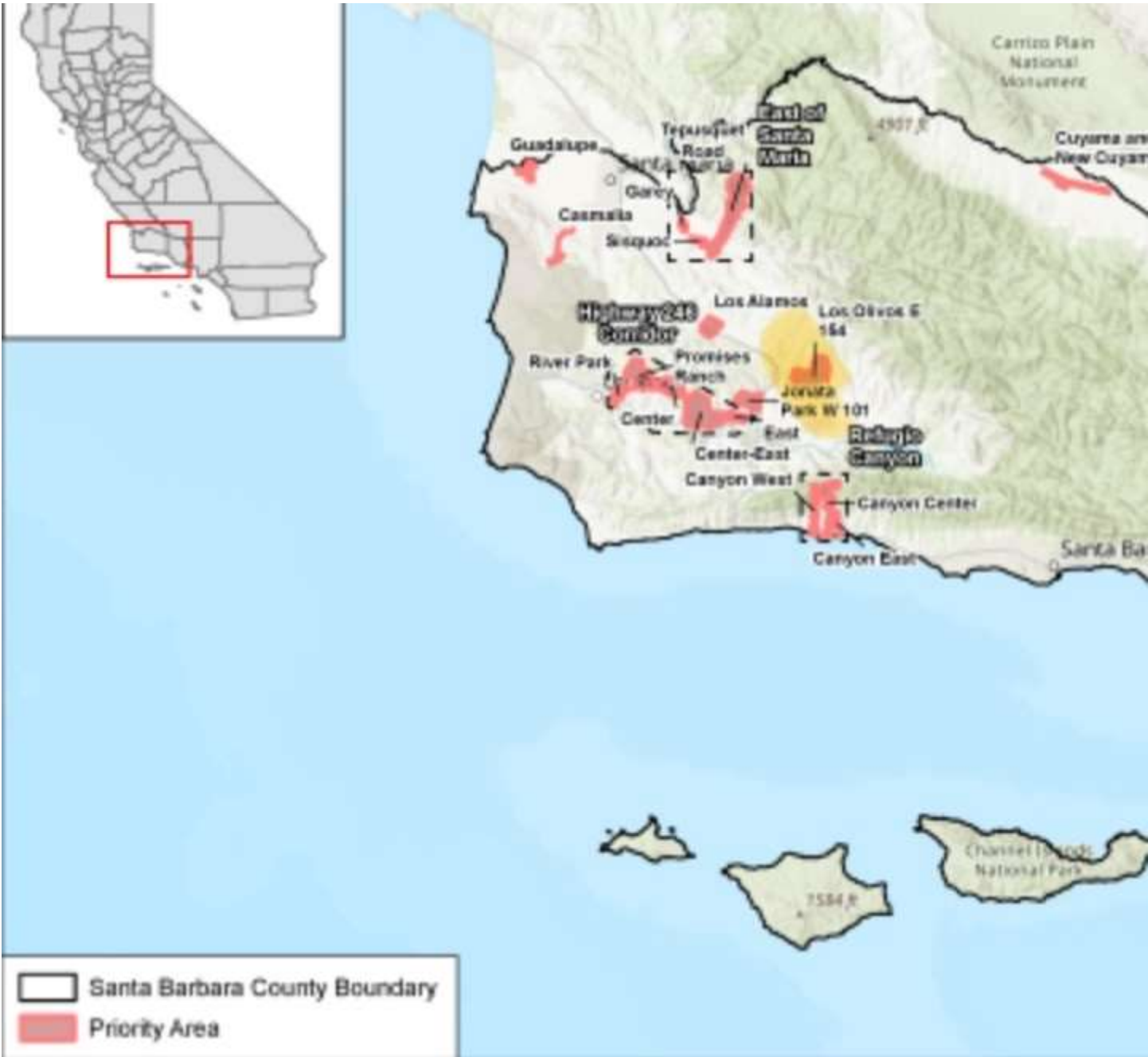
To: SBCAG Information Requests <sbcaginfo@sbcag.org>

Cc: Joan Hartmann <jrhartmann@impulse.net>

Subject: Last Mile High Speed Internet

Dear Mr. Luna - Recently I heard that efforts were being made to bring broadband internet to rural areas of Santa Barbara County. Currently, we live less than one mile from the Buellton City limits. Unfortunately, we have never been able to get high speed internet for our community of Jonata Springs Ranch. I have included a photo/map to show you just how close we are to Buellton. Our phone lines are serviced by Frontier. From the looks of your map it would appear that we are designated as a high priority area (Jonata Park W101). Is that correct?

I look forward to hearing about your efforts to bring broadband internet to our area. Thank you.



Jonata Park 101 Hwy west side.

Santa Ynez Valley
Botanic Garden



Sincerely,
Ron Freeman
1339 Cougar Ridge Rd
Buellton, ca. 93427
Ph 805-350-0902

Sent from my iPad

Appendix B

Air Quality Emissions Calculations and Modeling



B.1-1 Assumptions

Santa Barbara County Last-Mile Broadband Program

defaults are in blue

updated

9/5/2024

PROJECT CHARACTERISTICS

Location	Santa Barbara County
Electricity Demand Forecast Zone	6
Land Use Setting	Suburban
Start of Construction	3/1/2025
Operational Year	2027
Utility Company	SCE
CO2 intensity	default

LAND USE

Land Use	CalEEMod Land Use Subtype	Unit Amt	Size Metric	Lot Ac	SF	Predominant Soil Type	Description
Linear	User Defined Linear	72	miles	87.273	3801600	Sand Gravel	Underground Fiber Line
Other Non-Asphalt Surface	Other Non-Asphalt Surface	8.64	1000 sf	0.19835	8640		Concrete pad for prefab buildings

Notes:

- *For modeling purposes, it is assumed one prefab storage building per mile
- *Per Project Description, a total of 57 miles of conduit will be installed for the first 4 Priority Areas, out of the 9 total Priority Areas. The modeled quantities are based on the construction of 5 Priority Areas, which would likely be constructed simultaneously.
- *The assumed maximum width of ground disturbance would be 10 feet

CONSTRUCTION

Construction Phasing

Construction Type	Construction Phase	Start Date	End Date	Days/week	Work Days per Phase
Linear Construction	Linear, Grubbing & Land Clearing	3/1/2025	4/30/2025	5	43
	Drilling	5/1/2025	11/18/2025	5	144
	Trenching and Installation	11/19/2025	12/25/2026	5	288
Land Use Construction	Site Preparation	12/26/2026	1/15/2027	5	15
	Paving	1/16/2027	2/28/2027	5	30
Total Days					520

Notes:

- *It is assumed that for 1 mile of underground conduit, 1 drill rig is estimated to take approximately 10 days and 1 trencher would take an estimated 18 to 20 days (approximately 30 days total).
- *Based off the 24 month construction timeframe for all Priority Areas, as described in Project Description
- *The total construction schedule represents the simultaneous construction of 5 Priority Areas

Offroad Equipment

Construction Phase	Equipment	Unit Amt	Hours/Day	HP	LF	Engine Tier	Notes
Linear, Grubbing & Land Clearing	Trenchers	10	10	default	default	default	Accounts for cable plow and spider plows
	Rubber Tired Dozer	5	10	default	default	default	
	Tractors/Loaders/Backhoes	5	10	default	default	default	
Drilling	Bore/Drill Rig	5	10	default	default	default	
	Tractors/Loaders/Backhoes	10	10	default	default	default	Accounts for tractors and backhoes
	Industrial/Concrete Saw	5	10	default	default	default	
	Trenchers	5	10	default	default	default	
	Excavator	5	10	default	default	default	
Trenching and Installation	Off-Highway Trucks	10	10	default	default	default	Accounts for Line truck and utility trucks
	Trencher	10	10	default	default	default	Accounts for cable plows and trenchers
	Excavators	5	10	default	default	default	
	Dumpers	5	10	default	default	default	
	Tractors/Loaders/Backhoes	5	10	default	default	default	
	Bore/Drill Rig	10	10	default	default	default	Accounts for Drill Rig and Jackhammer
	Industrial/Concrete Saw	5	10	default	default	default	
	Air Compressor	5	10	default	default	default	
Site Preparation	Rubber Tired Dozers	5	10	default	default	default	
	Tractors/Loaders/Backhoes	5	10	default	default	default	
Paving	Pavers	5	10	default	default	default	
	Paving Equipment	5	10	default	default	default	
	Rollers	5	10	default	default	default	

Notes:

- *Equipment list based off construction equipment listed in Project Description
- *Project Description assumes construction occurring from 7a.m. - 6p.m.
- *Construction Equipment is assumed to be representative of the construction of the 5 simultaneously constructed Priority Areas

Dust from Material Movement

Phase	Material Import/Fill (cy)	Material Export/Cut (cy)	Size Metric	Acres Graded
Trenching	87040	87040	cy	default

Notes:

*Assumed that material excavated (cut) will be replaced after trenching/excavation activities with balanced material movement (fill)

Ground Disturbance

Phase	Size Metric	Unit Amt	Notes	
Access Vaults	Area	15	sf	PD notes that 1 vault per 700 feet. For 72 miles = 544 Access Vaults
	Depth	4	feet	
	Access Vault Volume (cubic yards)	2.22	cy	
	Total	1208.89	cy	
Bore Entry/Exit Pits	Area	12	sf	PD notes that 1 vault per 700 feet. For 72 miles = 544 Bore Pits
	Depth	5	feet	
	Pit Volume (cubic yards)	2.22	cy	
	Total	1208.89	cy	
Horizontal Drilling	Diameter	0.33	feet (4 inches)	Represents 700 feet of horizontal drilling. For 72 miles = 544
	Length	700	feet	
	Total (cubic feet)	61.09	cf	
	Drilling (cubic yards)	2.26	cy	
	Total	1230.78	cy	
Trenching	Width	1.5	feet (18 inches)	Represents 700 feet of trenching. For 72 miles = 544
	Depth	4	feet (48 inches)	
	Length	700	feet	
	Total (cubic feet)	4200	cf	
	Trenching (cubic yards)	155.56	cy	
Total	84622.22	cy		
Utility Poles	Diameter	1.58	feet (19 inches)	Represents 1 pole, PD notes 1 pole per 300 feet. For 72 miles = 1268 poles
	Depth	10	feet	
	Pole Volume (cubic yards)	0.73	cy	
	Total	924.68	cy	

Notes:

*Total amounts are representative of ground disturbance in all 5 Priority Areas

*Specifications of dimensions noted in the Project Description

*In areas where conditions are unsuitable for drilling, trenching would be needed to install the conduits. Therefore, either drilling or trenching would occur. As a conservative estimate, because trenching would create greater material movement, it was used to calculate cut/fill amounts

*It is assumed that utility poles are to be used where areas where trenching would be difficult for placing fiber optic line underground (e.g., rocky areas) or areas characterized by extreme topography. Therefore, because trenching would create more cubic yards of material movement than utility pole installation, it was conservatively used to calculate cut/fill amounts

Trips & VMT

truck hauling capacity 14 cy

Phase Name	# of worker trips/day	# vendor trips/day	# haul trips/day	Trip length worker (mi)	Trip length vendor (mi)	Trip length haul (mi)	Vehicle Class Worker	Vehicle Class Vendor	Vehicle Class Hauling
All Phases	50	50	50	default	default	default	LDA,LDT1,LDT2	HHDT,MHDT	HHDT

Notes:

*Assumes crews of 5 members per priority area

*Assumes 10 vendor and 10 haul trips per day for concrete, materials, etc. per priority area

B.1-2 Construction Air Quality Calculations and Modeling

Santa Barbara County Last-Mile Broadband Program Detailed Report

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 - 3.7. Linear, Grubbing & Land Clearing (2025) - Unmitigated
 - 3.9. Drilling and Plowing (2025) - Unmitigated
 - 3.11. Trenching and Installation (2025) - Unmitigated
 - 3.13. Trenching and Installation (2026) - Unmitigated

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Santa Barbara County Last-Mile Broadband Program
Construction Start Date	3/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.10
Precipitation (days)	27.8
Location	Los Alamos, CA, USA
County	Santa Barbara
City	Unincorporated
Air District	Santa Barbara County APCD
Air Basin	South Central Coast
TAZ	3361
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Linear	72.0	Mile	87.3	0.00	—	—	—	—
Other Non-Asphalt Surfaces	8.64	1000sqft	0.20	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	15.7	13.0	99.9	129	0.32	3.55	1.45	4.99	3.25	0.39	3.64	—	34,580	34,580	1.45	0.94	10.7	34,907
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.3	13.5	105	130	0.34	3.55	1.45	4.99	3.25	0.39	3.64	—	34,628	34,628	1.48	0.97	0.28	34,953
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.1	9.19	71.1	91.7	0.22	2.20	1.02	3.22	2.01	0.28	2.28	—	24,469	24,469	1.03	0.67	3.11	24,698
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.03	1.68	13.0	16.7	0.04	0.40	0.19	0.59	0.37	0.05	0.42	—	4,051	4,051	0.17	0.11	0.51	4,089

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	11.4	9.40	86.4	81.3	0.17	3.55	1.44	4.99	3.25	0.39	3.64	—	17,904	17,904	0.80	0.83	10.7	18,182

2026	15.7	13.0	99.9	129	0.32	3.08	1.45	4.54	2.82	0.39	3.21	—	34,580	34,580	1.45	0.94	10.1	34,907
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	16.3	13.5	105	130	0.34	3.55	1.45	4.99	3.25	0.39	3.64	—	34,628	34,628	1.48	0.97	0.28	34,953
2026	15.7	13.0	100	130	0.32	3.08	1.45	4.54	2.82	0.39	3.21	—	34,575	34,575	1.45	0.94	0.26	34,893
2027	10.9	10.2	62.5	58.8	0.13	2.43	1.44	3.87	2.24	0.39	2.63	—	15,118	15,118	0.66	0.79	0.24	15,369
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	5.30	4.33	39.4	48.1	0.11	1.36	0.85	2.20	1.24	0.23	1.47	—	10,786	10,786	0.48	0.50	2.77	10,949
2026	11.1	9.19	71.1	91.7	0.22	2.20	1.02	3.22	2.01	0.28	2.28	—	24,469	24,469	1.03	0.67	3.11	24,698
2027	1.13	1.03	4.14	4.60	0.01	0.15	0.16	0.31	0.14	0.04	0.18	—	1,217	1,217	0.05	0.08	0.44	1,244
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.97	0.79	7.19	8.79	0.02	0.25	0.15	0.40	0.23	0.04	0.27	—	1,786	1,786	0.08	0.08	0.46	1,813
2026	2.03	1.68	13.0	16.7	0.04	0.40	0.19	0.59	0.37	0.05	0.42	—	4,051	4,051	0.17	0.11	0.51	4,089
2027	0.21	0.19	0.76	0.84	< 0.005	0.03	0.03	0.06	0.03	0.01	0.03	—	201	201	0.01	0.01	0.07	206

3. Construction Emissions Details

3.1. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipm	7.54	6.34	58.6	56.0	0.10	2.52	—	2.52	2.31	—	2.31	—	10,432	10,432	0.42	0.08	—	10,468
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.69	0.66	< 0.005	0.03	—	0.03	0.03	—	0.03	—	122	122	< 0.005	< 0.005	—	123
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.12	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	20.3	20.3	< 0.005	< 0.005	—	20.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.21	0.16	1.77	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	302	302	0.01	0.01	0.03	306
Vendor	0.07	0.04	1.38	0.64	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	872	872	0.03	0.12	0.05	910
Hauling	0.27	0.07	5.07	1.69	0.02	0.07	0.90	0.97	0.04	0.25	0.30	—	3,614	3,614	0.19	0.56	0.17	3,787
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.55	3.55	< 0.005	< 0.005	0.01	3.61
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.01	10.7
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.4	42.4	< 0.005	0.01	0.03	44.5

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.59	0.59	< 0.005	< 0.005	< 0.005	0.60
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.77
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	0.01	7.37

3.3. Site Preparation (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.33	6.16	56.2	54.9	0.10	2.38	—	2.38	2.19	—	2.19	—	10,432	10,432	0.42	0.08	—	10,468
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.65	1.61	< 0.005	0.07	—	0.07	0.06	—	0.06	—	306	306	0.01	< 0.005	—	307
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	50.7	50.7	< 0.005	< 0.005	—	50.9

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.15	1.65	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	296	296	0.01	0.01	0.03	301	
Vendor	0.07	0.03	1.33	0.61	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	854	854	0.03	0.12	0.05	892	
Hauling	0.27	0.07	4.86	1.64	0.02	0.04	0.90	0.95	0.04	0.25	0.30	—	3,535	3,535	0.19	0.56	0.16	3,708	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.70	8.70	< 0.005	< 0.005	0.02	8.85	
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.1	25.1	< 0.005	< 0.005	0.02	26.2	
Hauling	0.01	< 0.005	0.14	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	104	104	0.01	0.02	0.08	109	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.44	1.44	< 0.005	< 0.005	< 0.005	1.47	
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.15	4.15	< 0.005	< 0.005	< 0.005	4.34	
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	17.2	17.2	< 0.005	< 0.005	0.01	18.0	

3.5. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	2.74	2.30	21.7	31.1	0.04	0.93	—	0.93	0.86	—	0.86	—	4,722	4,722	0.19	0.04	—	4,738
Paving	7.62	7.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.19	1.78	2.56	< 0.005	0.08	—	0.08	0.07	—	0.07	—	388	388	0.02	< 0.005	—	389
Paving	0.63	0.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.33	0.47	< 0.005	0.01	—	0.01	0.01	—	0.01	—	64.3	64.3	< 0.005	< 0.005	—	64.5
Paving	0.11	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.15	1.65	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	296	296	0.01	0.01	0.03	301
Vendor	0.07	0.03	1.33	0.61	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	854	854	0.03	0.12	0.05	892
Hauling	0.27	0.07	4.86	1.64	0.02	0.04	0.90	0.95	0.04	0.25	0.30	—	3,535	3,535	0.19	0.56	0.16	3,708
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.02	0.02	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	24.4	24.4	< 0.005	< 0.005	0.04	24.8
Vendor	0.01	< 0.005	0.11	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	70.2	70.2	< 0.005	0.01	0.07	73.4
Hauling	0.02	0.01	0.40	0.13	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	291	291	0.02	0.05	0.22	305
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.03	4.03	< 0.005	< 0.005	0.01	4.10
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.6	11.6	< 0.005	< 0.005	0.01	12.1
Hauling	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	0.04	50.5

3.7. Linear, Grubbing & Land Clearing (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.8	9.06	79.7	77.0	0.12	3.47	—	3.47	3.20	—	3.20	—	13,019	13,019	0.53	0.11	—	13,064
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.8	9.06	79.7	77.0	0.12	3.47	—	3.47	3.20	—	3.20	—	13,019	13,019	0.53	0.11	—	13,064
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road	1.27	1.07	9.39	9.07	0.01	0.41	—	0.41	0.38	—	0.38	—	1,534	1,534	0.06	0.01	—	1,539
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.19	1.71	1.66	< 0.005	0.07	—	0.07	0.07	—	0.07	—	254	254	0.01	< 0.005	—	255
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.23	0.16	1.87	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	315	315	0.02	0.01	1.39	321
Vendor	0.08	0.04	1.40	0.67	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	888	888	0.04	0.12	2.26	928
Hauling	0.29	0.07	5.13	1.78	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,682	3,682	0.22	0.59	7.09	3,869
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.22	0.18	1.91	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	308	308	0.02	0.01	0.04	313
Vendor	0.08	0.04	1.44	0.69	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	889	889	0.04	0.12	0.06	927
Hauling	0.29	0.07	5.27	1.80	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,683	3,683	0.22	0.59	0.18	3,863
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.3	36.3	< 0.005	< 0.005	0.07	37.0
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	105	105	< 0.005	0.01	0.12	109
Hauling	0.03	0.01	0.63	0.21	0.01	0.01	0.11	0.11	0.01	0.03	0.03	—	434	434	0.03	0.07	0.36	455
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.02	6.02	< 0.005	< 0.005	0.01	6.12
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.3	17.3	< 0.005	< 0.005	0.02	18.1

Hauling	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	71.8	71.8	< 0.005	0.01	0.06	75.4
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3.9. Drilling and Plowing (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.92	4.96	44.6	65.7	0.10	1.55	—	1.55	1.43	—	1.43	—	9,730	9,730	0.39	0.08	—	9,763
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.92	4.96	44.6	65.7	0.10	1.55	—	1.55	1.43	—	1.43	—	9,730	9,730	0.39	0.08	—	9,763
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.34	1.96	17.6	25.9	0.04	0.61	—	0.61	0.56	—	0.56	—	3,839	3,839	0.16	0.03	—	3,852
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.43	0.36	3.21	4.73	0.01	0.11	—	0.11	0.10	—	0.10	—	636	636	0.03	0.01	—	638
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.23	0.16	1.87	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	315	315	0.02	0.01	1.39	321
Vendor	0.08	0.04	1.40	0.67	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	888	888	0.04	0.12	2.26	928
Hauling	0.29	0.07	5.13	1.78	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,682	3,682	0.22	0.59	7.09	3,869
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.22	0.18	1.91	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	308	308	0.02	0.01	0.04	313
Vendor	0.08	0.04	1.44	0.69	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	889	889	0.04	0.12	0.06	927
Hauling	0.29	0.07	5.27	1.80	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,683	3,683	0.22	0.59	0.18	3,863
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	0.74	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	122	122	0.01	0.01	0.24	124
Vendor	0.03	0.02	0.57	0.27	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	350	350	0.02	0.05	0.39	366
Hauling	0.12	0.03	2.10	0.70	0.02	0.03	0.35	0.38	0.02	0.10	0.12	—	1,453	1,453	0.09	0.23	1.21	1,525
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	20.1	20.1	< 0.005	< 0.005	0.04	20.5
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	58.0	58.0	< 0.005	0.01	0.06	60.6
Hauling	0.02	0.01	0.38	0.13	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	241	241	0.01	0.04	0.20	253

3.11. Trenching and Installation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	15.7	13.2	98.3	126	0.29	3.43	—	3.43	3.15	—	3.15	—	29,748	29,748	1.21	0.24	—	29,850
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32	1.11	8.27	10.6	0.02	0.29	—	0.29	0.27	—	0.27	—	2,503	2,503	0.10	0.02	—	2,512
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.51	1.93	< 0.005	0.05	—	0.05	0.05	—	0.05	—	414	414	0.02	< 0.005	—	416
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.22	0.18	1.91	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	308	308	0.02	0.01	0.04	313	
Vendor	0.08	0.04	1.44	0.69	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	889	889	0.04	0.12	0.06	927	
Hauling	0.29	0.07	5.27	1.80	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,683	3,683	0.22	0.59	0.18	3,863	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.02	0.02	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.0	26.0	< 0.005	< 0.005	0.05	26.4	
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	74.7	74.7	< 0.005	0.01	0.08	78.0	
Hauling	0.02	0.01	0.45	0.15	< 0.005	0.01	0.08	0.08	< 0.005	0.02	0.02	—	310	310	0.02	0.05	0.26	325	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.30	4.30	< 0.005	< 0.005	0.01	4.37	
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.01	12.9	
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.3	51.3	< 0.005	0.01	0.04	53.9	

3.13. Trenching and Installation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	15.1	12.6	93.5	125	0.29	3.00	—	3.00	2.76	—	2.76	—	29,787	29,787	1.21	0.24	—	29,889
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	15.1	12.6	93.5	125	0.29	3.00	—	3.00	2.76	—	2.76	—	29,787	29,787	1.21	0.24	—	29,889
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.6	8.88	65.7	88.2	0.20	2.11	—	2.11	1.94	—	1.94	—	20,926	20,926	0.85	0.17	—	20,998
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipm	1.94	1.62	12.0	16.1	0.04	0.39	—	0.39	0.35	—	0.35	—	3,465	3,465	0.14	0.03	—	3,476
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.21	0.15	1.72	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	308	308	0.02	0.01	1.29	314
Vendor	0.08	0.04	1.34	0.62	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	872	872	0.03	0.12	2.10	912
Hauling	0.27	0.07	4.92	1.67	0.02	0.07	0.90	0.97	0.04	0.25	0.30	—	3,613	3,613	0.19	0.56	6.68	3,793
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.21	0.16	1.77	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	302	302	0.01	0.01	0.03	306
Vendor	0.07	0.04	1.38	0.64	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	872	872	0.03	0.12	0.05	910
Hauling	0.27	0.07	5.07	1.69	0.02	0.07	0.90	0.97	0.04	0.25	0.30	—	3,614	3,614	0.19	0.56	0.17	3,787
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.15	0.11	1.20	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	212	212	0.01	0.01	0.39	216
Vendor	0.05	0.03	0.97	0.44	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	613	613	0.02	0.09	0.64	640
Hauling	0.19	0.05	3.58	1.18	0.02	0.05	0.63	0.67	0.03	0.18	0.21	—	2,539	2,539	0.14	0.40	2.03	2,662
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	35.1	35.1	< 0.005	< 0.005	0.06	35.7
Vendor	0.01	0.01	0.18	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	101	101	< 0.005	0.01	0.11	106
Hauling	0.03	0.01	0.65	0.21	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	420	420	0.02	0.07	0.34	441

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	12/26/2026	1/15/2027	5.00	15.0	—
Paving	Paving	1/16/2027	2/28/2027	5.00	30.0	—
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	3/1/2025	4/30/2025	5.00	43.0	—
Drilling and Plowing	Linear, Grading & Excavation	5/1/2025	11/18/2025	5.00	144	—
Trenching and Installation	Linear, Trenching	11/19/2025	12/25/2026	5.00	288	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	5.00	10.0	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	5.00	10.0	84.0	0.37
Paving	Pavers	Diesel	Average	5.00	10.0	81.0	0.42
Paving	Paving Equipment	Diesel	Average	5.00	10.0	89.0	0.36

Paving	Rollers	Diesel	Average	5.00	10.0	36.0	0.38
Linear, Grubbing & Land Clearing	Trenchers	Diesel	Average	10.0	10.0	40.0	0.50
Linear, Grubbing & Land Clearing	Rubber Tired Dozers	Diesel	Average	5.00	10.0	367	0.40
Linear, Grubbing & Land Clearing	Tractors/Loaders/Back hoes	Diesel	Average	5.00	10.0	84.0	0.37
Drilling and Plowing	Bore/Drill Rigs	Diesel	Average	5.00	10.0	83.0	0.50
Drilling and Plowing	Tractors/Loaders/Back hoes	Diesel	Average	10.0	10.0	84.0	0.37
Drilling and Plowing	Concrete/Industrial Saws	Diesel	Average	5.00	10.0	33.0	0.73
Drilling and Plowing	Trenchers	Diesel	Average	5.00	10.0	40.0	0.50
Drilling and Plowing	Excavators	Diesel	Average	5.00	10.0	36.0	0.38
Trenching and Installation	Off-Highway Trucks	Diesel	Average	10.0	10.0	376	0.38
Trenching and Installation	Trenchers	Diesel	Average	10.0	10.0	40.0	0.50
Trenching and Installation	Excavators	Diesel	Average	5.00	10.0	36.0	0.38
Trenching and Installation	Dumpers/Tenders	Diesel	Average	5.00	10.0	16.0	0.38
Trenching and Installation	Tractors/Loaders/Back hoes	Diesel	Average	5.00	10.0	84.0	0.37
Trenching and Installation	Bore/Drill Rigs	Diesel	Average	10.0	10.0	83.0	0.50
Trenching and Installation	Concrete/Industrial Saws	Diesel	Average	5.00	10.0	33.0	0.73
Trenching and Installation	Air Compressors	Diesel	Average	5.00	10.0	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	50.0	8.80	LDA,LDT1,LDT2
Site Preparation	Vendor	50.0	5.30	HHDT,MHDT
Site Preparation	Hauling	50.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	50.0	8.80	LDA,LDT1,LDT2
Paving	Vendor	50.0	5.30	HHDT,MHDT
Paving	Hauling	50.0	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	50.0	8.80	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	50.0	5.30	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	50.0	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Drilling and Plowing	—	—	—	—
Drilling and Plowing	Worker	50.0	8.80	LDA,LDT1,LDT2
Drilling and Plowing	Vendor	50.0	5.30	HHDT,MHDT
Drilling and Plowing	Hauling	50.0	20.0	HHDT
Drilling and Plowing	Onsite truck	—	—	HHDT
Trenching and Installation	—	—	—	—
Trenching and Installation	Worker	50.0	8.80	LDA,LDT1,LDT2
Trenching and Installation	Vendor	50.0	5.30	HHDT,MHDT
Trenching and Installation	Hauling	50.0	20.0	HHDT
Trenching and Installation	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
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5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Paving	0.00	0.00	0.00	0.00	87.5
Trenching and Installation	87,040	87,040	0.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Linear	87.3	100%
Other Non-Asphalt Surfaces	0.20	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	6.86	annual days of extreme heat

Extreme Precipitation	5.85	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	45.1	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
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Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	11.6
AQ-PM	5.49
AQ-DPM	4.74
Drinking Water	74.4
Lead Risk Housing	24.6
Pesticides	80.6
Toxic Releases	7.85
Traffic	9.24

Effect Indicators	—
CleanUp Sites	27.5
Groundwater	91.8
Haz Waste Facilities/Generators	61.6
Impaired Water Bodies	77.3
Solid Waste	95.0
Sensitive Population	—
Asthma	21.7
Cardio-vascular	22.9
Low Birth Weights	46.5
Socioeconomic Factor Indicators	—
Education	54.8
Housing	16.3
Linguistic	33.3
Poverty	29.2
Unemployment	19.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	51.81573207
Employed	89.04144745
Median HI	57.39766457
Education	—
Bachelor's or higher	52.99627871
High school enrollment	8.995252149
Preschool enrollment	79.78955473

Transportation	—
Auto Access	76.73553189
Active commuting	34.12036443
Social	—
2-parent households	98.02386757
Voting	95.64994226
Neighborhood	—
Alcohol availability	42.91030412
Park access	29.57782625
Retail density	4.131913255
Supermarket access	27.678686
Tree canopy	56.03746952
Housing	—
Homeownership	70.96111895
Housing habitability	39.17618375
Low-inc homeowner severe housing cost burden	39.58680867
Low-inc renter severe housing cost burden	27.78134223
Uncrowded housing	43.53907353
Health Outcomes	—
Insured adults	38.07262928
Arthritis	0.0
Asthma ER Admissions	83.7
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0

Life Expectancy at Birth	44.2
Cognitively Disabled	88.7
Physically Disabled	74.5
Heart Attack ER Admissions	64.6
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	60.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.2
SLR Inundation Area	0.0
Children	67.0
Elderly	27.8
English Speaking	67.2
Foreign-born	28.6
Outdoor Workers	53.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	87.6
Traffic Density	11.4
Traffic Access	0.0
Other Indices	—
Hardship	38.1

Other Decision Support	—
2016 Voting	95.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	28.0
Healthy Places Index Score for Project Location (b)	67.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Based off the 24-month construction timeframe, as described in Project Description
Construction: Off-Road Equipment	Assumptions articulated in the Project Assumptions sheet.
Construction: Dust From Material Movement	See assumptions sheet
Construction: Trips and VMT	see assumptions sheet

Appendix C

Biological Resources



SPECIAL STATUS PLANT POTENTIAL TO OCCUR

Common Name Scientific Name	Federal ESA Status	State ESA Status	CRPR 1	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
Abrams' oxytheca <i>Acanthoscyphus parishii</i> var. <i>abramsii</i>	None	None	1B.2	Chaparral (sandy, shale). Elevation range: 3750 - 6750 feet.	<i>Low to moderate.</i> Of the 4 observations of this species in the County, the most recent CNDDB observation of this species was recorded in 1976.	All priority areas. Not expected. None of the priority areas are within the known elevation range for this species.
Hoover's bent grass <i>Agrostis hooveri</i>	None	None	1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland, valley and foothill grassland. Elevation range: 20 - 2000 feet.	<i>High.</i> There are 12 observations of this species in the CNDDB record. The most recent observation of this species was recorded in 2013.	Guadalupe. Moderate. Located approximately 7.8 miles from species occurrence. Suitable habitat may be present. Casmalia. High. Occurrence within priority area. Suitable habitat may be present. East of Santa Maria. High. Located adjacent to species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. Not expected. Outside of known elevation range. Los Alamos. High. Located approximately 3.9 miles from species occurrence. Suitable habitat may be present. Los Olivos. High. Occurrence within priority area. Suitable habitat may be present. Jonata Park. High. Located approximately 1.5 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. High. Occurrence within priority area. Suitable habitat may be present. Refugio Canyon. Moderate. Located approximately 8.1 miles from species occurrence. Suitable habitat may be present.
Mt. Pinos onion <i>Allium howellii</i> var. <i>clokeyi</i>	None	None	1B.3	Great Basin scrub, meadows and seeps (edges), pinyon and juniper woodland. Elevation range: 4265 - 6070 feet.	<i>Low to moderate.</i> Of the 2 observations of this species in the County, the most recent CNDDB observation of this species was recorded in 1996.	All priority areas. Not expected. None of the priority areas are within the known elevation range for this species.

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
Santa Ynez groundstar <i>Ancistrocarphus keilii</i>	None	None	1B.1	Chaparral, cismontane woodland. Sandy soils. Elevation range: 130 - 425 feet.	<i>Low to moderate.</i> Of the 2 observations of this species in the County, the most recent CNDDB observation of this species was recorded in 1995.	Guadalupe. <i>Not expected.</i> Located approximately 15.4 miles from species occurrence. No suitable habitat present. Casmalia. <i>Low.</i> Occurrence 7.5 miles from species occurrence. Limited suitable habitat may be present. East of Santa Maria. <i>Low.</i> Located approximately 9.1 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>Moderate.</i> Located approximately 2.1 miles from species occurrence. Limited suitable habitat may be present. Los Olivos. <i>Moderate.</i> Occurrence 7.0 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>High.</i> Occurrence 1.2 miles from species observation. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Occurrence within priority area. Suitable habitat may be present. Refugio Canyon. <i>Moderate.</i> Located approximately 10.7 miles from species occurrence. Suitable habitat may be present.
aphanisma <i>Aphanisma blitoides</i>	None	None	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub. Elevation range: 5 – 1,000 feet.	<i>Moderate to high.</i> Of the 10 occurrences of this species in the County, the most recent was recorded in 2010. Most of the observations have been on the Channel Islands, with only two observations in Casmalia Hills along the coast.	Guadalupe. <i>Not expected.</i> Located approximately 5.1 miles from species occurrence. No suitable habitat present. Casmalia. <i>Moderate.</i> Located approximately 4.8 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Low.</i> Located approximately 17.0 miles from species occurrence. Limited suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located outside of elevation range. All other priority areas. <i>Not expected.</i> All other priority areas are located at least 20 miles from the known occurrences.
Santa Rosa Island manzanita <i>Arctostaphylos confertiflora</i>	FE	None	1B.2	Broadleafed upland forest, chaparral, closed- cone coniferous forest. On outcrops, rocky slopes and ridges on Monterey shale. Elevation range: 130 - 1640 feet.	<i>Moderate to high.</i> Four occurrences of this species have been recorded on Santa Rosa Island East. The most recent observation was recorded in 2006.	All priority areas. <i>Not expected.</i> All known occurrences of this species are located on the Channel Islands.

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
Eastwood's brittle- leaf manzanita <i>Arctostaphylos crustacea</i> ssp. <i>eastwoodiana</i>	None	None	1B.1	Chaparral (maritime, sandy). In maritime chaparral on sandy soils, in the La Purisima Ridge, Burton Mesa, and Point Sal areas. Elevation range: 295 - 1200 feet.	<i>Low.</i> There are 3 observations of this species in the CNDDDB record. The most recent observation of this species was recorded in 1989.	Guadalupe. <i>Not expected.</i> Outside of known elevation range. Casmalia. <i>Low.</i> Located approximately 14.3 miles from species observation. Limited suitable habitat may be present. East of Santa Maria. <i>Low.</i> Located approximately 19.6 miles from species observation. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>Not expected.</i> Located approximately 14.2 miles from species observation. No suitable habitat present. Los Olivos. <i>Not expected.</i> Located approximately 22.5 miles from species observation. Suitable habitat may be present. Jonata Park. <i>Not expected.</i> Located approximately 15.0 miles from species observation. No suitable habitat present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 3.5 miles from species observation. Limited suitable habitat may be present. Refugio Canyon. <i>Not expected.</i> Located approximately 23.1 miles from species observation. Suitable habitat may be present.
San Gabriel manzanita <i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i>	None	None	1B.2	Chaparral (rocky). Rocky outcrops; can be dominant shrub where it occurs. Elevation range: 1950 - 4920 feet.	<i>Moderate.</i> There are 5 known occurrences of this species within the County, all of which were recorded in 1992.	East of Santa Maria. <i>Low.</i> Located approximately 11.9 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 7.2 miles from species occurrence. No suitable habitat is present. Refugio Canyon. <i>Not expected.</i> Located approximately 27.7 miles from species occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.

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La Purisima manzanita <i>Arctostaphylos purissima</i>	None	None	1B.1	Chaparral (sandy), coastal scrub. Sandstone outcrops, sandy soil. Elevation range: 195 - 1280 feet.	<i>Moderate.</i> There are 41 known occurrences of this species within the County. Of these, the most recent was recorded in 2016.	Guadalupe. <i>Not expected.</i> Outside of known elevation range. Casmalia. <i>Moderate.</i> Located adjacent to known occurrence. Extremely limited suitable habitat may be present. East of Santa Maria. <i>High.</i> Located adjacent to known occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>Moderate.</i> Located approximately 3.9 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Low.</i> Located approximately 10.0 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Moderate.</i> Located approximately 4.5 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Occurrence within priority area. Extremely limited suitable habitat may be present. Refugio Canyon. <i>Moderate.</i> Located approximately 6.0 miles from species occurrence. Suitable habitat may be present.
Refugio manzanita <i>Arctostaphylos refugioensis</i>	None	None	1B.2	Chaparral (sandstone). Elevation range: 900 - 2690 feet.	<i>Moderate.</i> There are 27 known occurrences of this species within the County. Of these, the most recent was recorded in 2016.	Guadalupe. <i>Not expected.</i> Outside of known elevation range. Casmalia. <i>Not expected.</i> Outside of known elevation range. East of Santa Maria. <i>High.</i> Located approximately 2.6 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 36.2 miles from species occurrence. Los Alamos. <i>Not expected.</i> Outside of known elevation range. Los Olivos. <i>Low.</i> Located approximately 17.0 miles from known occurrence. Suitable habitat may be present. Jonata Park. <i>Not expected.</i> Located approximately 12.1 miles from known occurrence. No suitable habitat present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 1.5 miles from known occurrence. Extremely limited suitable habitat may be present. Refugio Canyon. <i>High.</i> Occurrence within priority area. Suitable habitat may be present.

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sand mesa manzanita <i>Arctostaphylos rudis</i>	None	None	1B.2	Chaparral (maritime), coastal scrub. On sandy soils in Lompoc/Nipomo area. Elevation range: 80 - 1055 feet.	<i>High.</i> There are 24 known occurrences of this species within the County. Of these, the most recent was recorded in 2013.	Guadalupe. <i>Not expected.</i> Located approximately 2.7 miles from known occurrence. No suitable habitat present. Casmalia. <i>High.</i> Located adjacent to known occurrence. Limited suitable habitat may be present. East of Santa Maria. <i>High.</i> Located adjacent to known occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>Moderate.</i> Located approximately 4.0 miles from known occurrence. Suitable habitat may be present. Los Olivos. <i>Low.</i> Located approximately 12.3 miles from known occurrence. Suitable habitat may be present. Jonata Park. <i>Moderate.</i> Located approximately 7.8 miles from known occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Occurrence within priority area. Suitable habitat may be present. Refugio Canyon. <i>Low.</i> Located approximately 17.3 miles from known occurrence. Suitable habitat may be present.
Miles' milk-vetch <i>Astragalus didymocarpus</i> var. <i>milesianus</i>	None	None	1B.2	Coastal scrub (clay). Elevation range: 65 - 295 feet.	<i>Moderate.</i> There are 5 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 1961.	Guadalupe. <i>Not expected.</i> Located approximately 19.5 miles from species occurrence. No suitable habitat present. Casmalia. <i>Low.</i> Located approximately 12.8 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Located adjacent to known occurrence. Suitable habitat may be present. Refugio Canyon. <i>Moderate.</i> Located approximately 5.3 miles from known occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
Ventura marsh milk-vetch <i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	FE	SE	1B.1	Coastal dunes, coastal scrub, marshes and swamps (edges, coastal salt, brackish). Elevation range: 5-115 feet.	<i>Moderate.</i> There are no known CNDDB occurrences of this species within the County. This species range extends north to Montecito due to restoration efforts at the UCSB North Campus Open Space. The UCSB populations of this species are north of its historic range and were established at this site in anticipation of climate change impacts.	All priority areas. <i>Not expected.</i> All known occurrences of this species are located at least 39.5 miles from priority areas.
Trask's milk-vetch <i>Astragalus traskiae</i>	None	SR	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub. Sandy, windswept ocean bluffs, gullied banks, and coastal dunes. Elevation range: 15 - 805 feet.	<i>Low to moderate.</i> There are only 3 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 1989.	All priority areas. <i>Not expected.</i> All known occurrences of this species are located on the Channel Islands.
Coulter's saltbush <i>Atriplex coulteri</i>	None	None	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. Elevation range: 10 - 1510 feet.	<i>Moderate.</i> There are 34 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2015.	Jonata Park. <i>Low.</i> Located approximately 17.6 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 10.1 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Moderate.</i> Located approximately 11.9 miles from species occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Located at least 20 miles from species occurrences.

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south coast saltscale <i>Atriplex pacifica</i>	None	None	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub, playas. Alkali soils. Elevation range: 0 - 460 feet.	<i>Moderate.</i> There are 7 known occurrences of this species within the County. Of these, the most recent observation was recorded in 1996.	Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. No suitable habitat present. Los Alamos. <i>Not expected.</i> Outside of known elevation range. Los Olivos. <i>Not expected.</i> Outside of known elevation range. Jonata Park. <i>Not expected.</i> Outside of known elevation range. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 10.1 miles from known observation. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> All other priority areas are located at least 20 miles from species observation.
Davidson's saltscale <i>Atriplex serenana</i> var. <i>davidsonii</i>	None	None	1B.2	Coastal bluff scrub, coastal scrub. Alkaline soils. Elevation range: 35 - 655 feet.	<i>Moderate.</i> There are 5 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2009.	Guadalupe. <i>Not expected.</i> Located approximately 27.3 miles from known occurrence. No suitable habitat present. Casmalia. <i>Not expected.</i> Located approximately 21.2 miles from known occurrence. Limited suitable habitat may be present. East of Santa Maria. <i>Low.</i> Located approximately 10.5 miles from known occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>High.</i> Located approximately 4.9 miles from known occurrence. Suitable habitat may be present. Los Olivos. <i>High.</i> Located approximately 1.3 miles from known occurrence. Suitable habitat may be present. Jonata Park. <i>High.</i> Located approximately 2.6 miles from known occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 5.1 miles from known occurrence. Suitable habitat may be present. Refugio Canyon. <i>Low.</i> Located approximately 11.0 miles from known occurrence. Suitable habitat may be present.
island barberry <i>Berberis pinnata</i> ssp. <i>insularis</i>	FE	SE	1B.2	Chaparral, cismontane woodland, closed-cone coniferous forest, coastal scrub. Moist, shaded canyons; usually assoc w/dense understory of trees and shrubs. Elevation range: 245 - 1310 feet.	<i>Moderate.</i> There are 7 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2008.	All priority areas. <i>Not expected.</i> All known occurrences of this species are located on the Channel Islands.

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Hoffmann's rockcress <i>Boechera hoffmannii</i>	FE	None	1B.1	Chaparral, coastal bluff scrub, coastal scrub. Volcanic cliff edges. Elevation range: 195 - 1295 feet.	<i>Moderate.</i> There are 6 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2007.	All priority areas. <i>Not expected.</i> All known occurrences of this species are located on the Channel Islands.
late-flowered mariposa-lily <i>Calochortus fimbriatus</i>	None	None	1B.3	Chaparral, cismontane woodland, riparian woodland. Dry, open coastal woodland, chaparral; on serpentine. Elevation range: 900 - 6250 feet.	<i>High.</i> There are 49 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2017.	Guadalupe. <i>Not expected.</i> Outside of known elevation range. Casmalia. <i>Not expected.</i> Outside of known elevation range. East of Santa Maria. <i>Not expected.</i> Located at least 20 miles from known occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located at least 20 miles from known occurrence. Extremely limited suitable habitat may be present. Los Alamos. <i>Low.</i> Located approximately 13.8 miles from species occurrence. Extremely limited suitable habitat may be present. Los Olivos. <i>Moderate.</i> Located approximately 8.3 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Moderate.</i> Located approximately 8.2 miles from species occurrence. Limited suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 5.4 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>High.</i> Occurrence within priority area. Suitable habitat may be present.
Palmer's mariposa- lily <i>Calochortus palmeri</i> var. <i>palmeri</i>	None	None	1B.2	Chaparral, lower montane coniferous forest, meadows and seeps. Vernally moist places in yellow-pine forest, chaparral. Elevation range: 2330 - 7840 feet.	<i>Moderate.</i> There are 5 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2013.	All priority areas. <i>Not expected.</i> None of the priority areas are within the known elevation range for this species.
La Panza mariposa-lily <i>Calochortus simulans</i>	None	None	1B.3	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Decomposed granite, or sometimes on serpentine. Elevation range: 1065 - 3775 feet.	<i>Moderate.</i> There are 3 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2019.	Guadalupe. <i>Not expected.</i> Outside of known elevation range. Casmalia. <i>Not expected.</i> Outside of known elevation range. East of Santa Maria. <i>Moderate.</i> Located approximately 5.3 miles from known occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Low.</i> Located approximately 10.7 miles from known occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Located more than 20 miles from known occurrence.

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Santa Barbara morning-glory <i>Calystegia sepium</i> ssp. <i>binghamiae</i>	None	None	1A	Marshes and swamps (coastal). Elevation range: 15 - 15 feet.	<i>Low.</i> There is only one known occurrence of this species within the County that was recorded in 1886. This occurrence is now listed as possibly extirpated.	Refugio Canyon. <i>Not expected.</i> Located approximately 20.1 miles from known occurrence. Extremely limited suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.
island white-felted paintbrush <i>Castilleja hololeuca</i>	None	None	1B.2	Chaparral, closed-cone coniferous forest, coastal scrub. Rocky slopes. Elevation range: 65 - 1200 feet.	<i>High.</i> There are 36 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2008.	All priority areas. <i>Not expected.</i> All known occurrences of this species are located on the Channel Islands.
soft-leaved paintbrush <i>Castilleja mollis</i>	FE	None	1B.1	Coastal bluff scrub, coastal dunes. Elevation range: 15 - 65 feet.	<i>Moderate.</i> There are 7 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2005.	All priority areas. <i>Not expected.</i> All known occurrences of this species are located on the Channel Islands.
Santa Barbara jewelflower <i>Caulanthus amplexicaulis</i> var. <i>barbarae</i>	None	None	1B.1	Chaparral, cismontane woodland, closed-cone coniferous forest. Elevation range: 1540 - 4005 feet.	<i>Moderate.</i> There are 11 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2013.	East of Santa Maria. <i>Low.</i> Located approximately 13.1 miles from known occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 19.9 miles from known occurrence. Extremely limited suitable habitat may be present. Refugio Canyon. <i>Low.</i> Located approximately 12.3 miles from known occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range
California jewelflower <i>Caulanthus californicus</i>	FE	SE	1B.1	Chenopod scrub, pinyon and juniper woodland, valley and foothill grassland. Elevation range: 200 - 3280 feet.	<i>Moderate.</i> There are 8 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2018.	Guadalupe. <i>Not expected.</i> Outside of known elevation range. Cuyama and New Cuyama. <i>High.</i> Occurrence within priority area. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Located at least 25 miles from species occurrence.

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Lemmon's jewelflower <i>Caulanthus lemmonii</i>	None	None	1B.2	Chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon- juniper woodland. Elevation range: 260 - 5185 feet.	<i>Moderate.</i> There are 6 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2018.	Guadalupe. <i>Not expected.</i> Outside of known elevation range. Cuyama and New Cuyama. <i>High.</i> Occurrence within priority area. Extremely limited suitable habitat may be present. All other priority areas. <i>Not expected.</i> Located at least 23 miles from species occurrence.
Santa Barbara ceanothus <i>Ceanothus impressus</i> var. <i>impressus</i>	None	None	1B.2	Chaparral. Sandy. Elevation range: 130 - 1540 feet.	<i>High.</i> There are 37 known occurrences of these species within the County. Of these, the most recent occurrence was recorded in 2019.	Guadalupe. <i>Not expected.</i> Located approximately 3.1 miles from species occurrence. No suitable habitat present. Casmalia. <i>High.</i> Occurrence adjacent to priority area. Limited suitable habitat may be present. East of Santa Maria. <i>Low.</i> Located approximately 11.1 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>Not expected.</i> Located approximately 7.0 miles from species occurrence. No suitable habitat present. Los Olivos. <i>Low.</i> Located approximately 13.5 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Not expected.</i> Located approximately 8.2 miles from species occurrence. No suitable habitat present. Hwy 246 Corridor. <i>High.</i> Occurrence within priority area. Suitable habitat may be present. Refugio Canyon. <i>Low.</i> Located approximately 18.0 miles from species occurrence. Suitable habitat may be present.
southern tarplant <i>Centromadia parryi</i> ssp. <i>australis</i>	None	None	1B.1	Marshes and swamps (margins), valley and foothill grassland (vernally mesic), vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Elevation range: 0 - 1575 feet.	<i>Moderate.</i> There are 14 known occurrences of these species within the County. Of these, the most recent occurrence was recorded in 2013.	Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Olivos. <i>Low.</i> Located approximately 17.2 miles from species observation. Suitable habitat may be present. Jonata Park. <i>Low.</i> Located approximately 19.1 miles from species observation. Suitable habitat may be present. Hwy 246 Corridor. <i>Low.</i> Located approximately 19.7 miles from species observation. Suitable habitat may be present. Refugio Canyon. <i>Moderate.</i> Located approximately 6.1 miles from species occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Located greater than 20 miles from species occurrence.

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coastal goosefoot <i>Chenopodium littoreum</i>	None	None	1B.2	Coastal dunes. Generally on sandy soils, and on dunes. Elevation range: 35 - 100 feet.	<i>Moderate.</i> There are 3 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 1996.	Guadalupe. <i>Low.</i> Located approximately 9.0 miles from species occurrence. Suitable habitat may be present near priority area. Refugio Canyon. <i>Not expected.</i> Located approximately 28.9 miles from species occurrence. All other priority areas. <i>Not expected.</i> Outside of known elevation range.
salt marsh bird's-beak <i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	FE	SE	1B.2	Coastal dunes, marshes and swamps (coastal salt). Limited to the higher zones of salt marsh habitat. Elevation range: 0 - 100 feet.	<i>Low.</i> There are 2 known occurrences of this species within the County. These occurrences were recorded in 2017 and 2018.	All priority areas. <i>Not expected.</i> Located at least 29 miles from known observations.
Blakley's spineflower <i>Chorizanthe blakleyi</i>	None	None	1B.3	Chaparral, pinyon and juniper woodland. Elevation range: 1970 - 5250 feet	<i>Moderate.</i> There are 11 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2014.	East of Santa Maria. <i>Low.</i> Located approximately 16.3 miles from species observation. Extremely limited suitable habitat may be present. Cuyama and New Cuyama. <i>High.</i> Located approximately 3.0 miles from known occurrence. Extremely limited suitable habitat may be present. Refugio Canyon. <i>Not expected.</i> Located approximately 26.9 miles from species observation. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.

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Bolander's water-hemlock <i>Cicuta maculata</i> var. <i>bolanderi</i>	None	None	2B.1	Marshes and swamps (brackish, coastal, freshwater). Elevation range: 0 - 655 feet.	<i>Low.</i> There is only one known occurrence of this species within the County, which was recorded in 2008.	<p>Guadalupe. <i>Low.</i> Located approximately 11.3 miles from species occurrences. Limited suitable habitat may be present.</p> <p>Casmalia. <i>High.</i> Located approximately 4.2 miles from species occurrence. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>Low.</i> Located approximately 16.3 miles from species occurrence. Limited suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range.</p> <p>Los Alamos. <i>Moderate.</i> Located approximately 16.9 miles from species occurrence in CNDDDB, but historic 1973 occurrence within the priority area documented in Calflora. Suitable habitat may be present.</p> <p>Los Olivos. <i>Not expected.</i> Located approximately 26.4 miles from species occurrence. Extremely limited suitable habitat may be present.</p> <p>Jonata Park. <i>Not expected.</i> Located approximately 22.0 miles from species occurrence. No suitable habitat present.</p> <p>Hwy 246 Corridor. <i>Low.</i> Located approximately 11.7 miles from species occurrences. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>Not expected.</i> Located approximately 32.3 miles from species occurrence. Extremely limited suitable habitat may be present.</p>
compact cobwebby thistle <i>Cirsium occidentale</i> var. <i>compactum</i>	None	None	1B.2	Chaparral, coastal dunes, coastal prairie, coastal scrub. On dunes and on clay in chaparral; also in grassland. Elevation range: 15 - 490 feet.	<i>Moderate.</i> There are 11 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 1981.	<p>Guadalupe. <i>High.</i> Located approximately 3.6 miles from the nearest species occurrence. Suitable habitat may be located near this priority area.</p> <p>Casmalia. <i>Moderate.</i> Located approximately 6.8 miles from the nearest species occurrence. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>Low.</i> Located approximately 17.9 miles from the nearest species occurrence. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>Not expected.</i> Located approximately 20.0 miles from nearest species occurrence. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>Not expected.</i> Located approximately 39.9 miles from the nearest species occurrence. Suitable habitat may be present.</p> <p>All other priority areas. <i>Not expected.</i> Outside of the elevation range.</p>

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
surf thistle <i>Cirsium rhotophilum</i>	None	ST	1B.2	Coastal bluff scrub, coastal dunes. Elevation range: 10 - 195 feet.	<i>Moderate.</i> There are 16 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2004.	Guadalupe. <i>Low.</i> Suitable habitat may be present near this priority area. Hwy 246 Corridor. <i>Not expected.</i> Suitable habitat not present. Refugio Canyon. <i>Not expected.</i> Located approximately 20.4 miles from the nearest species occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of the elevation range.
La Graciosa thistle <i>Cirsium scariosum var. loncholepis</i>	FE	ST	1B.1	Cismontane woodland, coastal dunes, coastal scrub, marshes and swamps (brackish), valley and foothill grassland. Elevation range: 15 - 720 feet.	<i>High.</i> There are 7 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2019. Critical habitat for this species also occurs within the western portion of the County.	Guadalupe. <i>High.</i> Species occurrence within priority area. Suitable habitat may be present. Critical habitat for this species also occurs within this Priority Area. Casmalia. <i>High.</i> Located approximately 2.5 miles from the nearest species occurrence. Suitable habitat may be present. Critical habitat for this species also occurs within this Priority Area. East of Santa Maria. <i>Moderate.</i> Located approximately 7.1 miles from the nearest species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of the elevation range. Los Alamos. <i>High.</i> Species occurrence within priority area. Suitable habitat may be present. Los Olivos. <i>Not expected.</i> Outside of known elevation range. Jonata Park. <i>Moderate.</i> Located approximately 6.4 miles from the nearest species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Located approximately 6.5 miles from the nearest species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Not expected.</i> Located approximately 26.9 miles from the nearest species occurrence. Suitable habitat may be present.

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
California saw- grass <i>Cladium californicum</i>	None	None	2B.2	Marshes and swamps (alkaline, freshwater), meadows and seeps. Elevation range: 195 - 5250 feet.	<i>Moderate.</i> There are 2 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2005.	Guadalupe. <i>Not expected.</i> Outside of the elevation range. Casmalia. <i>High.</i> Located approximately 4.5 miles from the nearest species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Moderate.</i> Located approximately 5.1 miles from the nearest species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 34.3 miles from the nearest species occurrence. Suitable habitat may be present. Los Alamos. <i>High.</i> Species occurrence within priority area. Suitable habitat may be present. Los Olivos. <i>Moderate.</i> Located approximately 8.2 miles from the nearest species occurrence. Suitable habitat may be present. Jonata Park. <i>Moderate.</i> Located approximately 6.7 miles from the nearest species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 6.7 miles from the nearest species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Low.</i> Located approximately 17.6 miles from the nearest species occurrence. Suitable habitat may be present.
Nevin's woolly sunflower <i>Constancea nevinii</i>	None	None	1B.3	Coastal bluff scrub, coastal scrub. Elevation range: 15 - 1345 feet.	<i>Low.</i> There are 5 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 1989.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
seaside bird's-beak <i>Cordylanthus rigidus ssp. littoralis</i>	None	SE	1B.1	Chaparral (maritime), cismontane woodland, closed-cone coniferous forest, coastal dunes, coastal scrub. Disturbed areas (often), sandy. Elevation range: 0 - 1690 feet.	<i>Moderate.</i> There are 25 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2010.	Guadalupe. <i>Low.</i> Located approximately 12.9 miles from the nearest species occurrence. Suitable habitat may be present within and near this priority area. Casmalia. <i>Moderate.</i> Located approximately 5.1 miles from the nearest species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Low.</i> Located approximately 15.1 miles from the nearest species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>Moderate.</i> Located approximately 7.2 miles from the nearest species occurrence. Suitable habitat may be present. Los Olivos. <i>Moderate.</i> Located approximately 9.6 miles from the nearest species occurrence. Suitable habitat may be present. Jonata Park. <i>High.</i> Located approximately 3.7 miles from the nearest species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Species occurrence within priority area. Suitable habitat may be present. Refugio Canyon. <i>High.</i> Species occurrence within priority area. Suitable habitat may be present.
island rush-rose <i>Crocanthemum greenei</i>	FT	None	1B.2	Chaparral, cismontane woodland, closed-cone coniferous forest, coastal scrub. Elevation range: 50 - 1610 feet.	<i>Moderate.</i> There are 51 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2018.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
Mendocino dodder <i>Cuscuta pacifica var. papillata</i>	None	None	4B.2	Coastal dunes (interdune depressions). Elevation range: 0 – 165 feet.		

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Gaviota tarplant <i>Deinandra increscens</i> ssp. <i>villosa</i>	FE	SE	1B.1	Coastal bluff scrub, coastal scrub, valley and foothill grassland. Elevation range: 65 - 1410 feet.	<i>High.</i> There are 21 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2020. Critical habitat for this species also occurs within the southwestern portion of the County.	<p>Guadalupe. <i>Moderate.</i> Located approximately 5.6 miles from the nearest species occurrence. Suitable habitat may be present.</p> <p>Casmalia. <i>High.</i> Located approximately 3.5 miles from the nearest species occurrence. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>Low.</i> Located approximately 15.7 miles from the nearest species occurrence. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range.</p> <p>Los Alamos. <i>Low.</i> Located approximately 16.3 miles from the nearest species occurrence. Suitable habitat may be present.</p> <p>Los Olivos. <i>Low.</i> Located approximately 15.5 miles from the nearest species occurrence. Suitable habitat may be present.</p> <p>Jonata Park. <i>Low.</i> Located approximately 11.3 miles from the nearest species occurrence. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>Moderate.</i> Located approximately 5.7 miles from the nearest species occurrence. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>High.</i> Located approximately 4.4 miles from the nearest species occurrence. Suitable habitat may be present.</p>

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
dune larkspur <i>Delphinium parryi</i> ssp. <i>blochmaniae</i>	None	None	1B.2	Chaparral (maritime), coastal dunes. Elevation range: 0 - 655 feet.	<i>Moderate.</i> There are 13 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2010.	Guadalupe. <i>Moderate.</i> Located approximately 5.7 miles from the nearest species occurrence. Suitable habitat may be present near priority area, but no suitable habitat may be present within priority area. Casmalia. <i>High.</i> Located approximately 1.5 miles from the nearest species occurrence. Extremely limited suitable habitat may be present. East of Santa Maria. <i>Moderate.</i> Located approximately 6.4 miles from the nearest species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>Not expected.</i> Located approximately 6.2 miles from the nearest species occurrence. No suitable habitat present. Los Olivos. <i>Moderate.</i> Located approximately 9.5 miles from the nearest species occurrence. Suitable habitat may be present. Jonata Park. <i>Moderate.</i> Located approximately 3.7 miles from the nearest species occurrence. Suitable habitat present. Hwy 246 Corridor. <i>High.</i> Species occurrence within priority area. Limited suitable habitat may be present. Refugio Canyon. <i>Low.</i> Located approximately 13.0 miles from the nearest species occurrence. Suitable habitat may be present.
recurved larkspur <i>Delphinium</i> <i>recurvatum</i>	None	None	1B.2	Chenopod scrub, cismontane woodland, valley and foothill grassland. On alkaline soils; often in valley saltbush or valley chenopod scrub. Elevation range: 10 - 2590 feet.	<i>Low.</i> Only 1 known occurrence of this species within the County which was recorded in 2017.	Cuyama and New Cuyama. <i>Moderate.</i> Located at least 9.4 miles from the nearest species occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Located at least 35 miles from the nearest species occurrence.

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umbrella larkspur <i>Delphinium umbracolorum</i>	None	None	1B.3	Chaparral, cismontane woodland. Mesic sites. Elevation range: 1310 - 5250 feet.	<i>High.</i> There are 43 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2019.	East of Santa Maria. <i>High.</i> Species occurrence within priority area. Suitable habitat may be present. Cuyama and New Cuyama. <i>Moderate.</i> Located approximately 8.1 miles from species occurrence. Limited suitable habitat may be present. Los Olivos. <i>High.</i> Located approximately 1.9 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>High.</i> Species occurrence adjacent to priority area. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.
silverskin lichen <i>Dermatocarpon meiophyllizum</i>	None	None	2B.3	Coastal prairie, lower montane coniferous forest, north coast coniferous forest, subalpine coniferous forest, upper montane coniferous forest. Preferred habitat is undisturbed, exposed streams with large rocks or bedrock at high elevations, but it is also found in cold, deep canyons at lower elevations. Elevation range: 970 - 11465 feet.	<i>Low.</i> Only 1 known occurrence of this species within the County which was recorded in 1992.	East of Santa Maria. <i>Low.</i> Located approximately 16.8 miles from species occurrence. Suitable stream habitat may be present. Cuyama and New Cuyama. <i>Low.</i> Located approximately 11.1 miles from species occurrence. Suitable stream habitat may be present. Los Olivos. <i>Low.</i> Located approximately 18.4 miles from species occurrence. Suitable stream habitat may be present. Jonata Park. <i>Not expected.</i> Located approximately 24.7 miles from species occurrence. Suitable stream habitat may be present. Refugio Canyon. <i>Not expected.</i> Located approximately 28.7 miles from species occurrence. Suitable stream habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.
Santa Cruz Island monkeyflower <i>Diplacus brandegeei</i>	None	None	1A	Coastal scrub, valley and foothill grassland, rocky. Elevation range: 195 - 1000 feet.	<i>Low.</i> Only 1 known occurrence of this species within the County which was recorded in 1932. This occurrence is listed as possibly extirpated.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.

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Vandenberg monkeyflower <i>Diplacus vandenbergensis</i>	FE	None	1B.1	Chaparral, cismontane woodland, coastal dunes. Disturbed areas (often), sandy. Elevation range: 195 - 395 feet.	<i>High.</i> There are 17 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2019. Critical habitat for this species also occurs within the western portion of the County.	Casmalia. <i>Moderate.</i> Located approximately 7.4 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Low.</i> The majority of this area is outside of the known elevation range. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Species occurrence within priority area. Limited suitable habitat may be present. Critical habitat for this species also occurs within the western portion of this Priority Area. Refugio Canyon. <i>Low.</i> Located approximately 13.4 miles from species occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.
beach spectaclepod <i>Dithyrea maritima</i>	None	ST	1B.1	Coastal dunes, coastal scrub (sandy). Elevation range: 10 - 165 feet.	<i>Moderate.</i> There are 9 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2016.	Guadalupe. <i>Moderate.</i> Located approximately 3.8 miles from species occurrence. Suitable habitat not present within priority area; however, suitable habitat may be present near priority area. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 9.9 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Not expected.</i> Located approximately 30.1 miles from species occurrence. Suitable scrub habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.
Blochman's dudleya <i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	None	None	1B.1	Chaparral, coastal bluff scrub, coastal scrub, valley and foothill grassland. Open, rocky slopes; often in shallow clays over serpentine or in rocky areas with little soil. Elevation range: 15 - 1475 feet.	<i>Moderate.</i> There are 8 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2000.	Guadalupe. <i>High.</i> Located approximately 3.2 miles from species occurrence. Suitable habitat may be present. Casmalia. <i>High.</i> Located approximately 3.4 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Low.</i> Located approximately 15.5 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 50.1 miles from species occurrence. Suitable habitat may be present. Los Alamos. <i>Low.</i> Located approximately 13.5 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Not expected.</i> Located approximately 22.3 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Low.</i> Located approximately 17.8 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 7.0 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Not expected.</i> Located approximately 27.4 miles from species occurrence. Suitable habitat may be present.

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Santa Rosa Island dudleya <i>Dudleya blochmaniae</i> ssp. <i>insularis</i>	None	None	1B.1	Coastal bluff scrub, on rock flat near beach near mouth of creek. Elevation range: 10 - 35 feet.	<i>Low.</i> Only 1 known occurrence of this species within the County which was recorded in 2000.	All priority areas. <i>Not expected.</i> The known occurrence of this species is located on the Channel Islands.
candleholder dudleya <i>Dudleya candelabrum</i>	None	None	1B.2	Chaparral, closed-cone coniferous forest, coastal scrub. In rock walls and crevices, and on canyon sides. Elevation range: 15 - 2000 feet.	<i>Moderate.</i> There are 34 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 1996.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
munchkin dudleya <i>Dudleya gnoma</i>	None	None	1B.1	Coastal bluff scrub (gravelly, volcanic). Coastal bluffs on Santa Rosa Island; in sparsely vegetated area in shallow volcanic soil with annual grasses. Cryptic. Elevation range: 65 - 230 feet.	<i>Low.</i> Only 1 known occurrence of this species within the County which was recorded in 2000.	All priority areas. <i>Not expected.</i> The known occurrence of this species is located on the Channel Islands.
Santa Cruz Island dudleya <i>Dudleya nesiotica</i>	FDR	SR	1B.1	Coastal bluff scrub, coastal scrub. In flat area near edge of sea bluff or on gentle slopes. Clay soil, with gravelly bits. Elevation range: 35 - 165 feet.	<i>Moderate.</i> There are 2 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2008.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
Santa Barbara Island dudleya <i>Dudleya traskiae</i>	FE	SE	1B.2	Coastal bluff scrub, coastal scrub. In shallow soil pockets on rocky cliffs, and on coastal terraces. Elevation range: 100 - 360 feet.	<i>Moderate.</i> There are 3 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2011.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.

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Kern mallow <i>Eremalche parryi</i> ssp. <i>kernensis</i>	FE	None	1B.2	Chenopod scrub, pinyon and juniper woodland, valley and foothill grassland. On dry, open, sandy to clay soils; usually within valley saltbush scrub; often at edge of balds. Elevation range: 230 - 4230 feet.	<i>Moderate.</i> There are 4 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2019.	Guadalupe. <i>Not expected.</i> Outside of known elevation range. Casmalia. <i>Not expected.</i> Located approximately 40.4 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Not expected.</i> Located approximately 23.3 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>High.</i> Located adjacent to species occurrence. Suitable habitat may be present. Los Alamos. <i>Not expected.</i> Located approximately 30.3 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Not expected.</i> Located approximately 24.9 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Not expected.</i> Located approximately 31.5 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Not expected.</i> Located approximately 34.1 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Not expected.</i> Located approximately 34.0 miles from species occurrence. Suitable habitat may be present.
Blochman's leafy daisy <i>Erigeron</i> <i>blochmaniae</i>	None	None	1B.2	Coastal dunes, coastal scrub. Elevation range: 10 - 150 feet.	<i>Moderate.</i> There are 12 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2011.	Guadalupe. <i>High.</i> Located approximately 2.5 miles from species occurrence. No suitable habitat may be present within priority area; however, suitable habitat may be present near priority area. Hwy 246 Corridor. <i>Not expected.</i> The majority of this area is outside of known elevation range. The remaining portion of this area lacks suitable habitat to support this species. Refugio Canyon. <i>Not expected.</i> Located approximately 30.2 miles from species occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.

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Lompoc yerba santa <i>Eriodictyon capitatum</i>	FE	SR	1B.2	Chaparral (maritime), closed-cone coniferous forest, coastal bluff scrub. Sandy soils on terraces. Elevation range: 130 - 2955 feet.	<i>High.</i> There are 11 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2019. Critical habitat for this species also occurs within the western portion of the County.	Guadalupe. <i>Not expected.</i> Outside of known elevation range. Casmalia. <i>Moderate.</i> Located approximately 5.7 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Moderate.</i> Located approximately 5.4 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 39.6 miles from species occurrence. Limited suitable habitat may be present. Los Alamos. <i>Moderate.</i> Located approximately 8.8 miles from species occurrence. Limited suitable habitat may be present. Los Olivos. <i>Low.</i> Located approximately 17.6 miles from species occurrence. Limited suitable habitat may be present. Jonata Park. <i>Low.</i> Located approximately 15.0 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 6.8 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Low.</i> Located approximately 15.0 miles from species occurrence. Suitable habitat may be present.
Santa Barbara Island buckwheat <i>Eriogonum giganteum</i> var. <i>compactum</i>	None	SR	1B.3	Coastal bluff scrub (usually rocky). Seabluffs; dry rocky outcrops and cliffs. Elevation range: 35 - 985 feet.	<i>Low.</i> There are 4 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 1989.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
red-flowered buckwheat <i>Eriogonum grande</i> var. <i>rubescens</i>	None	None	1B.2	Chaparral, coastal bluff scrub, coastal scrub. Elevation range: 35 - 805 feet.	<i>Moderate.</i> There are 31 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2002.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
Fort Tejon woolly sunflower <i>Eriophyllum lanatum</i> var. <i>hallii</i>	None	None	1B.1	Chaparral, cismontane woodland. Often on slopes in loamy soils. Elevation range: 3495 - 6560 feet.	<i>Moderate.</i> There are 2 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2003.	All priority areas. <i>Not expected.</i> All priority areas are outside of known elevation range.

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sand-loving wallflower <i>Erysimum ammophilum</i>	None	None	1B.2	Chaparral (maritime), coastal dunes, coastal scrub. Sandy openings. Elevation range: 0 - 195 feet.	<i>Moderate.</i> There are 8 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2013.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
island wallflower <i>Erysimum insulare</i>	None	None	1B.3	Coastal bluff scrub, coastal dunes. Mesas and cliffs. Elevation range: 0 - 985 feet.	<i>Moderate.</i> There are 12 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 1996.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
cliff spurge <i>Euphorbia misera</i>	None	None	2B.2	Coastal bluff scrub, coastal scrub, Mojavean desert scrub. Rocky sites. Elevation range: 35 - 1640 feet.	<i>Low.</i> There is 1 known occurrence of this species which was recorded in 1991.	All priority areas. <i>Not expected.</i> The known occurrence of this species is located on the Channel Islands.
Ojai fritillary <i>Fritillaria ojaiensis</i>	None	None	1B.2	Broadleafed upland forest (mesic), chaparral, cismontane woodland, lower montane coniferous forest. Rocky sites. Sometimes on serpentine; sometimes along roadsides. Elevation range: 740 - 3275 feet.	<i>Moderate.</i> There are 26 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2017.	Guadalupe. <i>Not expected.</i> Outside of known elevation range. Casmalia. <i>Not expected.</i> Outside of known elevation range. East of Santa Maria. <i>High.</i> Species occurrence within priority area. Suitable habitat may be present. Cuyama and New Cuyama. <i>Very low.</i> Located approximately 19.6 miles from species location. Extremely limited suitable habitat may be present. Los Alamos. <i>Low.</i> Located approximately 11.5 miles from species location. Suitable habitat may be present. Los Olivos. <i>Moderate.</i> Located approximately 6.9 miles from species location. Suitable habitat may be present. Jonata Park. <i>Moderate.</i> Located approximately 6.9 miles from species location. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 6.2 miles from species location. Suitable habitat may be present. Refugio Canyon. <i>High.</i> Located approximately 1.1 miles from species occurrence. Suitable habitat may be present.

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box bedstraw <i>Galium buxifolium</i>	FDR	SR	1B.2	Closed-cone coniferous forest, coastal bluff scrub, coastal scrub. Rocky cliffs, ocean bluffs, talus slopes near coast. Elevation range: 15 - 1310 feet.	<i>Moderate.</i> There are 17 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2008.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
showy island snapdragon <i>Gambelia speciosa</i>	None	None	1B.2	Coastal scrub. Rocky cliffs and canyons. Elevation range: 0 - 2955 feet.	<i>Low.</i> There is 1 known occurrence of this species which was recorded in 1863. This species has been listed as possibly extirpated.	All priority areas. <i>Not expected.</i> The known occurrence of this species is located on the Channel Islands.
Hoffmann's slender-flowered gilia <i>Gilia tenuiflora</i> ssp. <i>hoffmannii</i>	FE	None	1B.1	Coastal dunes, coastal scrub. Island dunes; sandy-loam soil. Elevation range: 35 - 100 feet.	<i>Moderate.</i> There are 3 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2008.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
island alumroot <i>Heuchera maxima</i>	None	None	1B.2	Chaparral, cismontane woodland, coastal bluff scrub, coastal scrub. Moist north-facing canyon walls, rocky banks, and sea-cliffs. Elevation range: 35 - 1640 feet.	<i>Moderate.</i> There are 24 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2004.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.

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mesa horkelia <i>Horkelia cuneata</i> var. <i>puberula</i>	None	None	1B.1	Chaparral (maritime), cismontane woodland, coastal scrub. Sandy or gravelly sites. Elevation range: 230 - 2660 feet.	<i>Moderate.</i> There are 26 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2013.	Guadalupe. <i>Not expected.</i> Outside of known elevation range. Casmalia. <i>High.</i> Located approximately 2.1 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>High.</i> Species occurrence within priority area. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 21.2 miles from species occurrence. Limited suitable habitat may be present. Los Alamos. <i>Moderate.</i> Located approximately 6.8 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>High.</i> Located approximately 1.1 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>High.</i> Located approximately 2.6 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Species occurrence within priority area. Suitable habitat may be present. Refugio Canyon. <i>Moderate.</i> Located approximately 7.2 miles from species occurrence. Suitable habitat may be present.
Kellogg's horkelia <i>Horkelia cuneata</i> var. <i>sericea</i>	None	None	1B.1	Chaparral (maritime), closed-cone coniferous forest, coastal dunes, coastal scrub. Old dunes, coastal sandhills; openings. Sandy or gravelly soils. Elevation range: 35 - 655 feet.	<i>Moderate.</i> There are 9 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2012.	Guadalupe. <i>Moderate to high.</i> Located approximately 4.0 miles from species occurrence. Limited suitable habitat may be present. Casmalia. <i>High.</i> Located approximately 0.8 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Moderate.</i> Located approximately 5.0 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>Moderate.</i> Located approximately 8.0 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Not expected.</i> Outside of known elevation range. Jonata Park. <i>Low.</i> Located approximately 12.6 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 6.3 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Low.</i> Located approximately 15.6 miles from species occurrence. Suitable habitat may be present.

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island tube lichen <i>Hypogymnia schizidiata</i>	None	None	1B.3	Chaparral, closed-cone coniferous forest. On bark and wood of hardwoods and conifers. Elevation range: 1180 - 1330 feet.	<i>Moderate.</i> There are 4 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2015. Two occurrences are listed as possibly extirpated.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
Santa Lucia dwarf rush <i>Juncus luciensis</i>	None	None	1B.2	Chaparral, Great Basin scrub, lower montane coniferous forest, meadows and seeps, vernal pools. Ephemeral drainages, wet meadow habitats and streamsides. Elevation range: 985 - 6695 feet.	<i>Moderate.</i> There are 3 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 1956.	Guadalupe. <i>Not expected.</i> Outside of known elevation range. Casmalia. <i>Not expected.</i> Outside of known elevation range. East of Santa Maria. <i>Not expected.</i> Located at least 34 miles from species occurrence. Suitable chaparral habitat may be present. Cuyama and New Cuyama. <i>Low.</i> Located approximately 15.3 miles from species occurrence. Limited suitable habitat may be present. Los Alamos. <i>Not expected.</i> Outside of known elevation range. Los Olivos. <i>Low.</i> Located approximately 11.5 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Low.</i> Located approximately 15.3 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Low.</i> The majority of the priority area is outside of known elevation range. Further, this area is located approximately 16.2 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Moderate.</i> Located approximately 5.8 miles from species occurrence. Suitable habitat may be present.
Contra Costa goldfields <i>Lasthenia conjugens</i>	FE	None	1B.1	Cismontane woodland, playas (alkaline), valley and foothill grassland, vernal pools. Swales, low depressions, in open grassy areas. Elevation range: 0 - 1540 feet.	<i>Not expected.</i> There is only one known occurrence of this species in the County from 1950 which has since been extirpated.	All priority areas. <i>Not expected.</i> The only known occurrence of this species has been extirpated.

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Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	None	None	1B.1	Marshes and swamps (coastal salt), playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. Elevation range: 5 - 4005 feet.	<i>Moderate.</i> There are 7 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2013.	Guadalupe. <i>Low.</i> Located approximately 17.3 miles from species occurrence. Suitable habitat may be present. Casmalia. <i>Low.</i> Located approximately 10.0 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Not expected.</i> Located approximately 20.9 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 30.5 miles from species occurrence. Suitable habitat may be present. Los Alamos. <i>Low.</i> Located approximately 17.2 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Moderate.</i> Located approximately 6.0 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Low.</i> Located approximately 10.1 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 8.5 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Moderate.</i> Located approximately 4.1 miles from species occurrence. Suitable habitat may be present.
island mallow <i>Lavatera</i> <i>assurgentiflora</i> ssp. <i>assurgentiflora</i>	None	None	1B.1	Coastal bluff scrub, coastal scrub. Sandy flats and rocky places. Mainland and Todos Santos Island plants probably planted. Elevation range: 50 - 805 feet.	<i>Low.</i> There are 3 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 1989.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
beach layia <i>Layia carnosa</i>	FT	SE	1B.1	Coastal dunes, coastal scrub (sandy). On sparsely vegetated, semi-stabilized dunes, usually behind foredunes. Elevation range: 0 - 195 feet.	<i>Moderate.</i> There are 4 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2017.	Guadalupe. <i>Low.</i> Located approximately 11.1 miles from species occurrence. Suitable habitat not present within priority area; however, suitable habitat may be present nearby. Refugio Canyon. <i>Not expected.</i> Located approximately 30.9 miles from species occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.

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blushing layia <i>Layia erubescens</i>	None	None	1B.2	Coastal dunes, coastal scrub. Prefers loose, fine sand of stabilized dunes and sandhills. Elevation range: 35 - 805 feet.	<i>High.</i> There are 27 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2023.	<p>Guadalupe. <i>Moderate.</i> Located approximately 6.3 miles from species occurrence. Suitable habitat not present within priority area; however, suitable habitat may be present nearby.</p> <p>Casmalia. <i>High.</i> Species occurrence within priority area. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>High.</i> Located approximately 1.6 miles from species occurrence. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range.</p> <p>Los Alamos. <i>High.</i> Located approximately 4.7 miles from species occurrence. Suitable habitat may be present.</p> <p>Los Olivos. <i>High.</i> Located approximately 4.9 miles from species occurrence. Suitable habitat may be present.</p> <p>Jonata Park. <i>High.</i> Species occurrence within priority area. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>High.</i> Species occurrence within priority area. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>Moderate.</i> Located approximately 9.5 miles from species occurrence. Suitable habitat may be present.</p>
pale-yellow layia <i>Layia heterotricha</i>	None	None	1B.1	Cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland. Alkaline or clay soils; open areas. Elevation range: 985 - 5595 feet.	<i>Moderate.</i> There are 14 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2016.	<p>Guadalupe. <i>Not expected.</i> Outside of known elevation range.</p> <p>Casmalia. <i>Not expected.</i> Outside of known elevation range.</p> <p>East of Santa Maria. <i>Low.</i> Located approximately 16.9 miles from known occurrence. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Moderate.</i> Located approximately 5.8 miles from known occurrence. Suitable habitat may be present.</p> <p>Los Alamos. <i>Not expected.</i> Outside of known elevation range.</p> <p>Los Olivos. <i>Moderate.</i> Located approximately 7.9 miles from known occurrence. Suitable habitat may be present.</p> <p>Jonata Park. <i>Low.</i> Located approximately 12.4 miles from known occurrence. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>High.</i> Located approximately 1.2 miles from known occurrence. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>Low.</i> Located approximately 14.9 miles from known occurrence. Suitable habitat may be present.</p>

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Santa Barbara honeysuckle <i>Lonicera subspicata</i> var. <i>subspicata</i>	None	None	1B.2	Chaparral, cismontane woodland, coastal scrub. Elevation range: 35 - 3280 feet.	<i>Moderate.</i> There are 29 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2016.	Guadalupe. <i>Low.</i> Located approximately 19.4 miles from species occurrence. Limited suitable habitat may be present. Casmalia. <i>Low.</i> Located approximately 10.5 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Low.</i> Located approximately 13.5 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 21.3 miles from species occurrence. Extremely limited suitable habitat may be present. Los Alamos. <i>Moderate.</i> Located approximately 8.2 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>High.</i> Located approximately 4.7 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Low.</i> Located approximately 10.5 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Occurrence within priority area. Suitable habitat may be present. Refugio Canyon. <i>High.</i> Occurrence within priority area. Suitable habitat may be present.
Santa Cruz Island ironwood <i>Lyonothamnus floribundus</i> ssp. <i>aspleniifolius</i>	None	None	1B.2	Broadleafed upland forest, chaparral, cismontane woodland. Protected pockets on north-facing slopes. Also seen on ridges and in canyons. Elevation range: 65 - 1905 feet.	<i>Moderate.</i> There are 61 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2008.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
showy golden madia <i>Madia radiata</i>	None	None	1B.1	Cismontane woodland, valley and foothill grassland. Mostly on adobe clay in grassland or among shrubs. Elevation range: 80 - 3985 feet.	<i>Low.</i> There is 1 known occurrence of this species within the County. The date that this occurrence was recorded is unknown.	Cuyama and New Cuyama. <i>High.</i> Occurrence within priority area. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> All priority areas are at least 29.5 miles from the known occurrence.

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Santa Cruz Island bushmallow <i>Malacothamnus fasciculatus</i> var. <i>nesioticus</i>	FE	SE	1B.1	Chaparral, coastal scrub. Steep slopes and outcrops. Rocky sites. Elevation range: 50 - 690 feet.	<i>Moderate.</i> There are 8 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2016.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
slender bushmallow <i>Malacothamnus jonesii</i> var. <i>gracilis</i>	None	None	1B.1	Chaparral. Dry, rocky slopes. Elevation range: 625 - 1885 feet.	<i>Low.</i> There is 1 known occurrence of this species within the County. This occurrence was recorded in 1946.	Guadalupe. <i>Not expected.</i> Outside of known elevation range. Casmalia. <i>Not expected.</i> Outside of known elevation range. East of Santa Maria. <i>Moderate.</i> Located approximately 5.1 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>Low.</i> Located approximately 18.1 miles from species occurrence. Suitable habitat not present. Los Olivos. <i>Not expected.</i> Located approximately 23.8 miles from species occurrence. Limited suitable habitat may be present. Jonata Park. <i>Not expected.</i> Located approximately 25.6 miles from species occurrence. No suitable habitat present. Hwy 246 Corridor. <i>Not expected.</i> Located approximately 23.3 miles from species occurrence. Limited suitable habitat may be present. Refugio Canyon. <i>Not expected.</i> Located approximately 35.1 miles from species occurrence. Suitable habitat may be present.
Philbrick's malacothrix <i>Malacothrix foliosa</i> ssp. <i>philbrickii</i>	None	None	1B.2	Coastal scrub. Elevation range: 195 - 330 feet.	<i>Moderate.</i> There are 3 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 1982.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
Santa Cruz Island malacothrix <i>Malacothrix indecora</i>	FE	None	1B.1	Chaparral, coastal bluff scrub, coastal dunes, coastal scrub. Exposed sites on dry ridges and sea bluffs. Elevation range: 15 - 100 feet.	<i>Moderate.</i> There are 7 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2006.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.

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Carmel Valley malacothrix <i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	None	None	1B.2	Chaparral (rocky), coastal scrub. Rock outcrops or steep rocky roadcuts. Elevation range: 80 - 3400 feet.	<i>Low.</i> There is 1 known occurrence of this species within the County. This occurrence was recorded in 1982	Guadalupe. <i>Not expected.</i> Located approximately 53.6 miles from species occurrence. Suitable habitat is not present. Casmalia. <i>Not expected.</i> Located approximately 47.9 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Not expected.</i> Located approximately 35.4 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 24.3 miles from species occurrence. Extremely limited suitable habitat may be present. Los Alamos. <i>Not expected.</i> Located approximately 31.7 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Not expected.</i> Located approximately 20.8 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Not expected.</i> Located approximately 26.3 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 27.6 miles from species occurrence in CNDDDB, but 2 miles north of a 2017 occurrence in Calflora. Suitable habitat may be present. Refugio Canyon. <i>Low.</i> Located approximately 19.0 miles from species occurrence. Suitable habitat may be present.
Mexican malacothrix <i>Malacothrix similis</i>	None	None	2A	Coastal dunes. Elevation range: 0 - 130 feet.	<i>Low.</i> There are 2 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 1888.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
island malacothrix <i>Malacothrix squalida</i>	FE	None	1B.1	Chaparral, cismontane woodland, coastal bluff scrub. Exposed sites. Elevation range: 50 - 655 feet.	<i>Moderate.</i> There are 2 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2006.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
southwestern mountain monardella <i>Monardella australis</i> ssp. <i>occidentalis</i>	None	None	1B.1	Chaparral (montane), upper montane coniferous forest. Clay loam, rocky scree. Elevation range: 6200 - 7990 feet.	<i>Low.</i> There is 1 known occurrence of this species within the County. It is unknown when this occurrence was recorded.	All priority areas. <i>Not expected.</i> All priority areas are outside of the known elevation range of this species.

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white-veined monardella <i>Monardella hypoleuca</i> ssp. <i>hypoleuca</i>	None	None	1B.3	Chaparral, cismontane woodland. Dry slopes. Elevation range: 165 - 5005 feet.	<i>Moderate.</i> There are 19 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2006.	Guadalupe. <i>Not expected.</i> Outside of elevation range. Casmalia. <i>Not expected.</i> Located approximately 21.0 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Not expected.</i> Located approximately 21.1 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 28.0 miles from species occurrence. Extremely limited suitable habitat may be present. Los Alamos. <i>Low.</i> Located approximately 12.9 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Moderate.</i> Located approximately 9.3 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Moderate.</i> Located approximately 6.9 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Located approximately 4.6 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>High.</i> Occurrence within priority area. Suitable habitat may be present.
southern curly- leaved monardella <i>Monardella sinuata</i> ssp. <i>sinuata</i>	None	None	1B.2	Chaparral, cismontane woodland, coastal dunes, coastal scrub (openings). Sandy soils. Elevation range: 0 - 985 feet.	<i>Moderate.</i> There are 26 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2012.	Guadalupe. <i>Low.</i> This area is Located approximately 9.2 miles from species occurrence. Suitable habitat not present within priority area; however, suitable habitat may be present nearby. Casmalia. <i>High.</i> Furthermore, this area is Located approximately 1.3 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>High.</i> Occurrence within priority area. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>High.</i> Located approximately 2.3 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>High.</i> Located approximately 1.9 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>High.</i> Located approximately 1.3 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Located adjacent to multiple species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Moderate.</i> Located approximately 8.0 miles from species occurrence. Suitable habitat may be present.

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Point Arguello monardella <i>Monardella undulata</i> ssp. <i>arguelloensis</i>	None	None	1B.1	Coastal bluff scrub, coastal dunes (stabilized), coastal scrub. Sandy substrate. Elevation range: 165 - 490 feet.	<i>Low.</i> There is 1 known occurrence of this species within the County which was recorded in 2012.	Casmalia. <i>Low.</i> Located approximately 18.1 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Not expected.</i> Located approximately 27.4 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Low.</i> Located approximately 11.9 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Not expected.</i> Located approximately 29.5 miles from species occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.
crisp monardella <i>Monardella undulata</i> ssp. <i>crispa</i>	None	None	1B.2	Coastal dunes, coastal scrub. Often on the borders of open, sand areas, usually adjacent to typical backdune scrub vegetation. Elevation range: 35 - 395 feet.	<i>Moderate.</i> There are 18 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2013.	Guadalupe. <i>Low.</i> Located approximately 1.1 miles from a historic 1973 species occurrence documented in CNDDDB. Suitable habitat not present within priority area; however, suitable habitat may be present nearby. Casmalia. <i>High.</i> Located approximately 2.5 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Low.</i> Located approximately 15.3 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 10.1 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Not expected.</i> Located approximately 30.2 miles from species occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.

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San Luis Obispo monardella <i>Monardella undulata</i> ssp. <i>undulata</i>	None	None	1B.2	Coastal dunes, coastal scrub (sandy). Stabilized sand of the immediate coast. Elevation range: 35 - 655 feet.	<i>Moderate.</i> There are 12 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2012.	Guadalupe. <i>Moderate.</i> Located approximately 5.8 miles from species occurrence. Suitable habitat not present within priority area; however, suitable habitat may be present nearby. Casmalia. <i>High.</i> Located approximately 2.3 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Moderate.</i> Located approximately 6.2 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>Low.</i> Located approximately 10.8 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Low.</i> Located approximately 20.2 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Low.</i> Located approximately 17.2 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 9.9 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Not expected.</i> Located approximately 30.0 miles from species occurrence. Suitable habitat may be present.
San Joaquin woollythreads <i>Monolopia congdonii</i>	FE	None	1B.2	Chenopod scrub, valley and foothill grassland (sandy). Alkaline or loamy plains; sandy soils, often with grasses and within chenopod scrub. Elevation range: 195 - 2625 feet.	<i>Moderate.</i> There are 3 known occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2016.	Guadalupe. <i>Not expected.</i> Outside of elevation range. Casmalia. <i>Not expected.</i> Located approximately 36.6 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Low.</i> Located approximately 19.3 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>High.</i> Located adjacent to species occurrence. Suitable habitat may be present. Los Alamos. <i>Not expected.</i> Located approximately 28.8 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Not expected.</i> Located approximately 25.5 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Not expected.</i> Located approximately 31.6 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Not expected.</i> Located approximately 34.5 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Not expected.</i> Located approximately 34.5 miles from species occurrence. Suitable habitat may be present.

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
aparejo grass <i>Muhlenbergia utilis</i>	None	None	2B.2	Chaparral, cismontane woodland, coastal scrub, marshes and swamps, meadows and seeps. Sometimes alkaline, sometimes serpentinite. Elevation range: 80 - 7630 feet.	<i>Low.</i> There is one known occurrence of this species within the County. This occurrence was recorded in 1975.	<p>Guadalupe. <i>Not expected.</i> Located approximately 21.5 miles from species occurrence. Suitable habitat not present within priority area; however, suitable habitat may be present nearby.</p> <p>Casmalia. <i>Low.</i> Located approximately 15.4 miles from known occurrence. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>Moderate.</i> Located approximately 5.9 miles from species occurrence. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 33.8 miles from species occurrence. Very limited suitable habitat may be present.</p> <p>Los Alamos. <i>High.</i> Occurrence within priority area. Suitable habitat may be present.</p> <p>Los Olivos. <i>Moderate.</i> Located approximately 8.1 miles from species occurrence. Suitable habitat may be present.</p> <p>Jonata Park. <i>Moderate.</i> Located approximately 6.4 miles from species occurrence. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>Moderate.</i> Located approximately 5.9 miles from species occurrence. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>Low.</i> Located approximately 17.3 miles from species occurrence. Suitable habitat may be present.</p>

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
Gambel's water cress <i>Nasturtium gambelii</i>	FE	ST	1B.1	Marshes and swamps (brackish, freshwater). At the margins of lakes and along streams, in or just above the water level. Elevation range: 15 - 1085 feet.	<i>Moderate.</i> There are 3 known occurrences of this species within the County. Of these, the most recent observation was recorded in 2012.	Guadalupe. <i>Low.</i> Located approximately 12.9 miles from species occurrence. Limited suitable habitat along streams may be present. Casmalia. <i>Moderate.</i> Located approximately 5.0 miles from species occurrence. Suitable habitat along streams may be present. East of Santa Maria. <i>Low.</i> Located approximately 12.8 miles from species occurrence. Suitable habitat along streams may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 45.1 miles from species occurrence. Suitable habitat along streams may be present. Los Alamos. <i>Low.</i> Located approximately 11.1 miles from species occurrence. Suitable habitat along streams may be present. Los Olivos. <i>Not expected.</i> Located approximately 20.7 miles from species occurrence. Suitable habitat along streams may be present. Jonata Park. <i>Low.</i> Located approximately 16.9 miles from species occurrence. Suitable habitat along streams may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 6.6 miles from species occurrence. Suitable habitat along streams may be present. Refugio Canyon. <i>Low.</i> Located approximately 19.3 miles from species occurrence. Suitable habitat along streams may be present.
Robbins' nemacladus <i>Nemacladus secundiflorus</i> var. <i>robbinsii</i>	None	None	1B.2	Chaparral, valley and foothill grassland. Dry, sandy or gravelly slopes. Openings. Elevation range: 1150 - 5580 feet.	<i>Low.</i> There is 1 known occurrence of this species within the County which was recorded in 1929.	All priority areas. <i>Not expected.</i> This occurrence is located at least 20 miles from all known priority areas.

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
Sonoran maiden fern <i>Pelazoneuron puberulum</i> var. <i>sonorense</i>	None	None	2B.2	Meadows and seeps (seeps, streams). Elevation range: 165 - 2000 feet.	<i>Moderate.</i> There are 12 known occurrences of this species within the County. Of these, the most recent observation was recorded in 2015.	Guadalupe. <i>Not expected.</i> Located approximately 23.1 miles from known occurrence. Limited suitable seeps and streams may be present. Casmalia. <i>Low.</i> Located approximately 15.1 miles from known occurrence. Suitable seeps and streams may be present. East of Santa Maria. <i>Not expected.</i> Located approximately 22.1 miles from known occurrence. Suitable seeps and streams may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Suitable seeps and streams may be present. Los Alamos. <i>Low.</i> Located approximately 17.2 miles from known occurrence. Suitable seeps and streams may be present. Los Olivos. <i>Low.</i> Located approximately 10.5 miles from known occurrence. Suitable seeps and streams may be present. Jonata Park. <i>Low.</i> Located approximately 10.6 miles from known occurrence. Suitable seeps and streams may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 6.6 miles from known occurrence. Suitable seeps and streams may be present. Refugio Canyon. <i>High.</i> Occurrence within the priority area. Suitable seeps and streams may be present.
northern Channel Islands phacelia <i>Phacelia insularis</i> var. <i>insularis</i>	FE	None	1B.2	Coastal dunes, valley and foothill grassland. Dunes, bluffs and sandy places. Elevation range: 0 - 705 feet.	<i>Moderate.</i> There are 6 known occurrences of this species within the County. Of these, the most recent observation was recorded in 2006.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
Santa Rosa Island Torrey pine <i>Pinus torreyana</i> ssp. <i>insularis</i>	None	None	1B.2	Closed-cone coniferous forest. Ravines and low ridges. Elevation range: 245 - 490 feet.	<i>Moderate.</i> There are 2 known occurrences of this species within the County. Of these, the most recent observation was recorded in 2000.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
Santa Barbara Island cream cups <i>Platystemon californicus</i> var. <i>ciliatus</i>	None	None	1B.2	Coastal bluff scrub. Open gravelly soil on coastal bluffs. Elevation range: 165 - 165 feet.	<i>Moderate.</i> There is one known occurrence of this species within the County. This was recorded in 1989.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
Mexican earthmoss <i>Pleuridium mexicanum</i>	None	None	2B.1	Chaparral, sandstone. Elevation range: 1445 - 1445 feet.	<i>Moderate.</i> There is one known occurrence of this species within the County. This was recorded in 2006.	East of Santa Maria. <i>Not expected.</i> Located approximately 32.9 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Low.</i> Located approximately 12.6 miles from species occurrence. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.
Nuttall's scrub oak <i>Quercus dumosa</i>	None	None	1B.1	Chaparral, closed-cone coniferous forest, coastal scrub. Generally on sandy soils near the coast; sometimes on clay loam. Elevation range: 50 - 1310 feet.	<i>Moderate.</i> There are 17 known occurrences of this species within the County. Of these, the most recent observation was recorded in 2015.	Guadalupe. <i>Not expected.</i> Located more than 23 miles from known species occurrence. Limited suitable habitat may be present. Casmalia. <i>Not expected.</i> Located more than 23 miles from known species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Low.</i> Located more than 23 miles from known species occurrence in CNDDDB, but there is a historic 1935 occurrence 0.6 mile west of the priority area documented in Calflora. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>Not expected.</i> Located more than 23 miles from known species occurrence. Suitable habitat may be present. Los Olivos. <i>Not expected.</i> Located more than 23 miles from known species occurrence. Suitable habitat may be present. Jonata Park. <i>Not expected.</i> Located more than 23 miles from known species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Not expected.</i> Located more than 23 miles from known species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Low.</i> Located approximately 18.5 miles from species occurrence. Suitable habitat may be present.

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
Santa Cruz Island gooseberry <i>Ribes thacherianum</i>	None	None	1B.2	Cismontane woodland, closed-cone coniferous forest, riparian woodland. Canyons, streambeds, and ravines. Elevation range: 35 - 1495 feet.	<i>Moderate.</i> There are 12 known occurrences of this species within the County. Of these, the most recent observation was recorded in 2008.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
Brandegee's sage <i>Salvia brandegeei</i>	None	None	1B.2	Chaparral, closed-cone coniferous forest, coastal scrub. Coastal bluffs and seaward canyons. Elevation range: 15 - 655 feet.	<i>Moderate.</i> There are 13 known occurrences of this species within the County. Of these, the most recent observation was recorded in 2000.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
black-flowered figwort <i>Scrophularia atrata</i>	None	None	1B.2	Chaparral, closed-cone coniferous forest, coastal dunes, coastal scrub, riparian scrub. Sand, diatomaceous shales, and soils derived from other parent material; around swales and in sand dunes. Elevation range: 35 - 1640 feet.	<i>Moderate.</i> There are 51 known occurrences of this species within the County. Of these, the most recent observation was recorded in 2016.	Guadalupe. <i>High.</i> Located approximately 1.7 miles from species occurrence. Limited suitable habitat may be present. Casmalia. <i>High.</i> Occurrence within priority area. Suitable habitat may be present. East of Santa Maria. <i>Moderate.</i> Located approximately 6.3 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Outside of known elevation range. Los Alamos. <i>High.</i> Located approximately 3.1 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Low.</i> Located approximately 10.7 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Moderate.</i> Located approximately 6.3 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Occurrence adjacent to priority area. Suitable habitat may be present. Refugio Canyon. <i>Moderate.</i> Located approximately 7.3 miles from species occurrence. Suitable habitat may be present.

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
chaparral ragwort <i>Senecio aphanactis</i>	None	None	2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. Elevation range: 50 - 2625 feet.	<i>Moderate.</i> There are 10 known occurrences of this species within the County. Of these, the most recent observation was recorded in 2006.	Guadalupe. <i>Low.</i> Located approximately 17.9 miles from species occurrence. Suitable habitat not present within priority area; however, suitable habitat may be present nearby. Casmalia. <i>Low.</i> Located approximately 10.1 miles from species occurrence. Limited suitable habitat may be present. East of Santa Maria. <i>Low.</i> Located approximately 14.3 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 34.1 miles from species occurrence. Limited suitable habitat may be present. Los Alamos. <i>Low.</i> Located approximately 10.1 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Moderate.</i> Located approximately 7.6 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Moderate.</i> Located approximately 9.0 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Located approximately 2.7 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>High.</i> Occurrence within priority area. Suitable habitat may be present.
Santa Cruz Island winged-rockcress <i>Sibara filifolia</i>	FE	None	1B.1	Coastal scrub (rocky, volcanic). Shady slopes, openings (often). Elevation range: 195 - 1000 feet.	<i>Low.</i> There are 2 known occurrences of this species within the County. Of these, the most recent observation was recorded in 1985; however, this occurrence is listed as possibly extirpated.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
Parish's checkerbloom <i>Sidalcea hickmanii</i> ssp. <i>parishii</i>	None	SR	1B.2	Chaparral, cismontane woodland, lower montane coniferous forest. Disturbed burned or cleared areas on dry, rocky slopes, in fuel breaks and fire roads along the mountain summits. Elevation range: 3280 - 8200 feet.	<i>Moderate.</i> There are 10 known occurrences of this species within the County. Of these, the most recent observation was recorded in 2018.	Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 7.7 miles from species occurrence. Very limited suitable habitat may be present. Outside of the known elevation range of this species. All other priority areas. <i>Not expected.</i> All other priority areas are outside of the known elevation range of this species.

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
southern jewelflower <i>Streptanthus campestris</i>	None	None	1B.3	Chaparral, lower montane coniferous forest, pinyon and juniper woodland. Open, rocky areas. Elevation range: 2955 - 7545 feet.	<i>Low.</i> There is one known occurrence of this species within the County. This was recorded in 1929.	Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 15.5 miles from species occurrence. Very limited suitable habitat may be present. Outside of the known elevation range of this species. All other priority areas. <i>Not expected.</i> All other priority areas are outside of the known elevation range of this species.
estuary seablite <i>Suaeda esteroa</i>	None	None	1B.2	Marshes and swamps (coastal salt), in clay, silt, and sand substrates. Elevation range: 0 - 15 feet.	<i>Moderate.</i> There is one known occurrence of this species within the County. This was recorded in 1979.	Refugio Canyon. <i>Low.</i> Located approximately 11.6 miles from species occurrence. Suitable marsh habitat may be present. All other priority areas. <i>Not expected.</i> All other priority areas are outside of the known elevation range of this species.
San Bernardino aster <i>Symphotrichum defoliatum</i>	None	None	1B.2	Cismontane woodland, coastal scrub, lower montane coniferous forest, marshes and swamps, meadows and seeps, valley and foothill grassland (vernally mesic). Streambanks. Elevation range: 5 - 6695 feet.	<i>Moderate.</i> There is one known occurrence of this species within the County. This was recorded in 1995.	Guadalupe. <i>Low.</i> Located approximately 11.1 miles from species occurrence. Suitable habitat may be present. Casmalia. <i>High.</i> Located approximately 4.1 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Moderate.</i> Located approximately 8.5 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Located approximately 42.4 miles from species occurrence. Suitable habitat may be present. Los Alamos. <i>Moderate.</i> Located approximately 9.9 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Low.</i> Located approximately 19.6 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>Low.</i> Located approximately 16.2 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Located approximately 7.4 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Not expected.</i> Located approximately 27.2 miles from species occurrence. Suitable habitat may be present.

Common Name <i>Scientific Name</i>	Federal ESA Status	State ESA Status	CRPR ¹	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
Santa Ynez false lupine <i>Thermopsis macrophylla</i>	None	SR	1B.3	Chaparral (disturbed areas, granitic, sandy). In open areas such as fuel breaks, after burns; on sandstone. Elevation range: 1395 - 4595 feet.	<i>Moderate.</i> There are 8 known occurrences of this species within the County. Of these, the most recent observation was recorded in 2011.	East of Santa Maria. <i>Not expected.</i> This species is limited to the Santa Ynez Mountains. Cuyama and New Cuyama. <i>Not expected.</i> This species is limited to the Santa Ynez Mountains. Los Olivos. <i>Not expected.</i> This species is limited to the Santa Ynez Mountains. Refugio Canyon. <i>High.</i> Located approximately 2.4 miles of species occurrence. Occurrences of this species are within the Santa Ynez Mountains. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known elevation range.
Santa Cruz Island fringe pod <i>Thysanocarpus conchuliferus</i>	FE	None	1B.2	Chaparral, cismontane woodland. Stony ridges and mossy pockets on the sides of rocks. Elevation range: 150 - 2150 feet.	<i>Moderate.</i> There are 15 known occurrences of this species within the County. Of these, the most recent observation was recorded in 2006.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.
California screw moss <i>Tortula californica</i>	None	None	1B.2	Chenopod scrub, valley and foothill grassland. Moss growing on sandy soil. Elevation range: 35 - 4790 feet.	<i>Moderate.</i> There are 2 known occurrences of this species within the County. Of these, the most recent observation was recorded in 2001.	All priority areas. <i>Not expected.</i> All known occurrences are located on the Channel Islands.

NOTES:

¹ Sensitivity Status

FE	Federally endangered
FT	Federally threatened
FDR	Federally delisted (recovered)
SE	State endangered
ST	State threatened
SR	State rare
CRPR	<i>California Rare Plant Ranks:</i>

California Rare Plant Rank 1A	Plants presumed extirpated in California and either rare or extinct elsewhere
California Rare Plant Rank 1B	Plants rare, threatened, or endangered in California and elsewhere
California Rare Plant Rank 2A	Plants presumed extirpated in California but common elsewhere
California Rare Plant Rank 2B	Plants rare, threatened, or endangered in California, but common elsewhere
California Rare Plant Rank 3	Plants about which more information is needed, a review list
California Rare Plant Rank 4	Plants of limited distribution, a watch list

Common Name Scientific Name	Federal ESA Status	State ESA Status	CRPR 1	Preferred Habitat	Potential to Occur within the Project Area	Potential to Occur at 9 Project Sites
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Threat Code extensions and their meanings:

- 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- 0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

SOURCES:

California Native Plant Society. 2024. CNPS Rare Plant Inventory. Available online at: <https://rareplants.cnps.org/>. Accessed July 3, 2024.
 CDFW. 2024. California Natural Diversity Database (CNDDDB). RareFind, Version 5.0 (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. Available online at: <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>. Accessed July 3, 2024

SPECIAL STATUS WILDLIFE POTENTIAL TO OCCUR

Common Name Scientific Name	Federal ESA Status	State ESA Status	CDFW	Preferred Habitat	Potential to Occur within Santa Barbara County	Potential to Occur within 9 Priority Areas
Invertebrates						
Crotch's bumble bee <i>Bombus crotchii</i>	None	SCE	None	Open grassland and scrub habitats that support potential nectar sources.	<i>High.</i> There are 24 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2020.	<p>Guadalupe. <i>Very low.</i> Within species range. Located approximately 34.5 miles from species occurrence. Very limited grassland habitat may be present.</p> <p>Casmalia. <i>Moderate.</i> Within species range. Located approximately 29.0 miles from species occurrence. Suitable grassland habitat may be present.</p> <p>East of Santa Maria. <i>Moderate.</i> Within species range. Located approximately 15.6 miles from species occurrence. Suitable grassland and scrub habitat may be present.</p> <p>Cuyama and New Cuyama. <i>High.</i> Within species range. Occurrence within priority area. Suitable grassland habitat may be present.</p> <p>Los Alamos. <i>Moderate.</i> Within species range. Located approximately 12.3 miles from species occurrence. Suitable grassland and scrub habitat may be present.</p> <p>Los Olivos. <i>High.</i> Within species range. Located approximately 1.8 miles from species occurrence. Suitable grassland and scrub habitat may be present.</p> <p>Jonata Park. <i>Moderate.</i> Within species range. Located approximately 8.8 miles from species occurrence. Suitable grassland and scrub habitat may be present.</p> <p>Hwy 246 Corridor. <i>Moderate.</i> Within species range. Located approximately 11.1 miles from species occurrence. Suitable grassland and scrub habitat may be present.</p> <p>Refugio Canyon. <i>Moderate.</i> Within species range. Located within 2.8 miles from species occurrence. Suitable grassland and scrub habitat may be present.</p>

Common Name Scientific Name	Federal ESA Status	State ESA Status	CDFW	Preferred Habitat	Potential to Occur within Santa Barbara County	Potential to Occur within 9 Priority Areas
American bumble bee <i>Bombus pensylvanicus</i>	None	None	None	Coastal prairie, Great Basin grassland, Valley & foothill grassland. Long-tongued; forages on a wide variety of flowers including vetches (<i>Vicia</i>), clovers (<i>Trifolium</i>), thistles (<i>Cirsium</i>), sunflowers (<i>Helianthus</i>), etc. Nests above ground under long grass or underground. Queens overwinter in rotten wood or underground.	<i>High</i> . There is 1 known CNDDDB occurrence of this species within the County, which was recorded in 1991.	<p>Guadalupe. <i>Low</i>. Located approximately 33.3 miles from species occurrence. Very limited grassland habitat may be present.</p> <p>Casmalia. <i>Moderate</i>. Located approximately 26.4 miles from species occurrence. Suitable grassland habitat may be present.</p> <p>East of Santa Maria. <i>Moderate</i>. Located approximately 17.6 miles from species occurrence. Suitable grassland and scrub habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Moderate</i>. Located approximately 30.6 miles from species occurrence. Suitable grassland habitat may be present.</p> <p>Los Alamos. <i>Moderate</i>. Located approximately 11.2 miles from species occurrence. Suitable grassland and scrub habitat may be present.</p> <p>Los Olivos. <i>High</i>. Located approximately 1.7 miles from species occurrence. Suitable grassland and scrub habitat may be present.</p> <p>Jonata Park. <i>Moderate</i>. Located approximately 2.9 miles from species occurrence. Suitable grassland and scrub habitat may be present.</p> <p>Hwy 246 Corridor. <i>Moderate</i>. Located approximately 3.4 miles from species occurrence. Suitable grassland and scrub habitat may be present.</p> <p>Refugio Canyon. <i>Moderate</i>. Located approximately 2.1 miles from species occurrence. Suitable grassland and scrub habitat may be present.</p>

Common Name Scientific Name	Federal ESA Status	State ESA Status	CDFW	Preferred Habitat	Potential to Occur within Santa Barbara County	Potential to Occur within 9 Priority Areas
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	None	None	Limited to vernal pools in Oregon and California. Occasionally will be found in habitats other than vernal pools, such as artificial pools created by roadside ditches.	<i>High.</i> There are 9 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2020. Critical habitat for this species also occurs within the central portion of the County.	<p>Guadalupe. <i>High.</i> Within species range. Located approximately 6.5 miles from species occurrence. Suitable vernal pool habitat may be present.</p> <p>Casmalia. <i>High.</i> Within species range. Located approximately 1.5 miles from species occurrence. Suitable vernal pool habitat may be present.</p> <p>East of Santa Maria. <i>High.</i> Within species range. Located approximately 2.3 miles from species occurrence. Suitable vernal pool habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Moderate.</i> Within species range. Located approximately 21.2 miles from species occurrence. Suitable vernal pool habitat may be present.</p> <p>Los Alamos. <i>Moderate.</i> Within species range. Located approximately 14.7 miles from species occurrence. Suitable vernal pool habitat may be present.</p> <p>Los Olivos. <i>Moderate.</i> Within species range. Located approximately 8.1 miles from species occurrence. Suitable vernal pool habitat may be present.</p> <p>Jonata Park. <i>Moderate.</i> Within species range. Located approximately 14.6 miles from species occurrence. Suitable vernal pool habitat may be present.</p> <p>Hwy 246 Corridor. <i>High.</i> Within species range. Located approximately 7.4 miles from species occurrence. Suitable vernal pool habitat may be present.</p> <p>Refugio Canyon. <i>Moderate.</i> Within species range. Located approximately 12.3 miles from species occurrence. Suitable vernal pool habitat may be present.</p>
monarch - California overwintering population <i>Danaus plexippus plexippus pop. 1</i>	FC	None	None	Wintering sites in California are associated with wind-protected groves of large trees (primarily eucalyptus or pine [Pinus spp.]) with nectar and water sources nearby that are generally near the coast.	<i>High.</i> There are 116 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2023.	All priority areas. <i>Not expected.</i> Suitable wintering habitat not present.

Common Name Scientific Name	Federal ESA Status	State ESA Status	CDFW	Preferred Habitat	Potential to Occur within Santa Barbara County	Potential to Occur within 9 Priority Areas
Kern primrose sphinx moth <i>Euproserpinus euterpe</i>	FT	None	None	Valley & foothill grassland. Found in the Walker Basin, Kern County, and in the Carrizo Plain and Cuyama Valley.	<i>High.</i> There are 5 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2015.	Cuyama and New Cuyama. <i>High.</i> Within species range. Occurrence within priority area. Suitable grassland habitat may be present. All other priority areas. <i>Not expected.</i> Outside of species range.
black abalone <i>Haliotis cracherodii</i>	FE	None	None	Marine intertidal & splash zone communities. Mid to low rocky intertidal areas.	<i>High.</i> There are 12 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 1998.	All priority areas. <i>Not expected.</i> Outside of species range. All occurrences of this species are located on the Channel Islands.

Common Name Scientific Name	Federal ESA Status	State ESA Status	CDFW	Preferred Habitat	Potential to Occur within Santa Barbara County	Potential to Occur within 9 Priority Areas
Fish						
tidewater goby <i>Eucyclogobius newberryi</i>	FE	None	SSC	Found in shallow brackish water habitats, lagoons, and lower stream reaches along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Require fairly still but not stagnant water and high oxygen levels.	<i>High.</i> There are 30 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2016. Critical habitat for this species also occurs within the northwestern and southern portions of the County.	Refugio Canyon. <i>High.</i> Within species range. Suitable habitat may be present. Occurrence within priority area. All other priority areas. <i>Not expected.</i> Outside of species range.
unarmored threespine stickleback <i>Gasterosteus aculeatus williamsoni</i>	FE	SE	FP	South coast flowing waters, Weedy pools, backwaters, and among emergent vegetation at the stream edge in small Southern California streams. Cool (<24 C), clear water with abundant vegetation.	<i>High.</i> There are 3 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2010.	Casmalia. <i>High.</i> Within species range. Occurrence less than 1 mile from priority area. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of species range.
arroyo chub <i>Gila orcuttii</i>	None	None	SSC	Los Angeles Basin south coastal streams. Prefers slow water stream sections with muddy or sandy bottoms. Feeds on aquatic vegetation, insects, and associated invertebrates.	<i>Moderate.</i> There is 1 known CNDDDB occurrence of this species within the County, which was recorded in 1996.	Casmalia. <i>Moderate.</i> Observation within the vicinity of the priority area documented in iNaturalist. Hwy 246 Corridor. <i>Moderate.</i> Observation within the vicinity of the priority area documented in iNaturalist. All other priority areas. <i>Not expected.</i> Outside of species' native range.
steelhead - southern California DPS <i>Oncorhynchus mykiss irideus</i> pop. 10	FE	SCE	None	South coast flowing waters with variable temperatures. Found in streams and rivers with at least 7 inches minimum depth.	<i>High.</i> There are 6 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2014.	East of Santa Maria. <i>Moderate.</i> Within species range. Suitable habitat may be present. Occurrence within priority area. Hwy 246 Corridor. <i>Moderate.</i> Within species range. Suitable habitat may be present. Occurrence within priority area. All other priority areas. <i>Not expected.</i> No suitable habitat or outside of known range.

Common Name Scientific Name	Federal ESA Status	State ESA Status	CDFW	Preferred Habitat	Potential to Occur within Santa Barbara County	Potential to Occur within 9 Priority Areas
Amphibians						
California tiger salamander - Santa Barbara County DPS <i>Ambystoma californiense</i> pop. 2	FE	ST	WL	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats.	<i>High.</i> There are 30 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2017. Critical habitat for this species also occurs within the western portion of the County.	<p>Guadalupe. <i>Low.</i> Within species range. Located approximately 2.5 miles from species occurrence. Limited suitable habitat may be present.</p> <p>Casmalia. <i>High.</i> Within species range. Located less than 1 mile from species occurrence. Suitable grassland habitat may be present.</p> <p>East of Santa Maria. <i>High.</i> Within species range. Species occurrence in priority area. Suitable grassland habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Not expected.</i> Outside of species range.</p> <p>Los Alamos. <i>High.</i> Within species range. Located less than 1 mile from species occurrence. Suitable grassland habitat may be present.</p> <p>Los Olivos. <i>High.</i> Within species range. Located approximately 6.0 miles from species occurrence. Suitable grassland habitat may be present.</p> <p>Jonata Park. <i>High.</i> Within species range. Located approximately 3.1 miles from species occurrence. Suitable grassland habitat may be present.</p> <p>Hwy 246 Corridor. <i>High.</i> Within species range. Occurrence within priority area. Suitable grassland habitat may be present. Critical habitat for this species also occurs within this Priority Area.</p> <p>Refugio Canyon. <i>Not Expected.</i> Outside of known species range. Located approximately 12.3 miles from species occurrence. Suitable grassland habitat may be present.</p>
arroyo toad <i>Anaxyrus californicus</i>	FE	None	SSC	Gravelly or sandy washes, stream and river banks, and arroyos where flow rates are great enough to keep silt and clay suspended. Found in desert wash, riparian scrub, riparian woodland, south coast flowing waters, and south coast standing waters.	<i>High.</i> There are 30 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2011. Species observations limited to Sisquoc and Santa Ynez rivers. Critical habitat for this species also occurs within the central portion of the County.	<p>East of Santa Maria. <i>High.</i> Located less than 1 mile from species occurrence.</p> <p>All other priority areas. <i>Not expected.</i> Outside of species range.</p>

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foothill yellow-legged frog - south coast DPS <i>Rana boylei</i> pop. 6	FE	SE	None	In California, species were found in most of the northwest and south throughout the foothill regions of the coast range (south to the San Gabriel River system, Los Angeles County) and along the western slopes of the Sierra Nevada south to Kern County, and through the Tehachapis and San Gabriel Mountains in southern California. Valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, mixed chaparral and wet meadows	<i>High.</i> There are 7 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2014.	East of Santa Maria. <i>Moderate.</i> Within species range. Located approximately 31.0 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Low.</i> Within species range. Located approximately 17.1 miles from species occurrence. Limited suitable scrub habitat may be present. Jonata Park. <i>Low.</i> Within species range. Located approximately 22.9 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>High.</i> Within species range. Occurrence within priority area. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of species range.

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California red-legged frog <i>Rana draytonii</i>	FT	None	SSC	Aquatic habitats including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds and lagoons.	<i>High.</i> There are 132 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2022. Critical habitat for this species also occurs throughout the County.	<p>Guadalupe. <i>High.</i> Within species range. Occurrence within priority area. Suitable stream and creek habitat may be present.</p> <p>Casmalia. <i>High.</i> Within species range. Occurrence within priority area. Suitable stream and creek habitat may be present. Critical habitat present within this priority area.</p> <p>East of Santa Maria. <i>High.</i> Within species range. Occurrence within priority area. Suitable stream and creek habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Not expected.</i> Not within species range.</p> <p>Los Alamos. <i>High.</i> Within species range. Occurrence within priority area. Suitable stream and creek habitat may be present.</p> <p>Los Olivos. <i>High.</i> Within species range. Located approximately 3.1 miles from species occurrence. Suitable stream and creek habitat may be present.</p> <p>Jonata Park. <i>High.</i> Within species range. Occurrence within priority area. Suitable stream and creek habitat may be present.</p> <p>Hwy 246 Corridor. <i>High.</i> Within species range. Occurrence within priority area. Suitable stream and creek habitat may be present.</p> <p>Refugion Canyon. <i>High.</i> Within species range. Occurrence within priority area. Suitable stream and creek habitat may be present. Critical habitat present within this priority area.</p>

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western spadefoot <i>Spea hammondi</i>	FPT	None	SSC	Mixed woodland, grasslands, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Prefers washes and other sandy areas with patches of brush and rocks.	<i>High.</i> There are 120 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2019.	<p>Guadalupe. <i>Low.</i> Within species range. Located approximately 2.4 miles from species occurrence. Very limited suitable grassland habitat may be present.</p> <p>Casmalia. <i>High.</i> Within species range. Occurrence within priority area. Suitable grassland habitat may be present.</p> <p>East of Santa Maria. <i>High.</i> Within species range. Occurrence within priority area. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Low.</i> Within species range. Located approximately 30.5 miles from species occurrence. Suitable grassland habitat may be present.</p> <p>Los Alamos. <i>High.</i> Within species range. Occurrence within priority area. Suitable grassland habitat may be present.</p> <p>Los Olivos. <i>High.</i> Within species range. Occurrence within priority area. Suitable grassland habitat may be present.</p> <p>Jonata Park. <i>High.</i> Within species range. Located approximately 3.0 miles from species occurrence. Suitable grassland habitat may be present.</p> <p>Hwy 246 Corridor. <i>High.</i> Within species range. Occurrence within priority area. Suitable grassland habitat.</p> <p>Refugio Canyon. <i>Moderate.</i> Within species range. Located approximately 8.7 miles from species occurrence. Suitable grassland habitat may be present.</p>
Coast Range newt <i>Taricha torosa</i>	None	None	SSC	Leave their aquatic habitat within a few weeks of breeding, and estivate terrestrially during the dry summer, residing in moist habitats under woodland debris, animal burrows, or in rock crevices.	<i>High.</i> There are 17 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2015.	<p>Refugio Canyon. <i>High.</i> Within species range. Occurrence within priority area. Suitable woodland.</p> <p>All other priority areas. <i>Not expected.</i> Outside of species range.</p>

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Reptiles						
Northern California legless lizard <i>Anniella pulchra</i>	None	None	SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	<i>High.</i> There are 4 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 1976.	<p>Guadalupe. <i>Low.</i> Within species range. Located approximately 39.7 miles from species occurrence. Suitable habitat may be present.</p> <p>Casmalia. <i>Low.</i> Within species range. Located approximately 34.8 miles from species occurrence. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>Low.</i> Within species range. Located approximately 21.4 miles from species occurrence. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Low.</i> Within species range. Located approximately 16.5 miles from species occurrence. Suitable habitat may be present.</p> <p>Los Alamos. <i>Low.</i> Within species range. Located approximately 18.9 miles from species occurrence. Suitable habitat may be present.</p> <p>Los Olivos. <i>Low.</i> Within species range. Located approximately 9.1 miles from species occurrence. Suitable habitat may be present.</p> <p>Jonata Park. <i>Low.</i> Within species range. Located approximately 15.9 miles from species occurrence. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>Low.</i> Within species range. Located approximately 18.0 miles from species occurrence. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>Low.</i> Within species range. Located approximately 14.7 miles from species occurrence. Suitable habitat may be present.</p>
California legless lizard <i>Anniella</i> spp.	None	None	SSC	Occurs in sparsely vegetated areas of beach/coastal dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks.	<i>High.</i> There are 5 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 1983.	All priority areas. <i>Low.</i> Study area is within known species range; however, all occurrences of this species in the County are located near the City of Carpinteria and are at least 28 miles from the priority areas.

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California glossy snake <i>Arizona elegans occidentalis</i>	None	None	SSC	Inhabits arid scrub, rocky washes, and grasslands, and chaparral habitats.	<i>High.</i> There are 17 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2015. All occurrences of this species have been located along Hwy 166.	Cuyama and New Cuyama. <i>High.</i> Within species range. Located less than 1 mile from species occurrence. Suitable grassland habitat may be present. All other priority areas. <i>Not expected.</i> Located outside of species range (California Herps, XXXX).
coastal whiptail <i>Aspidoscelis tigris stejnegeri</i>	None	None	SSC	Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.	<i>Moderate.</i> There is 1 known CNDDDB occurrence of this species within the County, which was recorded in 2013.	All priority areas. <i>Low.</i> Priority areas are within species range; however, the priority areas are located at least 19 miles from species occurrence.
southwestern pond turtle <i>Actinemys pallida</i>	FPT	None	SSC	Known to occur in slow-moving permanent or intermittent streams, ponds, small lakes, rivers, streams, marshes, irrigation ditches with abundant vegetation, reservoirs with emergent basking sites, and either rocky or muddy bottoms.	<i>High.</i> There are 99 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2022.	Guadalupe. <i>Moderate.</i> Within species range. Located approximately 4.2 miles from species occurrence. Suitable creek habitat may be present. Casmalia. <i>High.</i> Within species range. Occurrence within priority area. Suitable creek habitat may be present. East of Santa Maria. <i>High.</i> Within species range. Occurrence within priority area. Suitable riverine and creek habitat may be present. Cuyama and New Cuyama. <i>High.</i> Within species range. Located approximately 4.6 miles from species occurrence. Suitable creek habitat may be present. Los Alamos. <i>High.</i> Within species range. Located approximately 4.4 miles from species occurrence. Suitable creek habitat may be present. Los Olivos. <i>High.</i> Within species range. Located approximately 4.4 miles from species occurrence. Suitable creek habitat may be present. Jonata Park. <i>High.</i> Within species range. Located approximately 1.7 miles from species occurrence. Suitable creek habitat may be present. Hwy 246 Corridor. <i>High.</i> Within species range. Located less than 1 mile from species occurrence. Suitable creek habitat may be present. Refugio Canyon. <i>High.</i> Within species range. Occurrence within priority area. Suitable creek habitat may be present.

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blunt-nosed leopard lizard <i>Gambelia sila</i>	FE	SE	FP	Resident of sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief.	<i>High.</i> There are 9 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2007.	Cuyama and New Cuyama. <i>Low.</i> Within species range. Less than 1 mile from species occurrence. However, suitable scrub habitat is not present. All other priority areas. <i>Not expected.</i> Outside of species range.
coast horned lizard <i>Phrynosoma blainvillii</i>	None	None	SSC	Prefers sandy riparian and sage scrub habitats but also occurs in valley-foothill hardwood, conifer, pine-cypress, juniper and annual grassland habitats	<i>High.</i> There are 27 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2017.	Guadalupe. <i>Moderate.</i> Within species range. Located approximately 9.8 miles from known CNDDDB occurrence. Observation within the vicinity of the priority area documented in iNaturalist. Limited suitable habitat may be present. Casmalia. <i>High.</i> Within species range. Located approximately 2.1 miles from known CNDDDB occurrence. Suitable grassland and sage scrub habitat may be present. East of Santa Maria. <i>High.</i> Within species range. Located less than 1 mile from known CNDDDB occurrence. Suitable grassland and sage scrub habitat may be present. Cuyama and New Cuyama. <i>High.</i> Within species range. Located approximately 3.2 miles from known CNDDDB occurrence. Suitable grassland habitat may be present. Los Alamos. <i>Moderate.</i> Within species range. Located approximately 4.0 miles from known CNDDDB occurrence. Observation within the vicinity of the priority area documented in iNaturalist. Suitable grassland and sage scrub habitat may be present. Los Olivos. <i>Moderate.</i> Within species range. Located approximately 4.9 miles from known CNDDDB occurrence. Observation within the vicinity of the priority area documented in iNaturalist. Suitable grassland and sage scrub habitat may be present. Jonata Park. <i>Low.</i> Within species range. Located approximately 9.4 miles from known CNDDDB occurrence. However, suitable grassland and sage scrub habitat is present. Hwy 246 Corridor. <i>High.</i> Within species range. Located approximately 2.4 miles from known CNDDDB occurrence. Observation within the priority area documented in iNaturalist. Suitable grassland and sage scrub habitat may be present. Refugio Canyon. <i>High.</i> Within species range. Occurrence within priority area. Suitable grassland and sage scrub habitat may be present.

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coast patch-nosed snake <i>Salvadora hexalepis virgultea</i>	None	None	SSC	Known to inhabit semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains with sandy soils and leaf litter.	<i>High.</i> There are 8 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2004.	<p>Los Olivos. <i>Low.</i> Within species range. Located approximately 10.4 miles from species occurrence. Limited suitable chaparral habitat may be present.</p> <p>Jonata Park. <i>Not expected.</i> No suitable habitat present.</p> <p>Hwy 246 Corridor. <i>Low.</i> Within species range. Located approximately 14.9 miles from species occurrence. Extremely limited suitable habitat may be present.</p> <p>Refugio Canyon. <i>High.</i> Within species range. Located approximately 4.5 miles from species occurrence. Suitable chaparral habitat in canyons present.</p> <p>All other priority areas. <i>Low.</i> Within species range; however, priority areas are located greater than 21 miles from species occurrence.</p>
two-striped gartersnake <i>Thamnophis hammondi</i>	None	None	SSC	Habitat includes marsh and swamp, riparian scrub, riparian woodland, and wetland.	<i>High.</i> There are 24 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2016.	<p>Guadalupe. <i>Low.</i> Within species range. Located approximately 10.8 miles from species occurrence. Limited suitable riparian and wetland habitat may be present.</p> <p>Casmalia. <i>Moderate.</i> Within species range. Located approximately 4.2 miles from species occurrence. Suitable riparian and wetland habitat may be present.</p> <p>East of Santa Maria. <i>Low.</i> Within species range. Located approximately 5.2 miles from species occurrence. Limited suitable riparian and wetland habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Not expected.</i> Outside of known range.</p> <p>Los Alamos. <i>Low.</i> Within species range. Located approximately 9.9 miles from species occurrence. Observation within the vicinity of the priority area documented in iNaturalist. Limited suitable riparian and wetland habitat may be present.</p> <p>Los Olivos. <i>Low.</i> Within species range. Located approximately 2.0 miles from species occurrence. Extremely limited suitable riparian and wetland habitat may be present.</p> <p>Jonata Park. <i>Low.</i> Within species range. Located approximately 3.1 miles from species occurrence. Extremely limited suitable riparian and wetland habitat may be present.</p> <p>Hwy 246 Corridor. <i>Low.</i> Within species range. Located approximately 2.5 miles from species occurrence. Limited suitable riparian and wetland habitat may be present.</p> <p>Refugio Canyon. <i>High.</i> Within species range. Occurrence within priority area. Suitable riparian and wetland habitat may be present.</p>

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island night lizard <i>Xantusia riversiana</i>	Delisted	None	None	Chaparral, cismontane woodland, coastal dunes. Found in a wide variety of habitats on 3 of the Channel Islands: Santa Barbara, San Clemente, and San Nicolas.	<i>High</i> . There are 2 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 1996.	All priority areas. <i>Not expected</i> . Outside of species range. All known CNDDDB occurrences of this species are located on the Channel Islands.
Birds						
Cooper's hawk <i>Accipiter cooperii</i>	None	None	WL	Inhabits cismontane woodland, riparian forest, riparian woodland, upper montane coniferous forest, or other forest habitats near water.	<i>High</i> . There are 5 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2009.	<p>Guadalupe. <i>High</i> (Nesting). <i>High</i> (Foraging). Located approximately 19.5 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Casmalia. <i>High</i> (Nesting). <i>High</i> (Foraging). Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>High</i> (Nesting). <i>High</i> (Foraging). Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>High</i> (Nesting). <i>High</i> (Foraging). Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Los Alamos. <i>High</i> (Nesting). <i>High</i> (Foraging). Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Los Olivos. <i>High</i> (Nesting). <i>High</i> (Foraging). Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Jonata Park. <i>High</i> (Nesting). <i>High</i> (Foraging). Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>High</i> (Nesting). <i>High</i> (Foraging). Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>High</i> (Nesting). <i>High</i> (Foraging). Located approximately 4.1 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p>

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tricolored blackbird <i>Agelaius tricolor</i>	None	ST	SSC, BCC	Known to occur in freshwater marsh, marsh, swap, and wetland.	<i>High.</i> There are 4 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2009.	<p>Guadalupe. <i>High.</i> Within species range. Located approximately 39.7 miles from species occurrence. Observation within the priority area documented in eBird. Limited wetland habitat may be present.</p> <p>Casmalia. <i>High.</i> Within species range. Located approximately 34.5 miles from species occurrence. Observation within the priority area documented in eBird. Limited wetland habitat may be present.</p> <p>East of Santa Maria. <i>High.</i> Within species range. Located approximately 20.7 miles from species occurrence. Observation within the priority area documented in eBird. Very limited wetland habitat may be present.</p> <p>Cuyama and New Cuyama. <i>High.</i> Within species range. Located approximately 16.4 miles from species occurrence. Observation within the priority area documented in eBird. Limited suitable habitat may be present.</p> <p>Los Alamos. <i>Moderate.</i> Within species range. Located approximately 19.0 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Limited suitable habitat may be present.</p> <p>Los Olivos. <i>Moderate.</i> Within species range. Located approximately 9.1 miles from species occurrence. Observation within the priority area documented in eBird. Extremely limited suitable habitat may be present.</p> <p>Jonata Park. <i>Low.</i> Within species range. Located approximately 15.9 miles from species occurrence. Limited suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>Moderate.</i> Within species range. Located approximately 17.9 miles from species occurrence. Observation within the priority area documented in eBird. Limited suitable habitat may be present.</p> <p>Refugio Canyon. <i>Moderate.</i> Observation within the priority area documented in eBird.</p>

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southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	None	None	WL	Known to frequent relatively steep, often rocky hillsides with grass and forb species. Resident in Southern California coastal sage scrub and sparse mixed chaparral.	<i>High.</i> There are 4 known CNDDDB occurrences of this species within the County. Of these, the most recent occurrence was recorded in 2013.	<p>Guadalupe. <i>Low.</i> Located approximately 18.3 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Extremely limited suitable habitat may be present.</p> <p>Casmalia. <i>Moderate.</i> Located approximately 13.1 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>High.</i> Located less than 1 mile from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Low.</i> Located approximately 32.8 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Extremely limited suitable habitat may be present.</p> <p>Los Alamos. <i>Moderate.</i> Located approximately 4.9 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Limited suitable habitat may be present.</p> <p>Los Olivos. <i>Moderate.</i> Located approximately 12.2 miles from species occurrence. Observation within the priority area documented in eBird. Limited suitable habitat may be present.</p> <p>Jonata Park. <i>Moderate.</i> Located approximately 10.8 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>Moderate.</i> Located approximately 10.3 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>High.</i> Located approximately 2.0 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p>

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grasshopper sparrow <i>Ammodramus savannarum</i>	None	None	SSC	Known to occur in dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs, and scattered shrubs.	<i>High.</i> There are 2 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2008.	<p>Guadalupe. <i>Low.</i> Within species summer range. Located greater than 20 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Limited suitable habitat may be present.</p> <p>Casmalia. <i>Moderate.</i> Within species summer range. Located greater than 20 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>Low.</i> Within species summer range. Located greater than 20 miles from species occurrence. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Low.</i> Within species summer range. Located greater than 20 miles from species occurrence. Suitable habitat may be present.</p> <p>Los Alamos. <i>Low.</i> Within species summer range. Located greater than 20 miles from species occurrence. Suitable habitat may be present.</p> <p>Los Olivos. <i>Low.</i> Within species summer range. Located greater than 20 miles from species occurrence. Suitable habitat may be present.</p> <p>Jonata Park. <i>Low.</i> Within species summer range. Located greater than 20 miles from species occurrence. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>Low.</i> Within species summer range. Located greater than 20 miles from species occurrence. Observation within the priority area from 1996 documented in eBird. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>Low.</i> Within species summer range. Located approximately 14.6 miles from species occurrence. Suitable habitat may be present.</p>

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golden eagle <i>Aquila chrysaetos</i>	None	None	FP, WL	Broadleaved upland forest, cismontane woodland, coastal prairie, great basin grassland, great basin scrub, lower montane coniferous forest, pinon and juniper woodlands, upper montane coniferous forest, valley and foothill grassland. Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	<i>High.</i> There are 2 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2008.	<p>Guadalupe. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 39.6 miles from species occurrence. Observation within priority area documented in eBird. Limited suitable habitat may be present.</p> <p>Casmalia. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 34.3 miles from species occurrence. Observation within priority area documented in eBird. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>Moderate</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 21.9 miles from species occurrence. Observation within the vicinity of priority area documented in eBird. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 25.5 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Los Alamos. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 17.5 miles from species occurrence. Observation within the priority area documented in eBird. Limited suitable habitat may be present.</p> <p>Los Olivos. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 6.2 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Jonata Park. <i>Moderate</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 12.1 miles from species occurrence. Observation within the vicinity of priority area documented in eBird. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>Moderate</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 13.2 miles from species occurrence. Observation within the vicinity of priority area documented in eBird. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>Moderate</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 8.4 miles from species occurrence. Observation within the vicinity of priority area documented in eBird. Suitable habitat may be present.</p>

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Bell's sparrow <i>Artemisiospiza belli belli</i>	None	None	WL	Inhabits large, unfragmented blocks of coastal sage scrub, southern mixed chaparral habitats.	<i>Moderate.</i> There is 1 known CNDDDB occurrence of this species within the County, which was recorded in 1994.	<p>Guadalupe. <i>Not expected.</i> Not within species range.</p> <p>Casmalia. <i>Not expected.</i> Not within species range.</p> <p>East of Santa Maria. <i>Low.</i> Within species range. Located greater than 20 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Limited suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Moderate.</i> Observation within the priority area documented in eBird. Limited suitable habitat may be present.</p> <p>Los Alamos. <i>Low.</i> Within species range. Located greater than 20 miles from species occurrence. Extremely limited suitable habitat may be present.</p> <p>Los Olivos. <i>Low.</i> Within species range. Located approximately 19.2 miles from species occurrence. Limited suitable habitat may be present.</p> <p>Jonata Park. <i>Low.</i> Within species range. Located greater than 20 miles from species occurrence. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>Moderate.</i> Within species range. Located greater than 20 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>Moderate.</i> Within species range. Located approximately 14.3 miles from species occurrence. Suitable habitat may be present.</p>
short-eared owl <i>Asio flammeus</i>	None	None	SSC, BCC	Open country, usually with tall grass, in scattered regions around the Northern Hemisphere. Primarily a rare winter visitor in southern California, but recorded at Mystic Lake in the San Jacinto Valley, Riverside County, in summer 1992 and Harper Dry Lake, San Bernardino County, in summer 1993.	<i>Moderate.</i> There is 1 known CNDDDB occurrence of this species within the County, which was recorded in 1994.	<p>Guadalupe. <i>Not expected.</i> Within species range. Suitable habitat not present.</p> <p>Casmalia. <i>Low.</i> Within species range. Suitable habitat may be present. Located approximately 50.9 miles from species occurrence.</p> <p>Refugio Canyon. <i>Low.</i> Within species range. Suitable habitat may be present. Located approximately 35.9 miles from species occurrence.</p> <p>All other priority areas. <i>Not expected.</i> Outside of species range.</p>

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burrowing owl <i>Athene cunicularia</i>	None	None	SSC, BCC	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	<i>High.</i> There are 4 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2009.	<p>Guadalupe. <i>Not expected.</i> Suitable habitat not present.</p> <p>Casmalia. <i>Moderate.</i> Within species summer range. Located approximately 2.9 miles from species occurrence. Observation of wintering burrowing owl within the vicinity of the priority area documented in eBird. Suitable grassland habitat may be present.</p> <p>East of Santa Maria. <i>Moderate.</i> Within species summer range. Located approximately 9.1 miles from species occurrence. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Moderate.</i> Within species summer range. Located approximately 43.2 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Los Alamos. <i>Not expected.</i> Outside of species range.</p> <p>Los Olivos. <i>Moderate.</i> Within yearlong species range. Located approximately 20.0 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present.</p> <p>Jonata Park. <i>Low.</i> Within yearlong species range. v23.0 miles from species occurrence. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>Low.</i> Within yearlong species range. Located approximately 23.5 miles from species occurrence. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>Moderate.</i> Within yearlong species range. Located approximately 10.1 miles from species occurrence. Suitable habitat may be present.</p>

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ferruginous hawk <i>Buteo regalis</i>	None	None	WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats.	<i>High</i> . There are 2 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 1992.	<p>Guadalupe. <i>Not expected</i> (Nesting). <i>High</i> (Foraging). Within species range. Located greater than 34 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present. Wintering range only.</p> <p>Casmalia. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located greater than 34 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present. Wintering range only.</p> <p>East of Santa Maria. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located greater than 34 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. Wintering range only.</p> <p>Cuyama and New Cuyama. <i>Not expected</i> (Nesting). <i>High</i> (Foraging). Within species range. Located greater than 34 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present. Wintering range only.</p> <p>Los Alamos. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 8.8 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present. Wintering range only.</p> <p>Los Olivos. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 4.7 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present. Wintering range only.</p> <p>Jonata Park. <i>Not expected</i> (Nesting). <i>High</i> (Foraging). Within species range. Located less than 1 mile from species occurrence. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. Wintering range only.</p> <p>Hwy 246 Corridor. <i>Not expected</i> (Nesting). <i>High</i> (Foraging). Within species range. Located less than 1 mile from species occurrence. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. Wintering range only.</p> <p>Refugio Canyon. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 7.4 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. Wintering range only.</p>

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Swainson's hawk <i>Buteo swainsoni</i>	None	ST	None	Found in Great Basin grassland, riparian forest, riparian woodland, valley and foothill grassland.	<i>Moderate</i> . There is 1 known CNDDDB occurrence of this species within the County, which was recorded in 1896.	<p>Guadalupe. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Outside of the known nesting range for the species. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. Outside of known nesting range.</p> <p>Casmalia. <i>Not expected</i> (Nesting). <i>Low</i> (Foraging). Outside of the known nesting range for the species. Suitable habitat may be present. Outside of known nesting range.</p> <p>East of Santa Maria. <i>Not expected</i> (Nesting). <i>Low</i> (Foraging). Outside of the known nesting range for the species. Suitable habitat may be present. Outside of known nesting range.</p> <p>Cuyama and New Cuyama. <i>Not expected</i> (Nesting). <i>High</i> (Foraging). Outside of the known nesting range for the species. Observation within the priority area documented in eBird. Suitable habitat may be present. Outside of known nesting range.</p> <p>Los Alamos. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Outside of the known nesting range for the species. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. Outside of known nesting range.</p> <p>Los Olivos. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Outside of the known nesting range for the species. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. Outside of known nesting range.</p> <p>Jonata Park. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Outside of the known nesting range for the species. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. Outside of known nesting range.</p> <p>Hwy 246 Corridor. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Outside of the known nesting range for the species. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. Outside of known nesting range.</p> <p>Refugio Canyon. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Outside of the known nesting range for the species. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. Outside of known nesting range.</p>
rhinoceros auklet <i>Cerorhinca monocerata</i>	None	None	WL	Found on off-shore islands and rocks along the California coast.	<i>High</i> . There are 3 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 1992.	<p>Refugio Canyon. <i>Low</i>. Within species range. Located approximately 1.3 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Limited suitable habitat may be present.</p> <p>All other priority areas. <i>Not expected</i>. Outside of species range.</p>

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western snowy plover <i>Charadrius nivosus nivosus</i>	FT	None	SS C	Found in Great Basin standing waters, sand shore, wetland. Sandy beaches, salt pond levees & shores of large alkali lakes.	<i>High.</i> There are 12 known CNDDB occurrences of this species within the County, the most recent of which was recorded in 2014. Critical habitat for this species also occurs within the northwestern portion of the County.	Refugio Canyon. <i>High.</i> Within species range. Located approximately 1.3 miles from species occurrence. Observation within the priority area documented in eBird. Limited suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of species range.
yellow rail <i>Coturnicops noveboracensis</i>	None	None	SS C, BC C	Known to occur within freshwater marshlands, meadows, and seeps.	<i>Low.</i> There is 1 known CNDDB occurrence of this species in the County, which was recorded in 1996.	All priority areas. <i>Not expected.</i> Outside of species range.
white-tailed kite <i>Elanus leucurus</i>	None	None	FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	<i>High.</i> There are 4 known CNDDB occurrences of this species within the County, the most recent of which was recorded in 2009.	Guadalupe. <i>High</i> (Nesting). <i>High</i> (Foraging). Observation within the priority area documented in eBird. Limited suitable habitat may be present. Casmalia. <i>Moderate</i> (Nesting) <i>Moderate</i> (Foraging). Within species range. Located more than 30 miles from species occurrence. Observation within the priority area documented in eBird. Limited woodland present. East of Santa Maria. <i>Moderate</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located more than 30 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Limited woodland present. Cuyama and New Cuyama. <i>Moderate</i> (Nesting). <i>Moderate</i> (Foraging). Suitable habitat may be present. Los Alamos. <i>Moderate</i> (Nesting). <i>Moderate</i> (Foraging). Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. Los Olivos. <i>Moderate</i> (Nesting). <i>Moderate</i> (Foraging). Observation within the priority area documented in eBird. Suitable habitat may be present. Jonata Park. <i>Moderate</i> (Nesting). <i>Moderate</i> (Foraging). Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. Hwy 246 Corridor. <i>Moderate</i> (Nesting). <i>Moderate</i> (Foraging). Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. Refugio Canyon. <i>High</i> (Nesting). <i>High</i> (Foraging). Observation within the priority area documented in eBird. Suitable habitat may be present.

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southwestern willow flycatcher <i>Empidonax traillii extimus</i>	FE	SE	None	For nesting, species requires dense riparian habitats (cottonwood/willow and tamarisk vegetation) with microclimatic conditions dictated by the local surroundings.	<i>High.</i> There are 5 known CNDDDB occurrences of this species within the County. Of these, the most recent occurrence was recorded in 1995. Critical habitat for this species also occurs within the western portion of the County.	<p>Guadalupe. <i>Low.</i> Located approximately 29.5 miles from species occurrence. Suitable habitat may be present.</p> <p>Casmalia. <i>Low.</i> Located approximately 22.3 miles from species occurrence. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>Low.</i> Located approximately 15.3 miles from species occurrence. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Low.</i> Located approximately 23.8 miles from species occurrence. Suitable habitat may be present.</p> <p>Los Alamos. <i>Low.</i> Located approximately 8.1 miles from species occurrence. Suitable habitat may be present.</p> <p>Los Olivos. <i>Low.</i> Located approximately 6.4 miles from species occurrence. Suitable habitat may be present.</p> <p>Jonata Park. <i>Low.</i> Located approximately 1.4 miles from species occurrence. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>High.</i> Occurrence within priority area. Suitable habitat may be present. Critical habitat for this species also occurs within this Priority Area.</p> <p>Refugio Canyon. <i>Low.</i> Located approximately 8.9 miles from species occurrence. Suitable habitat may be present.</p>

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California horned lark <i>Eremophila alpestris actia</i>	Non e	None	WL	Found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above the treeline. During the winter, this species typically flocks in desert lowlands.	<i>High.</i> There are 2 known CNDDB occurrences of this species within the County, the most recent of which was recorded in 2015.	<p>Guadalupe. <i>Moderate.</i> Within species range. Located approximately 18.2 miles from species occurrence. Observation within the priority area documented in eBird. Limited suitable habitat may be present.</p> <p>Casmalia. <i>Low.</i> Within species range. Located approximately 13.1 miles from species occurrence. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>High.</i> Within species range. Located less than 1 mile from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Moderate.</i> Within species range. Located approximately 32.6 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Los Alamos. <i>High.</i> Within species range. Located approximately 5.1 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present.</p> <p>Los Olivos. <i>Moderate.</i> Within species range. Located approximately 13.3 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Jonata Park. <i>Moderate.</i> Within species range. Located approximately 12.8 miles from species occurrence. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>Moderate.</i> Within species range. Located approximately 11.3 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>Moderate.</i> Within species range. Located approximately 9.9 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p>

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American peregrine falcon <i>Falco peregrinus anatum</i>	Delisted	Delisted	None	Known to occur near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	<i>High.</i> There are 5 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2016.	<p>Guadalupe. <i>Moderate</i> (Nesting). <i>Moderate</i> (Foraging). Observation within the priority area documented in eBird. Limited suitable habitat may be present.</p> <p>Casmalia. <i>Low</i> (Nesting). <i>Low</i> (Foraging). Limited suitable habitat may be present.</p> <p>East of Santa Maria. <i>Low</i> (Nesting). <i>Low</i> (Foraging). Limited suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Low</i> (Nesting). <i>Low</i> (Foraging). Limited suitable habitat may be present.</p> <p>Los Alamos. <i>Low</i> (Nesting). <i>Low</i> (Foraging). Limited suitable habitat may be present.</p> <p>Los Olivos. <i>Low</i> (Nesting). <i>Low</i> (Foraging) Limited suitable habitat may be present.</p> <p>Jonata Park. <i>Low</i> (Nesting). <i>Low</i> (Foraging) Limited suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>Low</i> (Nesting). <i>Low</i> (Foraging). Limited suitable habitat may be present.</p> <p>Refugio Canyon. <i>Low</i> (Nesting). <i>Low</i> (Foraging). Limited suitable habitat may be present.</p>
tufted puffin <i>Fratercula cirrhata</i>	None	None	SSC, BCC	Open-ocean bird, nests along the coast on islands, islets, or (rarely) mainland cliffs.	<i>High.</i> There is 1 known CNDDDB occurrence of this species within the County, which was recorded in 1992.	All priority areas. <i>Not expected.</i> Outside of species range.
California condor <i>Gymnogyps californianus</i>	FE	SE	FP	Scavenge for carrion in habitats ranging from Pacific beaches to mountain forests and meadows. They nest in caves on cliff faces in mountains up to 6,000 feet in elevation.	<i>Moderate.</i> There are 3 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 1983. Critical habitat for this species also occurs within the eastern portion of the County.	<p>East of Santa Maria. <i>Not expected</i> (Nesting). <i>Low</i> (Foraging). Within species range. Located approximately 24.2 miles from species occurrence.</p> <p>Cuyama and New Cuyama. <i>Not expected</i> (Nesting). <i>Moderate to high.</i> (Foraging). Within species range. Located approximately 7.0 miles from known CNDDDB occurrence.</p> <p>Los Olivos. <i>Not expected</i> (Nesting). <i>Moderate.</i> (Foraging). Within species range. Located approximately 14.9 miles from species occurrence.</p> <p>All other priority areas. <i>Not expected</i> (Nesting) <i>Not expected</i> (Foraging). <i>Not expected</i> (Foraging). Outside of species range.</p>

Common Name Scientific Name	Federal ESA Status	State ESA Status	CDFW	Preferred Habitat	Potential to Occur within Santa Barbara County	Potential to Occur within 9 Priority Areas
bald eagle <i>Haliaeetus leucocephalus</i>	Delisted	SE	FP	Typically nest in forested areas adjacent to large bodies of water, staying away from heavily developed areas when possible. For perching, bald eagles prefer tall, mature coniferous or deciduous trees that afford a wide view of the surroundings.	<i>High.</i> There is 1 known CNDDDB occurrence of this species within the County, which was recorded in 1996.	East of Santa Maria. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 26.3 miles from species occurrence. Observation within the priority area documented in eBird. Limited suitable forested habitat may be present. The priority area is 5.35 miles southeast of Twitchell Reservoir where this species is also documented in eBird. Refugio Canyon. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Located approximately 10.4 miles from species occurrence. Limited suitable forest habitat may be present. All other priority areas. <i>Not expected</i> (Nesting). <i>Moderate</i> (Foraging). Within species range. Extremely limited suitable forested habitat may be present.
ashy storm-petrel <i>Hydrobates homochroa</i>	None	None	SSC, BCC	Protected deepwater coastal communities. Colonial nester on off-shore islands. Usually nests on driest part of islands. Forages over open ocean.	<i>High.</i> There are 12 known CNDDDB occurrence of this species within the County, the most recent of which was recorded in 2006.	All priority areas. <i>Not expected.</i> Outside of species range.
black storm-petrel <i>Hydrobates melania</i>	BCC	None	SSC, BCC	Protected deepwater coastal communities. Colonial nester on Santa Barbara Island. Forages in open ocean, in channel waters, and also far off-shore.	<i>High.</i> There are 12 known CNDDDB occurrence of this species within the County, the most recent of which was recorded in 2006.	All priority areas. <i>Not expected.</i> Outside of species range.
California black rail <i>Laterallus jamaicensis coturniculus</i>	None	ST	FP	Known to occur in brackish and freshwater marshes. Inhabits riparian thickets of willow and other brushy tangles near watercourses. Needs water depths of about 1 inch that does not fluctuate during the year and dense vegetation for nesting habitat.	<i>High.</i> There is 1 known CNDDDB occurrence of this species within the County, which was recorded in 1917.	All priority areas. <i>Not expected.</i> Outside of species range.

Common Name Scientific Name	Federal ESA Status	State ESA Status	CDFW	Preferred Habitat	Potential to Occur within Santa Barbara County	Potential to Occur within 9 Priority Areas
Channel Island song sparrow <i>Melospiza melodia graminea</i>	None	None	SSC, BCC	Chaparral, coastal scrub, riparian scrub. Currently known from San Miguel and Santa Rosa Islands; believed extirpated from Santa Barbara and San Clemente Islands. Need moderately dense scrubby vegetation for nesting, a water source, and exposed ground for foraging.	<i>Moderate.</i> There are 3 known CNDDDB occurrences of this species within the County. Of these, the most recent observation was recorded in 2006.	All priority areas. <i>Not expected.</i> Outside of species range.
double-crested cormorant <i>Nannopterum auritum</i>	None	None	WL	Colonial waterbirds that seek aquatic bodies large enough to support their fish diet, but can nest in clusters or trees near smaller lagoons or ponds.	<i>High.</i> There are 6 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2006.	<p>Guadalupe. <i>Moderate.</i> Within species range. Located greater than 20 miles from species occurrence. Observation within the priority area documented in eBird. Limited suitable habitat near water bodies.</p> <p>Casmalia. <i>Low.</i> Within species range. Located greater than 20 miles from species occurrence. Limited suitable habitat near water bodies.</p> <p>East of Santa Maria. <i>Low.</i> Within species range. Located greater than 20 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Limited suitable habitat near water bodies.</p> <p>Cuyama and New Cuyama. <i>Moderate.</i> Observation within the priority area documented in eBird. Limited suitable habitat near water bodies.</p> <p>Los Alamos. <i>Low.</i> Within species range. Located greater than 20 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Limited suitable habitat near water bodies.</p> <p>Los Olivos. <i>Not expected.</i> Within species range. No suitable habitat present.</p> <p>Jonata Park. <i>Low.</i> Within species range. Located greater than 20 miles from species occurrence. Limited suitable habitat near water bodies.</p> <p>Hwy 246 Corridor. <i>Low.</i> Within species range. Located greater than 20 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Limited suitable habitat near water bodies.</p> <p>Refugio Canyon. <i>High.</i> Within species range. Located approximately 12.8 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.</p>

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Belding's savannah sparrow <i>Passerculus sandwichensis beldingi</i>	None	SE	BCC	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in Salicornia on and about margins of tidal flats.	<i>High.</i> There are 4 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2016.	Refugio Canyon. <i>Not expected.</i> Outside of known range. All other priority areas. <i>Not expected.</i> Suitable habitat not present.
California brown pelican <i>Pelecanus occidentalis californicus</i>	Delisted	Delisted	None	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	<i>High.</i> There are 11 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2007.	All priority areas. <i>Not expected.</i> Outside of known range.
purple martin <i>Progne subis</i>	None	None	SSC	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine.	<i>High.</i> There are 3 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 1938.	East of Santa Maria. <i>Low.</i> Within species range. Located approximately 18.0 miles from species range. Suitable habitat may be present. Cuyama and New Cuyama. <i>Moderate.</i> Observation within the priority area documented in eBird. Limited suitable habitat may be present. Refugio Canyon. <i>High.</i> Within species range. Located approximately 2.1 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Suitable habitat not present.
light-footed Ridgway's rail <i>Rallus obsoletus levipes</i>	FE	SE	FP	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation. Requires dense growth of either pickleweed or cordgrass for nesting or escape cover.	<i>High.</i> There are 2 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2012.	All priority areas. <i>Not expected.</i> Outside of species range.

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bank swallow <i>Riparia riparia</i>	None	ST	None	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	<i>High.</i> There are 3 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 1927.	Cuyama and New Cuyama. <i>Moderate.</i> Outside of species range. Observation within the priority area documented in eBird. Limited suitable habitat may be present. Hwy 246 Corridor. <i>Moderate.</i> Outside of species range. Observation within the vicinity of the priority area documented in eBird. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of known range.
yellow warbler <i>Setophaga petechia</i>	None	None	SSC	Found in riparian forest, scrub, and woodland. Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada.	<i>High.</i> There is 1 known CNDDDB occurrence of this species within the County, which was recorded in 1999.	Guadalupe. <i>Moderate.</i> Within species range. Observation within the priority area documented in eBird. No suitable habitat present. Casmalia. <i>Moderate.</i> Within species range. Observation within the priority area documented in eBird. Extremely limited scrub habitat may be present. East of Santa Maria. <i>High.</i> Within species range. Occurrence within priority area. Suitable habitat may be present. Cuyama and New Cuyama. <i>High.</i> Within species range. Observation within the priority area documented in eBird. Limited suitable habitat may be present. Los Alamos. <i>Moderate.</i> Within species range. Located approximately 6.7 miles from species occurrence. Observation within the vicinity of the priority area documented in eBird. Limited suitable habitat may be present. Los Olivos. <i>Moderate.</i> Within species range. Located approximately 14.2 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present. Jonata Park. <i>Moderate.</i> Within species range. Located approximately 14.1 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Within species range. Located approximately 12.6 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present. Refugio Canyon. <i>High.</i> Within species range. Located approximately 24.7 miles from species occurrence. Observation within the priority area documented in eBird. Suitable habitat may be present.

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California least tern <i>Sternula antillarum browni</i>	FE	SE	FP	Known to occur in alkali playas and coastal dune and beach habitats. Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	<i>High.</i> There are 6 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2011.	Guadalupe. <i>Low.</i> Within species range. Located approximately 3.0 miles from species occurrence. Dune habitat may be near priority area. Casmalia. <i>Low.</i> Within species range. Located approximately 5.5 miles from species occurrence. Dune habitat may be present in the vicinity. Refugio Canyon. <i>Moderate.</i> Within species range. Located approximately 10.0 miles from species occurrence. Observation within the priority area documented in eBird. Dune habitat may be present. All other priority areas. <i>Not expected.</i> Outside of species range.
Scripps's murrelet <i>Synthliboramphus scrippsi</i>	None	ST	BCC	Open ocean except during breeding season. Breeds on offshore islands in Southern California.	<i>High.</i> There are 8 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2002.	All priority areas. <i>Not expected.</i> Outside of species range.
least Bell's vireo <i>Vireo bellii pusillus</i>	FE	SE	None	Known to occur in riparian forest, scrub, and woodland habitats. Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms.	<i>High.</i> There are 8 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2016. Critical habitat for this species also occurs within the southeastern portion of the County.	Guadalupe. <i>Low.</i> Within species range. Limited suitable habitat may be present. Casmalia. <i>Low.</i> Within species range. Extremely limited scrub habitat may be present. East of Santa Maria. <i>Low.</i> Within species range. Suitable scrub habitat may be present. Cuyama and New Cuyama. <i>Not expected.</i> Within species range. Suitable habitat not present. Los Alamos. <i>Low.</i> Within species range. Limited suitable scrub habitat may be present. Los Olivos. <i>Low.</i> Within species range. Limited suitable habitat may be present. Jonata Park. <i>Low.</i> Within species range. Suitable habitat may be present. Hwy 246 Corridor. <i>Low.</i> Within species range. Suitable habitat may be present. Refugio Canyon. <i>Low.</i> Within species range. Located approximately 11.0 miles from species occurrence. Suitable habitat may be present.

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Mammals						
Nelson's (=San Joaquin) antelope squirrel <i>Ammospermophilus nelsoni</i>	None	ST	None	Chenopod scrub, western San Joaquin Valley from 200-1200 ft elev. On dry, sparsely vegetated loam soils.	<i>High.</i> There are 2 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 1975.	Cuyama and New Cuyama. <i>High.</i> Within species range. Suitable habitat not present within priority area; however, limited suitable habitat is present adjacent to priority area. Occurrence within priority area. All other priority areas. <i>Not expected.</i> Outside of species range.
pallid bat <i>Antrozous pallidus</i>	None	None	SSC	Chaparral, coastal scrub, desert wash, great basin grassland, great basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley and foothill grassland, deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	<i>High.</i> There are 19 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2017.	Guadalupe. <i>Low.</i> Within species range. Located approximately 10.1 miles from species occurrence. Limited suitable habitat may be present. Casmalia. <i>High.</i> Within species range. Located approximately 2.7 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>High.</i> Within species range. Located less than 1 mile from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Low.</i> Within species range. Located approximately 33.7 miles from species occurrence. Suitable habitat may be present. Los Alamos. <i>Moderate.</i> Within species range. Located approximately 10.3 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>Moderate.</i> Within species range. Located approximately 6.6 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>High.</i> Within species range. Located approximately 1.8 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Within species range. Located less than 1 mile from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>Moderate.</i> Within species range. Located approximately 10.4 miles from species occurrence. Suitable habitat may be present.
Guadalupe fur-seal <i>Arctocephalus townsendi</i>	FT	ST	FP	Marine intertidal & splash zone communities, protected deepwater coastal communities. Breeds on Isla de Guadalupe off of Mexico, occasionally found on San Miguel, San Nicolas, and San Clemente islands.	<i>High.</i> There is only 1 known CNDDDB occurrence of this species within the County, which was recorded in 1998.	All priority areas. <i>Not expected.</i> Outside of known range.

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Townsend's big-eared bat <i>Corynorhinus townsendii</i>	None	None	SSC	Broadleaved upland forest, chaparral, chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, lower montane coniferous forest, meadow and seep, Mojavean desert scrub, riparian forest, riparian woodland, Sonoran desert scrub, Sonoran thorn woodland, upper montane coniferous forest, valley and foothill grassland. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting.	<i>High.</i> There are 34 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2013.	Guadalupe. <i>High.</i> Within species range. Located approximately 6.9 miles from species occurrence. Suitable habitat may be present. Casmalia. <i>High.</i> Within species range. Located approximately 1.7 miles from species occurrence. Suitable habitat may be present. East of Santa Maria. <i>Moderate.</i> Within species range. Located approximately 9.7 miles from species occurrence. Observation within the priority area documented in iNaturalist. Suitable habitat may be present. Cuyama and New Cuyama. <i>Low.</i> Within species range. Located approximately 30.0 miles from species occurrence. Suitable habitat may be present. Los Alamos. <i>Moderate.</i> Within species range. Located approximately 7.4 miles from species occurrence. Suitable habitat may be present. Los Olivos. <i>High.</i> Within species range. Located approximately 3.1 miles from species occurrence. Suitable habitat may be present. Jonata Park. <i>High.</i> Within species range. Occurrence within priority area. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Within species range. Located approximately 2.5 miles from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>High.</i> Within species range. Located approximately 2.8 miles from species occurrence. Suitable habitat may be present.
giant kangaroo rat <i>Dipodomys ingens</i>	FE	SE	None	Annual grasslands on the western side of the San Joaquin Valley, marginal habitat in alkali scrub.	<i>High.</i> There are 4 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 1982.	Cuyama and New Cuyama. <i>High.</i> Within species range. Occurrence within priority area. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of species range.
Steller sea lion <i>Eumetopias jubatus</i>	Delisted	None	None	Marine intertidal & splash zone communities, protected deepwater coastal communities, rock shore. Breeds on Ano Nuevo, San Miguel and Farallon islands, Point St. George, and Sugarloaf. Hauls-out on islands and rocks.	<i>Low.</i> There are 7 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2015. All occurrences of this species are possibly extirpated.	All priority areas. <i>Not expected.</i> Outside of species range.

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western mastiff bat <i>Eumops perotis californicus</i>	None	None	SSC	Known to occur in habitat consisting of extensive open areas within dry desert washes, flood plains, chaparral, cismontane oak woodland, coastal scrub, open ponderosa pine forest, and grasslands. Roosts primarily in crevices in rock outcrops and buildings.	<i>High.</i> There are 5 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2008.	<p>Guadalupe. <i>Low.</i> Within species range. Located approximately 23.9 miles from species occurrence. Limited suitable habitat may be present.</p> <p>Casmalia. <i>Low.</i> Within species range. Located approximately 16.0 miles from species occurrence. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>Low.</i> Within species range. Located approximately 22.3 miles from species occurrence. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Low.</i> Within species range. Located approximately 27.8 miles from species occurrence. Suitable habitat may be present.</p> <p>Los Alamos. <i>Low.</i> Within species range. Located approximately 27.1 miles from species occurrence. Suitable habitat may be present.</p> <p>Los Olivos. <i>Low.</i> Within species range. Located approximately 17.3 miles from species occurrence. Suitable habitat may be present.</p> <p>Jonata Park. <i>Low.</i> Within species range. Located approximately 17.4 miles from species occurrence. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>High.</i> Within species range. Located approximately 6.3 miles from species occurrence. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>Low.</i> Within species range. Located approximately 13.9 miles from species occurrence. Suitable habitat may be present.</p>
western red bat <i>Lasiurus frantzii</i>	None	None	SSC	Prefers edges or habitat mosaics that have trees for roosting and open areas for foraging. Requires nearby water source. Roosting habitat includes forests and woodlands from sea level up through mixed conifer forests.	<i>High.</i> There are 24 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2017.	<p>East of Santa Maria. <i>Moderate.</i> Within species range. Located approximately 10.1 miles from species occurrence. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>Moderate.</i> Within species range. Located approximately 10.5 miles from species occurrence. Suitable habitat may be present.</p> <p>All other priority areas. <i>Not expected.</i> Forest and woodland habitat not present.</p>

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San Diego desert woodrat <i>Neotoma lepida intermedia</i>	None	None	SSC	Found in a variety of coastal scrub, desert scrub, chaparral, cactus, and rocky habitats. Nests primarily against rock outcroppings, boulders, cacti, or areas of dense undergrowth.	<i>High.</i> There are 7 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 1992.	Guadalupe. <i>Not expected.</i> No suitable habitat present. Casmalia. <i>Low.</i> Located approximately 10.8 miles from species occurrence. Extremely limited suitable scrub habitat may be present. East of Santa Maria. <i>Moderate.</i> Located approximately 12.0 miles from species occurrence. Suitable habitat may be present. Cuyama and New Cuyama. <i>Low.</i> Located approximately 32.2 miles from species occurrence. Extremely limited suitable habitat may be present. Los Alamos. <i>Moderate.</i> Located approximately 7.3 miles from species occurrence. Limited suitable habitat may be present. Los Olivos. <i>Low.</i> Located approximately 12.6 miles from species occurrence. Limited suitable habitat may be present. Jonata Park. <i>Low.</i> Located approximately 11.1 miles from species occurrence. Suitable habitat may be present. Hwy 246 Corridor. <i>High.</i> Located less than 1 mile from species occurrence. Suitable habitat may be present. Refugio Canyon. <i>High.</i> Located approximately 1 mile from species occurrence. Suitable habitat may be present.
big free-tailed bat <i>Nyctinomops macrotis</i>	None	None	SSC	Low-lying arid areas in Southern California within habitats such as desert shrub, woodlands, and evergreen forests. Need high cliffs or rugged, rocky outcrops or canyons for roosting sites.	<i>Low.</i> There is 1 known CNDDDB occurrence of this species within the County, the most recent of which was recorded in 1996.	All priority areas. <i>Not expected.</i> Outside of species range.
Tulare grasshopper mouse <i>Onychomys torridus tularensis</i>	None	None	SSC	Found primarily on sandy or gravelly soils in open and semi-open habitats. Found in the southern San Joaquin Valley, Carrizo Plain, Cuyama Valley, and nearby foothills of the Sierra Nevada and Tehachapi Mountains.	<i>High.</i> There are 3 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2015.	Cuyama and New Cuyama. <i>High.</i> Within species range. Suitable habitat may be present. Located less than 1 mile from species occurrence. All other priority areas. <i>Not expected.</i> Outside of species range.

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Channel Islands spotted skunk <i>Spilogale gracilis amphiala</i>	None	None	SSC	Only on Santa Cruz, Santa Rosa, and San Miguel islands.	<i>High.</i> There are 8 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2004.	All priority areas. <i>Not expected.</i> Outside of species range.
American badger <i>Taxidea taxus</i>	None	None	SSC	Found in a variety of habitats, including alkali marsh, desert wash, Great Basin scrub, marsh and swamp, meadow and seep, Mojavean desert scrub, riparian scrub, riparian woodland, valley and foothill grassland. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	<i>High.</i> There are 43 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 2016.	<p>Guadalupe. <i>Moderate.</i> Within species range. Located approximately 8.2 miles from species occurrence. Limited suitable habitat may be present.</p> <p>Casmalia. <i>High.</i> Within species range. Occurrence within priority area. Suitable habitat may be present.</p> <p>East of Santa Maria. <i>High.</i> Within species range. Located less than 1 mile from species occurrence. Suitable habitat may be present.</p> <p>Cuyama and New Cuyama. <i>Low.</i> Within species range. Located approximately 21.1 miles from species occurrence. Suitable habitat may be present.</p> <p>Los Alamos. <i>High.</i> Within species range. Occurrence within priority area. Suitable habitat may be present.</p> <p>Los Olivos. <i>High.</i> Within species range. Located less than 1 mile from species occurrence. Suitable habitat may be present.</p> <p>Jonata Park. <i>High.</i> Within species range. Occurrence within priority area. Suitable habitat may be present.</p> <p>Hwy 246 Corridor. <i>High.</i> Within species range. Occurrence within priority area. Suitable habitat may be present.</p> <p>Refugio Canyon. <i>High.</i> Within species range. Occurrence within priority area. Suitable habitat may be present.</p>
San Miguel Island fox <i>Urocyon littoralis littoralis</i>	Delisted	ST	None	Chaparral, cismontane woodland, coastal scrub. Found only on San Miguel Island.	<i>Moderate.</i> There is 1 known CNDDDB occurrence of this species within the County, the most recent of which was recorded in 2003.	All priority areas. <i>Not expected.</i> Outside of species range.

Common Name Scientific Name	Federal ESA Status	State ESA Status	CDFW	Preferred Habitat	Potential to Occur within Santa Barbara County	Potential to Occur within 9 Priority Areas
Santa Cruz Island fox <i>Urocyon littoralis santacruzae</i>	Delisted	ST	None	Chaparral, cismontane woodland, coastal scrub. Found only on Santa Cruz Island.	<i>Moderate.</i> There is 1 known CNDDDB occurrence of this species within the County, the most recent of which was recorded in 2003.	All priority areas. <i>Not expected.</i> Outside of species range.
Santa Rosa Island fox <i>Urocyon littoralis santarosae</i>	Delisted	ST	None	Chaparral, cismontane woodland, coastal scrub. Found only on Santa Rosa Island.	<i>Moderate.</i> There is 1 known CNDDDB occurrence of this species within the County, the most recent of which was recorded in 2003.	All priority areas. <i>Not expected.</i> Outside of species range.
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	FE	ST	None	Chenopod scrub, valley & foothill grassland. Annual grasslands or grassy open stages with scattered shrubby vegetation.	<i>High.</i> There are 13 known CNDDDB occurrences of this species within the County, the most recent of which was recorded in 1979.	Cuyama and New Cuyama. <i>High.</i> Within species range. Occurrence within priority area. Suitable habitat may be present. All other priority areas. <i>Not expected.</i> Outside of species range.

NOTES:

FE	Federally endangered
FT	Federally threatened
FPE	Federally proposed for listing as endangered
FPT	Federally proposed for listing as threatened
FC	Federal candidate
SE	State endangered
SCE	State candidate for listing as endangered
SCT	State candidate for listing as threatened
FP	California Department of Fish and Wildlife Fully Protected
SCC	California Department of Fish and Wildlife Species of Conservation Concern
WL	California Department of Fish and Wildlife Watch List
BCC	United States Fish and Wildlife Service Birds of Conservation Concern

SOURCE:

CDFW. 2024. California Natural Diversity Database (CNDDDB). RareFind, Version 5.0 (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. Available online at: <https://www.wildlife.ca.gov/Data/CNDDDB/Maps-and-Data>. Accessed July 3, 2024

Appendix D
**Confidential Cultural Report (on
file at SBCAG offices)**
Non-confidential Appendices

USGS Project Locational Information

USGS PROJECT LOCATIONAL INFORMATION

Priority Area	TopoQuad Name	Township	Range	Section
Canyon Center	Santa Ynez	T05N	R30W	6
				7
				18
			R31W	12
				13
				24
	Tajiguas	T04N	R31W	1
		T05N	R31W	25
			36	
Canyon East	Santa Ynez	T05N	R30W	19
	Tajiguas	T04N	R30W	6
		T05N	R30W	30
				31
Canyon West	Santa Ynez	T05N	R31W	11
				14
				23
	Tajiguas	T04N	R31W	2
		T05N	R31W	26
				35
Casmalia	Casmalia	T09N	R35W	13
				23
				24
				25
				26
	Guadalupe	T09N	R34W	6
				7
			R35W	12
Center	Los Alamos	T07N	R33W	15
				22
				23
				24
				25
				26
				27

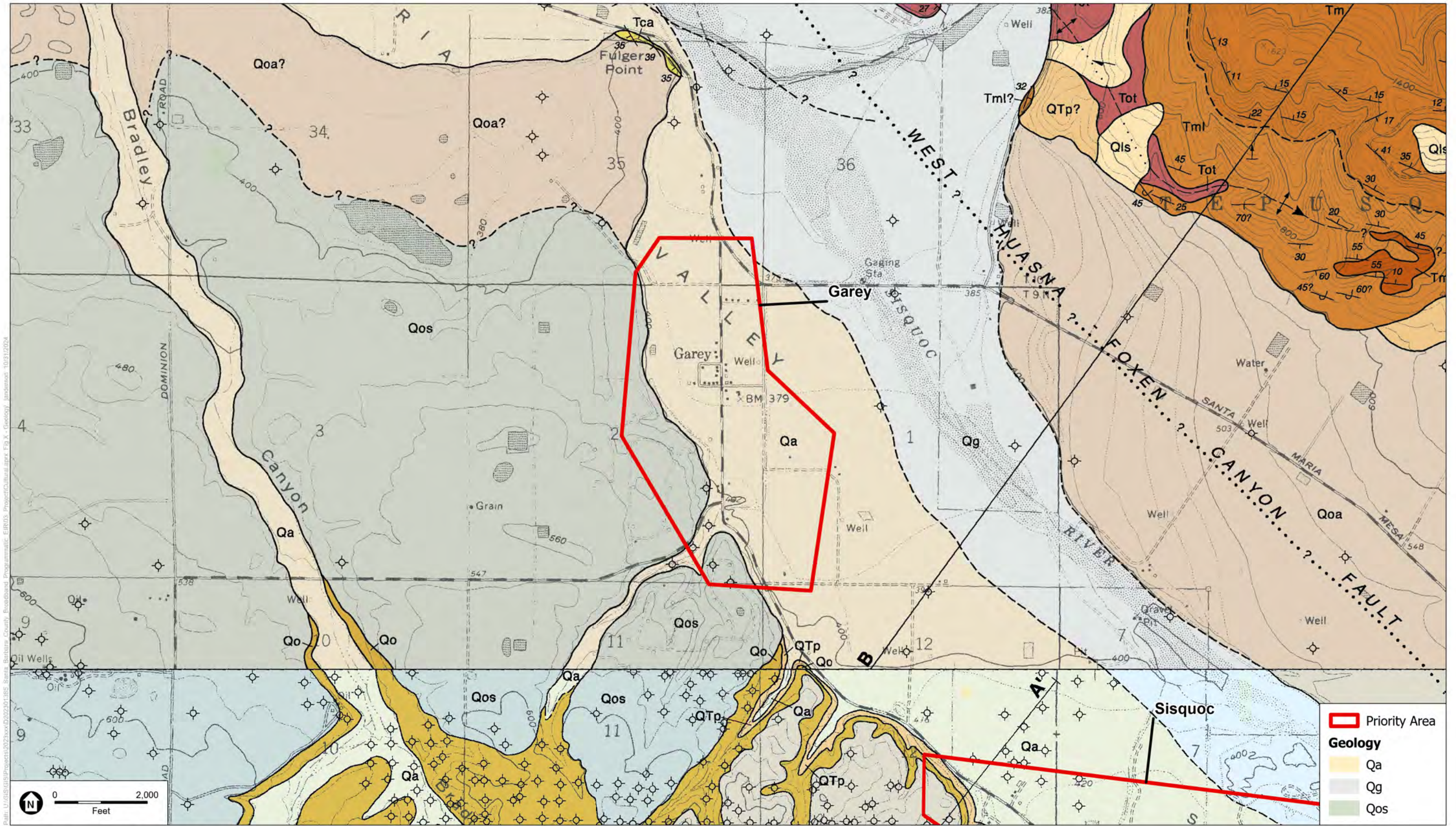
Priority Area	TopoQuad Name	Township	Range	Section	
Center-East	Los Alamos	T06N	R32W	4	
				5	
				6	
				29	
				30	
				31	
	Santa Rosa Hills	T06N	R32W	7	
				8	
				9	
				R33W	11
					12
					R33W
2					
36					
Cuyama and New Cuyama	Cuyama	T10N	R26W	24	
	New Cuyama	T10N	R26W	7	
				15	
				16	
				17	
				18	
				19	
				20	
				21	
				22	
				23	
				R27W	12
			13		
East	Solvang	T06N	R32W	10	
				11	
	Zaca Creek	T06N	R32W	2	
				3	
Garey	Twitchell Dam	T09N	R33W	1	
				2	
				11	
				12	
		T10N	R33W	35	

Priority Area	TopoQuad Name	Township	Range	Section				
Guadalupe	Guadalupe	T10N	R35W	3				
				4				
				8				
				9				
				10				
				16				
Jonata Park W 101	Zaca Creek	T06N	R31W	6				
			R32W	1				
		T07N	R31W	30				
				31				
			R32W	25				
				26				
				27				
				34				
				35				
				36				
			Los Alamos	Los Alamos	T08N	R32W	32	
				Sisquoc	T08N	R32W	19	
20								
21								
28								
29								
30								
Los Olivos E 154	Los Olivos	T07N					R30W	6
								7
								18
			19					
			30					
			R31W	12				
				13				
				14				
				23				
				24				
				25				
				26				
				Zaca Creek	T07N	R31W	15	
				22				

Priority Area	TopoQuad Name	Township	Range	Section
Promises Ranch	Lompoc	T07N	R33W	7
				18
			R34W	13
	Los Alamos	T07N	R33W	8
				17
				20
				21
				28
				29
	River Park	Lompoc	T07N	R33W
30				
R34W				23
				24
				25
				26
				35
				36
				Sisquoc
Twitchell Dam	T09N		7	
Tepusquet Road	Sisquoc	T09N	R32W	16
				17
				20
				21
	Tepusquet Canyon	T09N	R32W	3
				10
		T10N	R32W	10
				11
				13
				14
				15
				22
				23
				24
				26
				27
				34
				35
	Twitchell Dam	T09N	R32W	4
				8
9				
T10N		R32W	33	

Geologic Sensitivity List and Geological Maps

Symbol	Formation	Age	Paleo Potential
Qa	Alluvium	Holocene	Low
Qls	Landslide deposits	Holocene	Low
Qg	Gravels	Holocene	Low
Qo	Older alluvium	Pleistocene	High
QTp	Paso Robles Formation	Pleistocene	High
Tca	Careaga Sandstone	Pliocene	High
Tf	Foxen Claystone	Early Pliocene	High
Tsq	Sisquoc Formation	Miocene	High
Tn	Monterey Formation	Miocene	High
Ttb	Tranquillon Volcanic Fomation	Miocene	None
Tr	Rincon Formation	Miocene	High
Tvq	Vaqueros Formation	Oligocene	High
Ta	Alegria Formation	Oligocene	High
Tg	Gaviota Formation	Oligocene	High
Tsa	Sacate Formation	Late Eocene	High
Ke	Espada Formation	Late Jurassic-Middle Cretaceous	Low
db	diabase	Cretaceous?	None

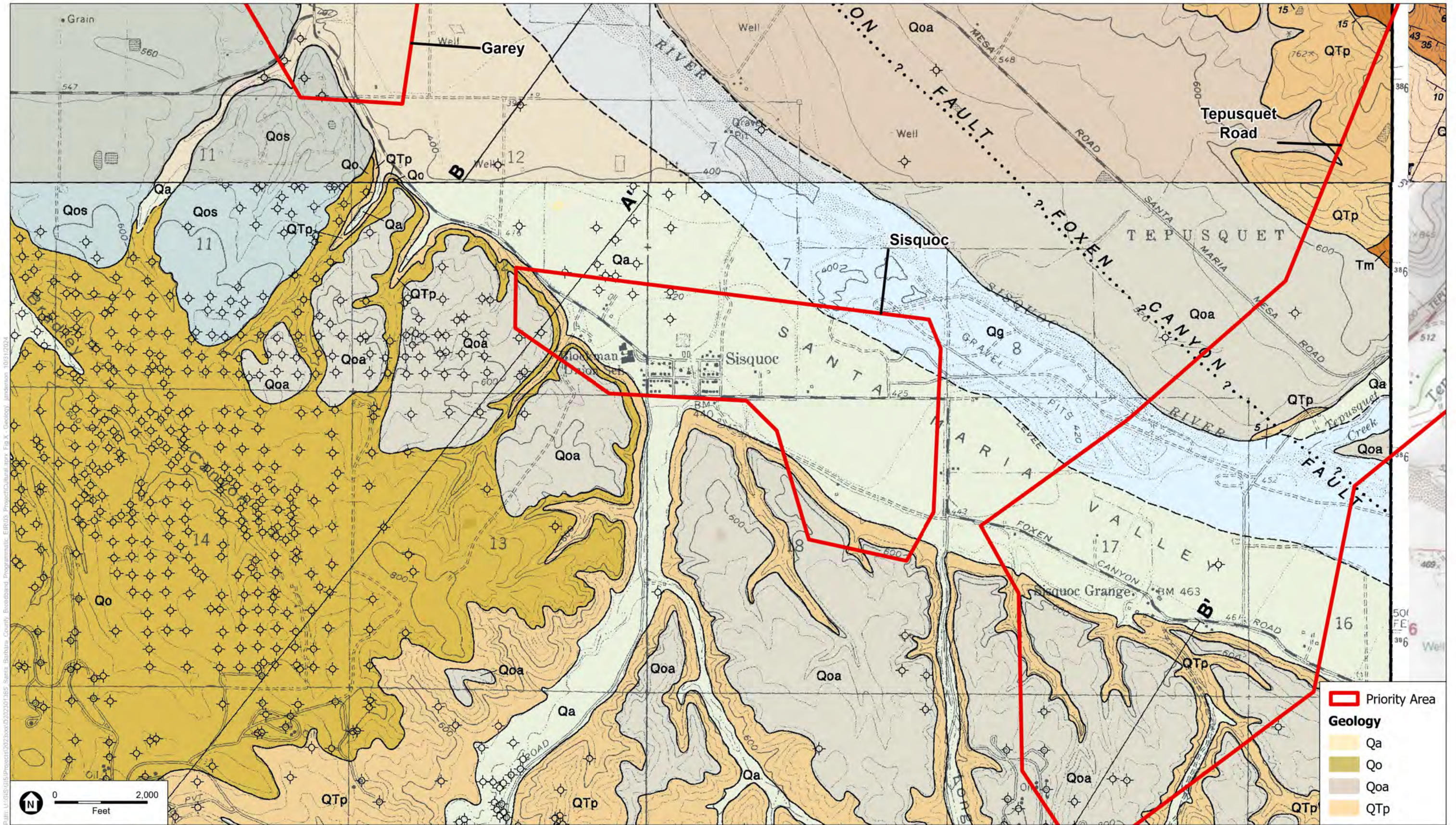


SOURCE: USGS Topographic Series (Twitchell Dam); ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure X-1
 Geology
 Priority Area: Garey



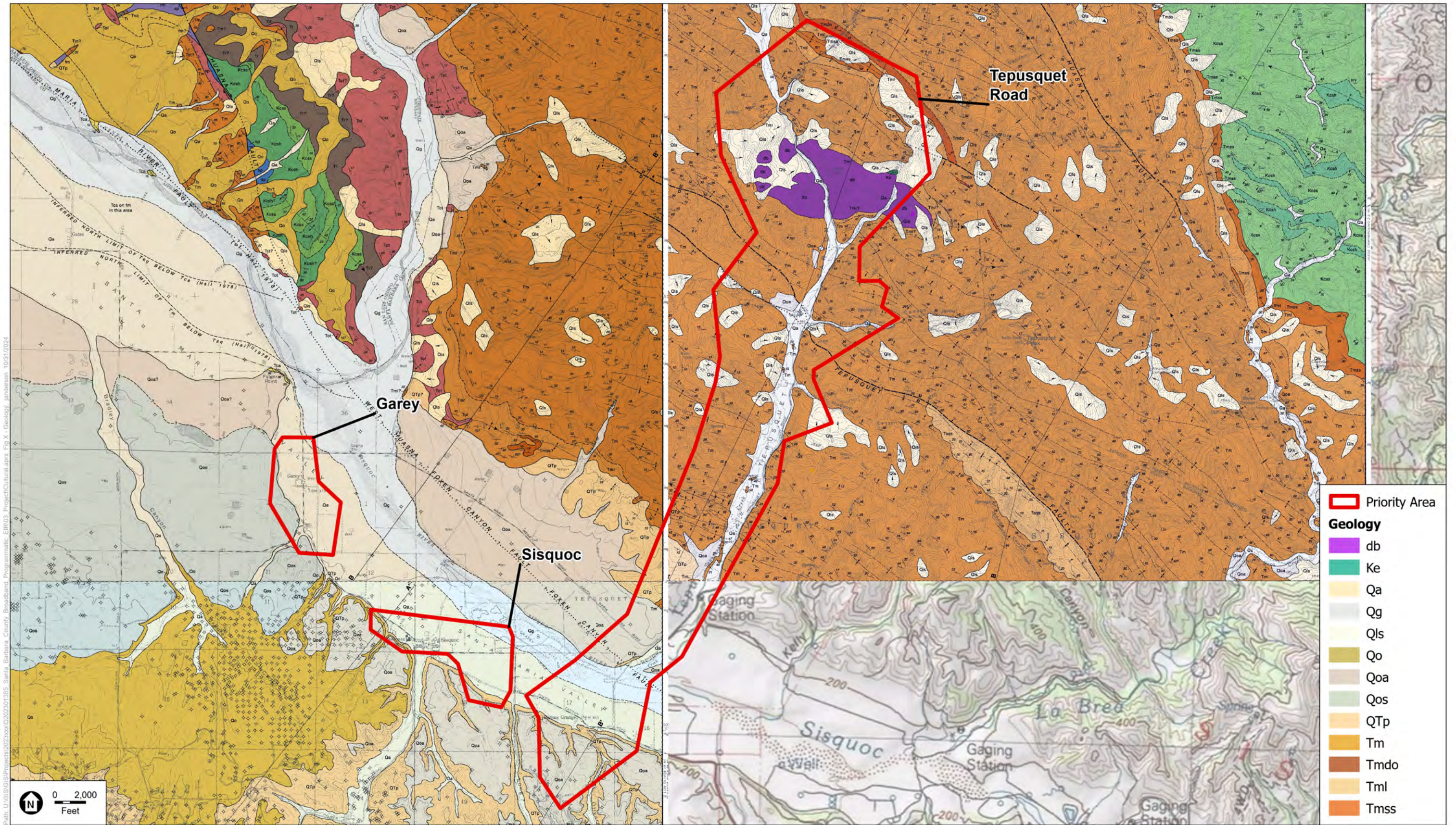


SOURCE: USGS Topographic Series (Sisquoc); ESA, 2024

Santa Barbara County Last-Mile Broadband Program

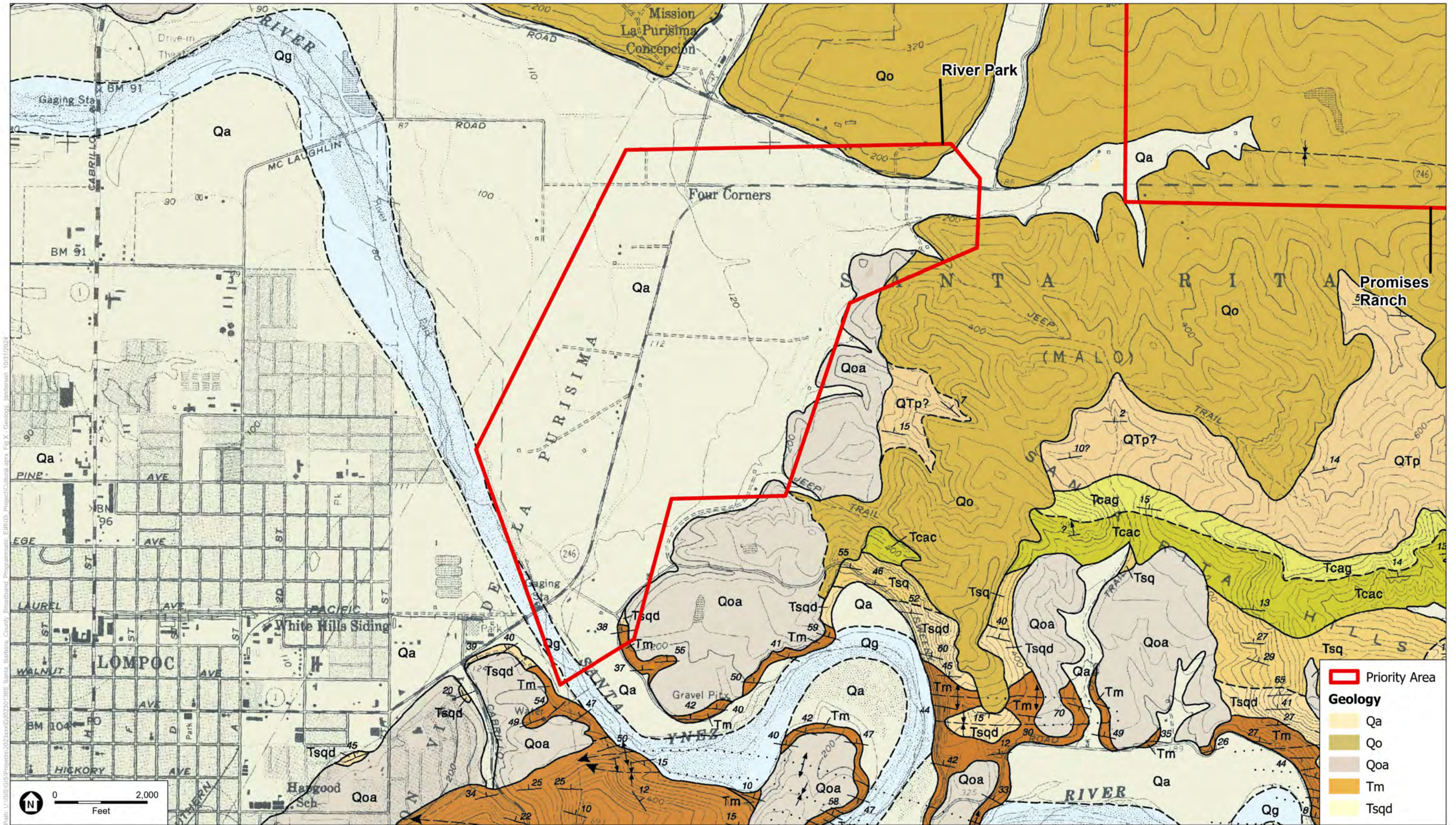
Figure X-2
Geology
Priority Area: Sisquoc





SOURCE: USGS Topographic Series (Sisquoc, Foxen Canyon and Tepusquet Canyon); ESA, 2024

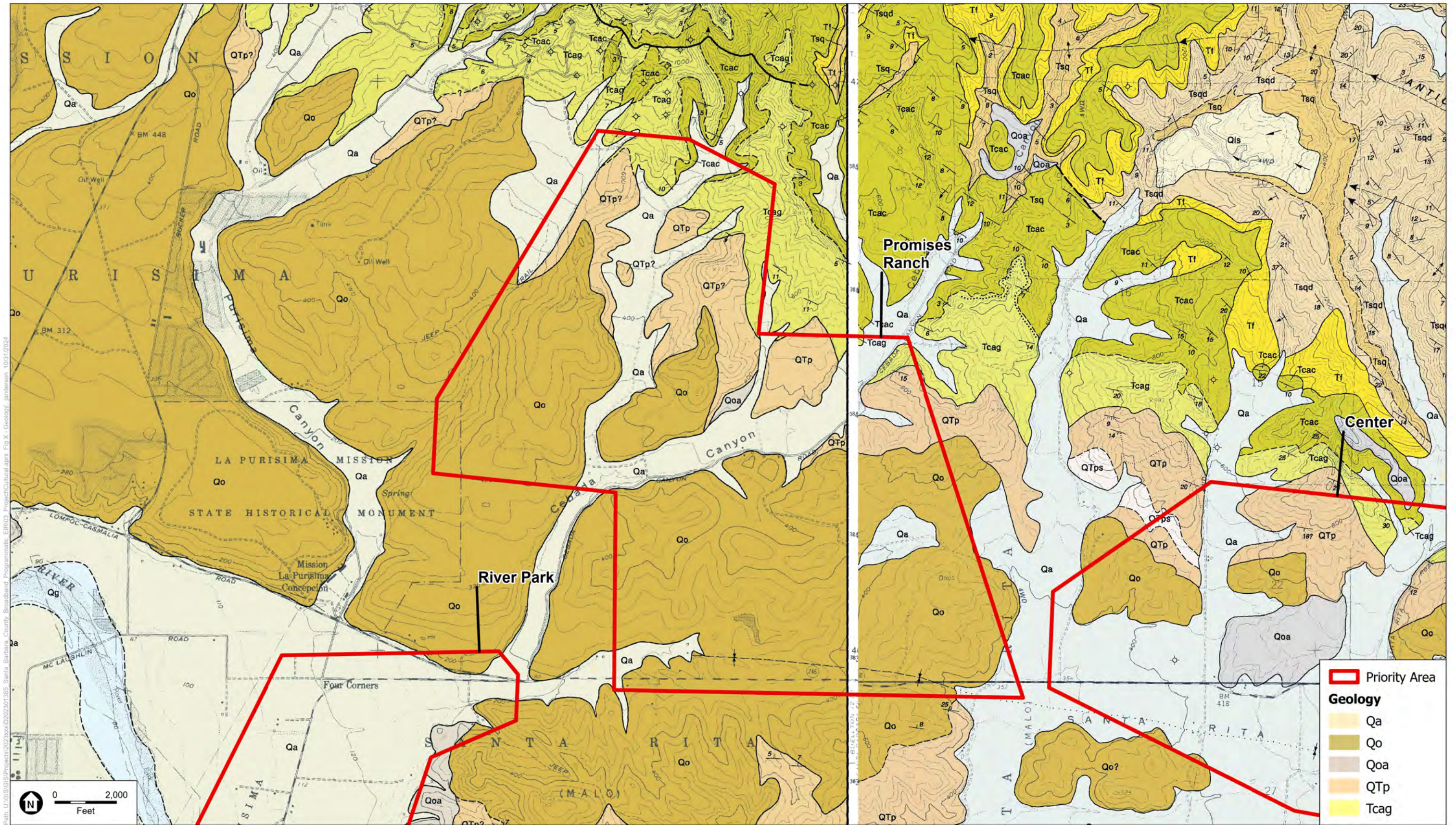
Santa Barbara County Last-Mile Broadband Program



SOURCE: USGS Topographic Series (Lompoc); ESA, 2024

Santa Barbara County Last-Mile Broadband Program

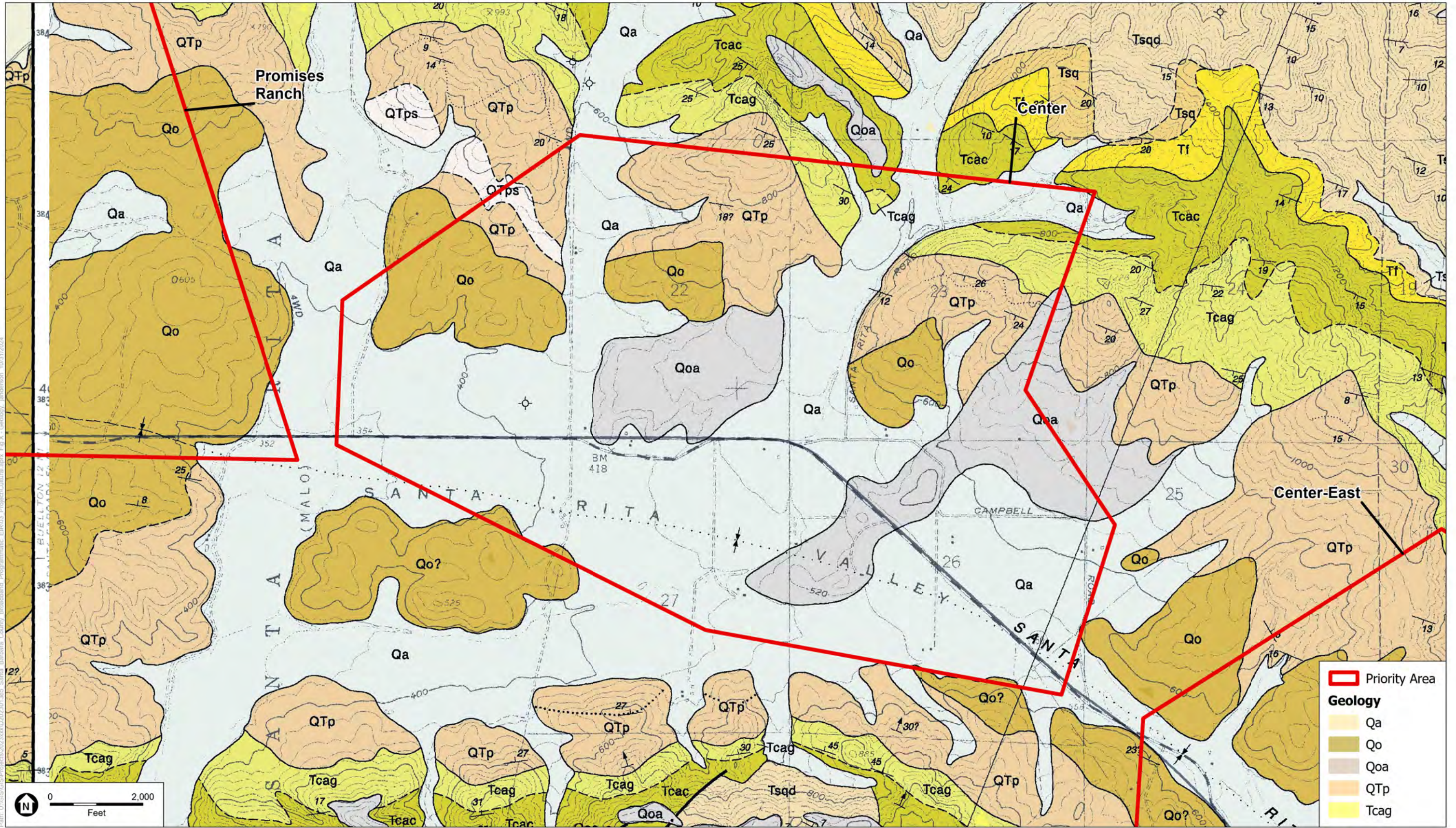
Figure X-4
 Geology
 Priority Area: River Park



SOURCE: USGS Topographic Series (Lompoc and Los Alamos); ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure X-5
Geology
Priority Area: Promises Ranch

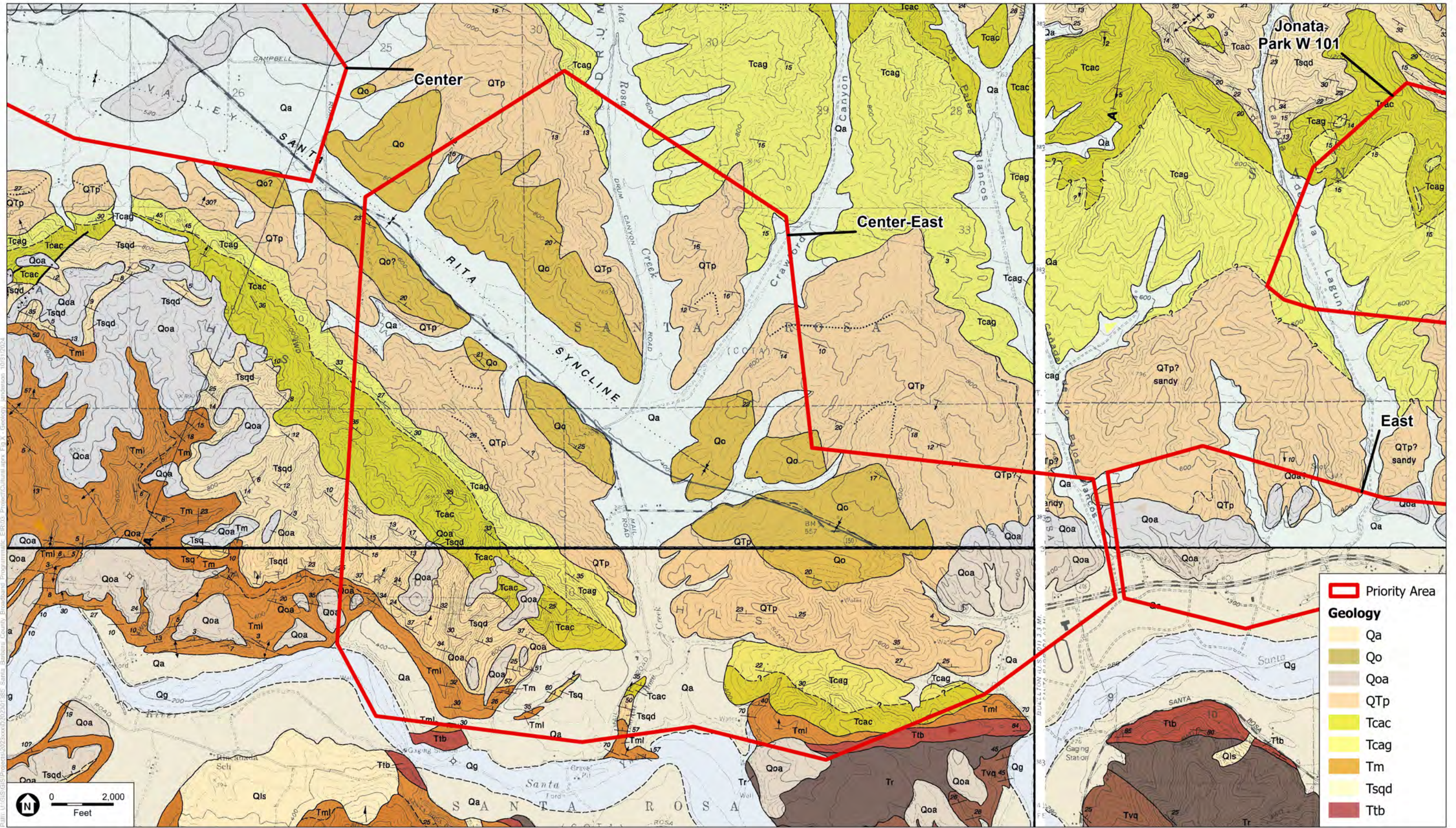


SOURCE: USGS Topographic Series (Los Alamos); ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure X-6
Geology
Priority Area: **Center**

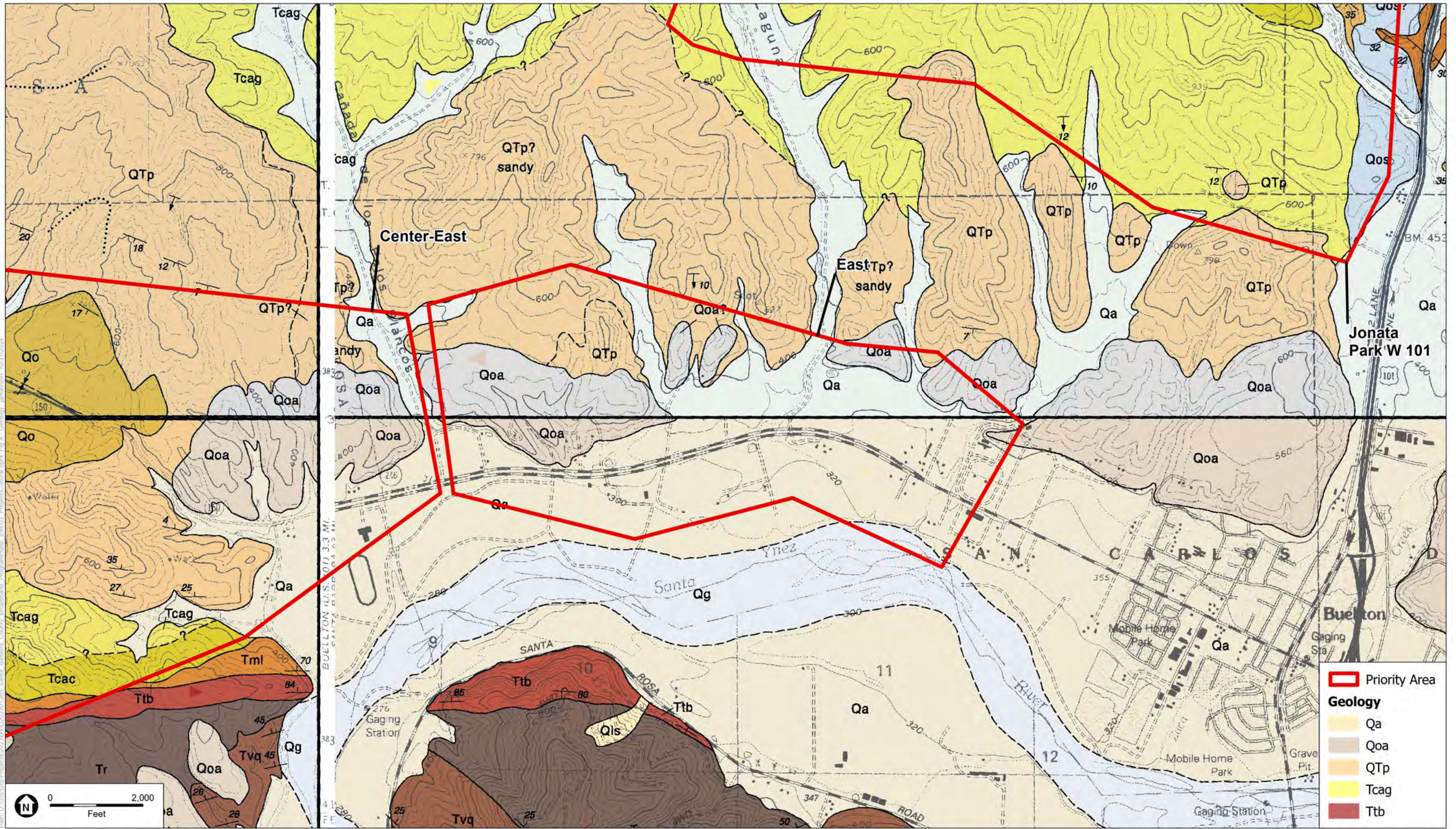




SOURCE: USGS Topographic Series (Los Alamos, Santa Rosa Hills, Solvang and Zaca Creek); ESA, 2024

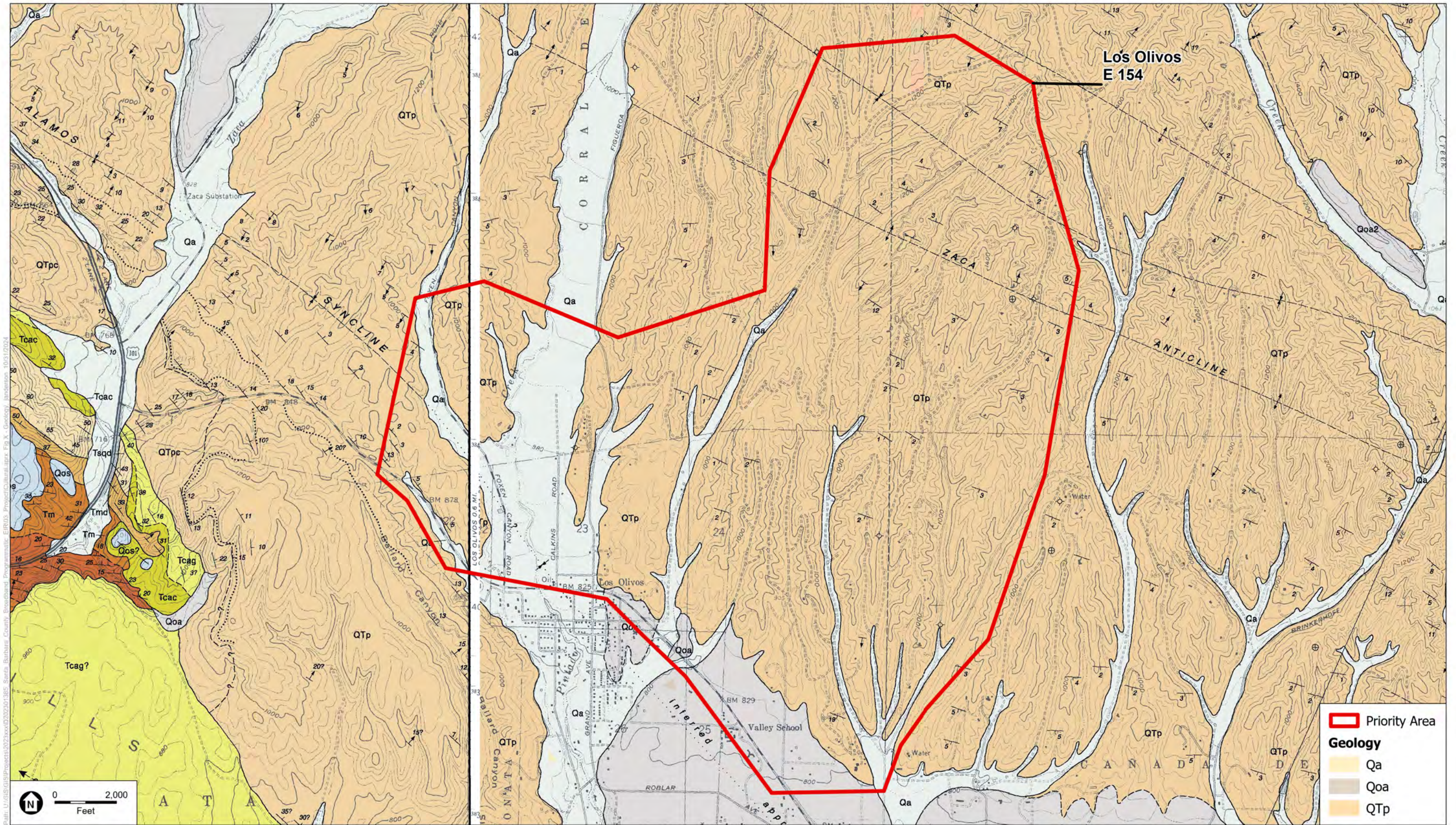
Santa Barbara County Last-Mile Broadband Program

Figure X-7
Geology
Priority Area: **Center-East**



Santa Barbara County Last-Mile Broadband Program

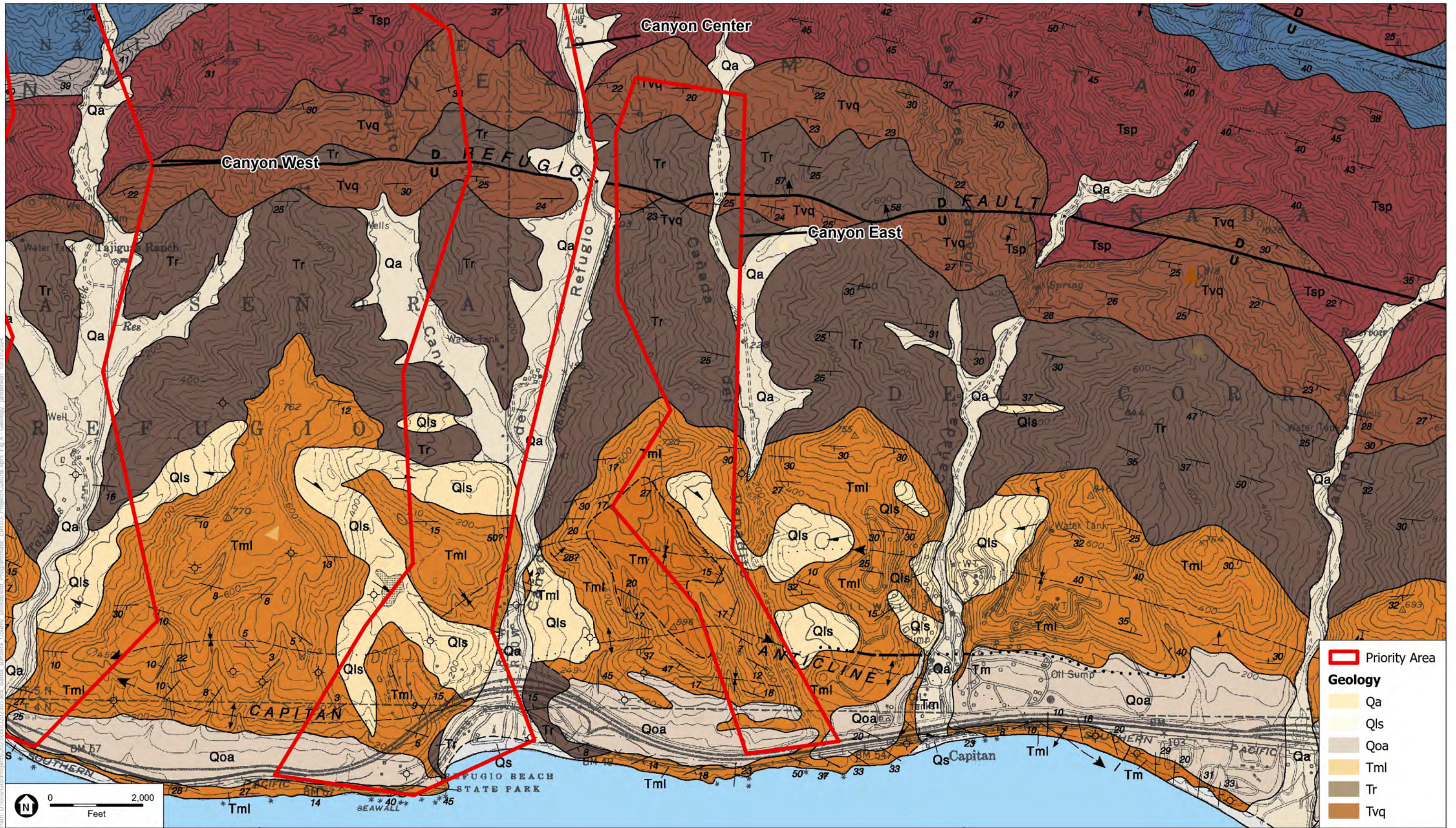
Figure X-8
Geology
Priority Area: East



SOURCE: USGS Topographic Series (Los Olivos and Zaca Creek); ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure X-10
 Geology
 Priority Area: Los Olivos E 154

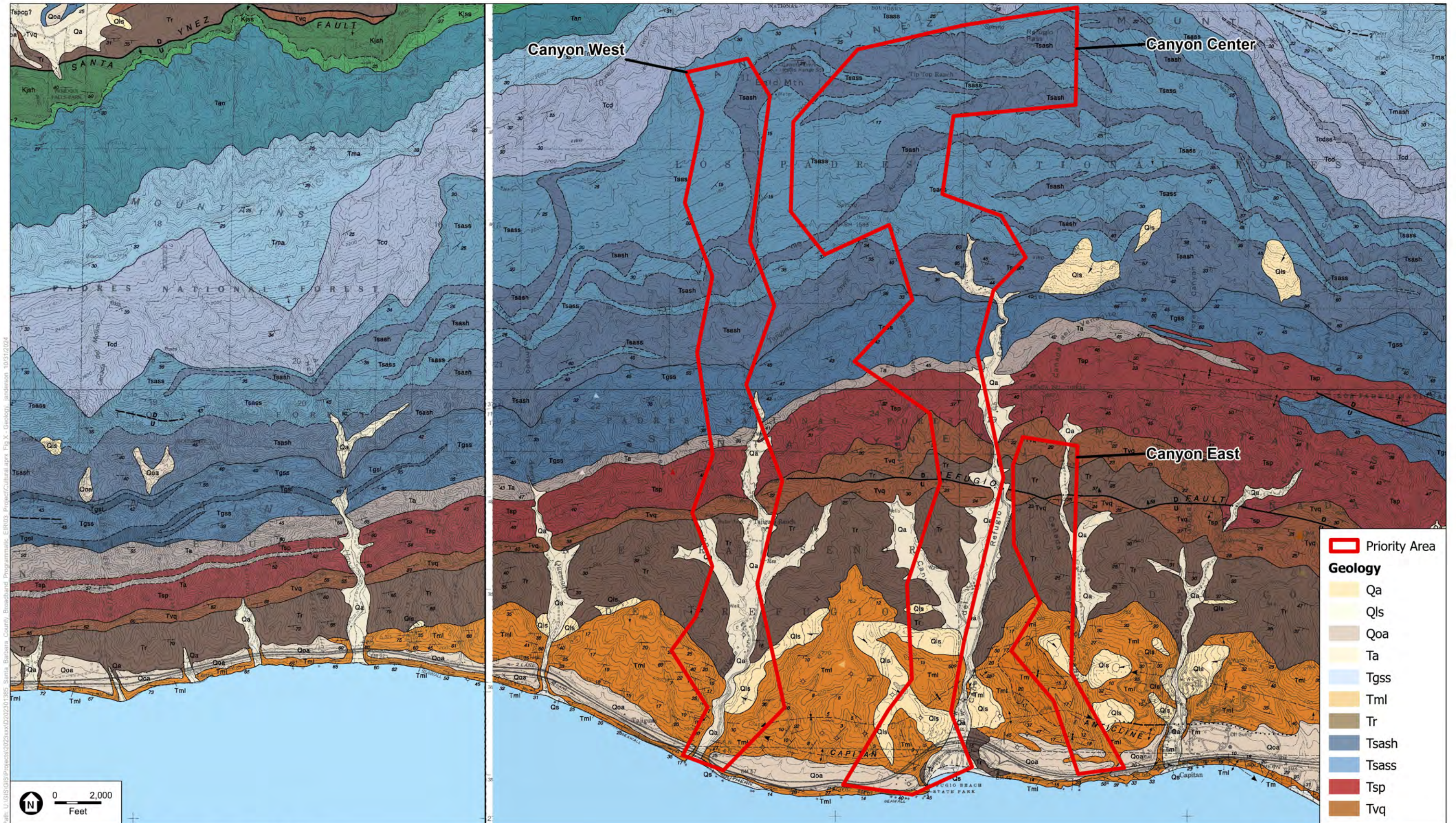


SOURCE: USGS Topographic Series (Tajiguas); ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure X-11
 Geology
 Priority Area: Canyon East

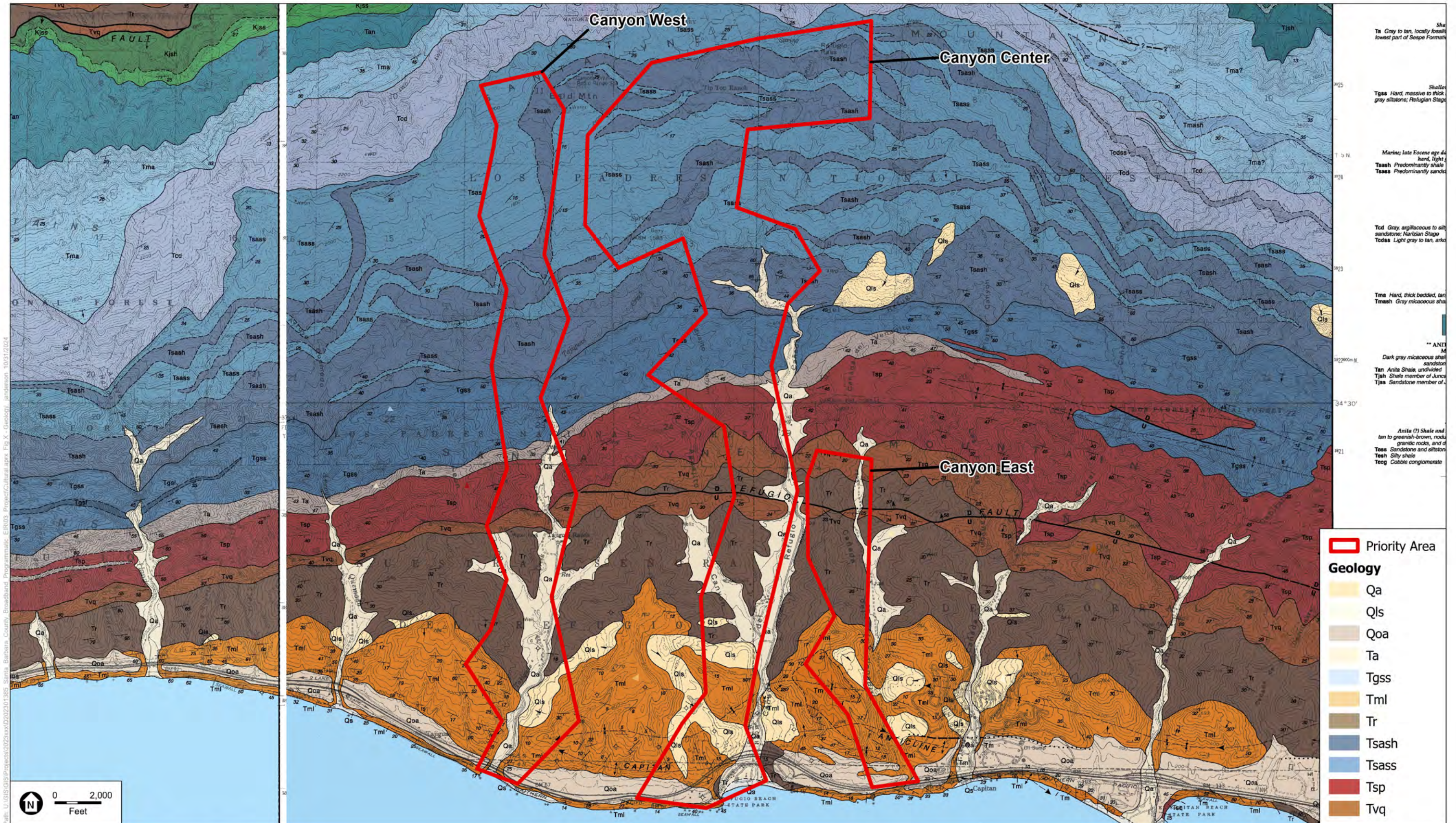




SOURCE: USGS Topographic Series (Tajiguas and Santa Ynez); ESA, 2024

Santa Barbara County Last-Mile Broadband Program

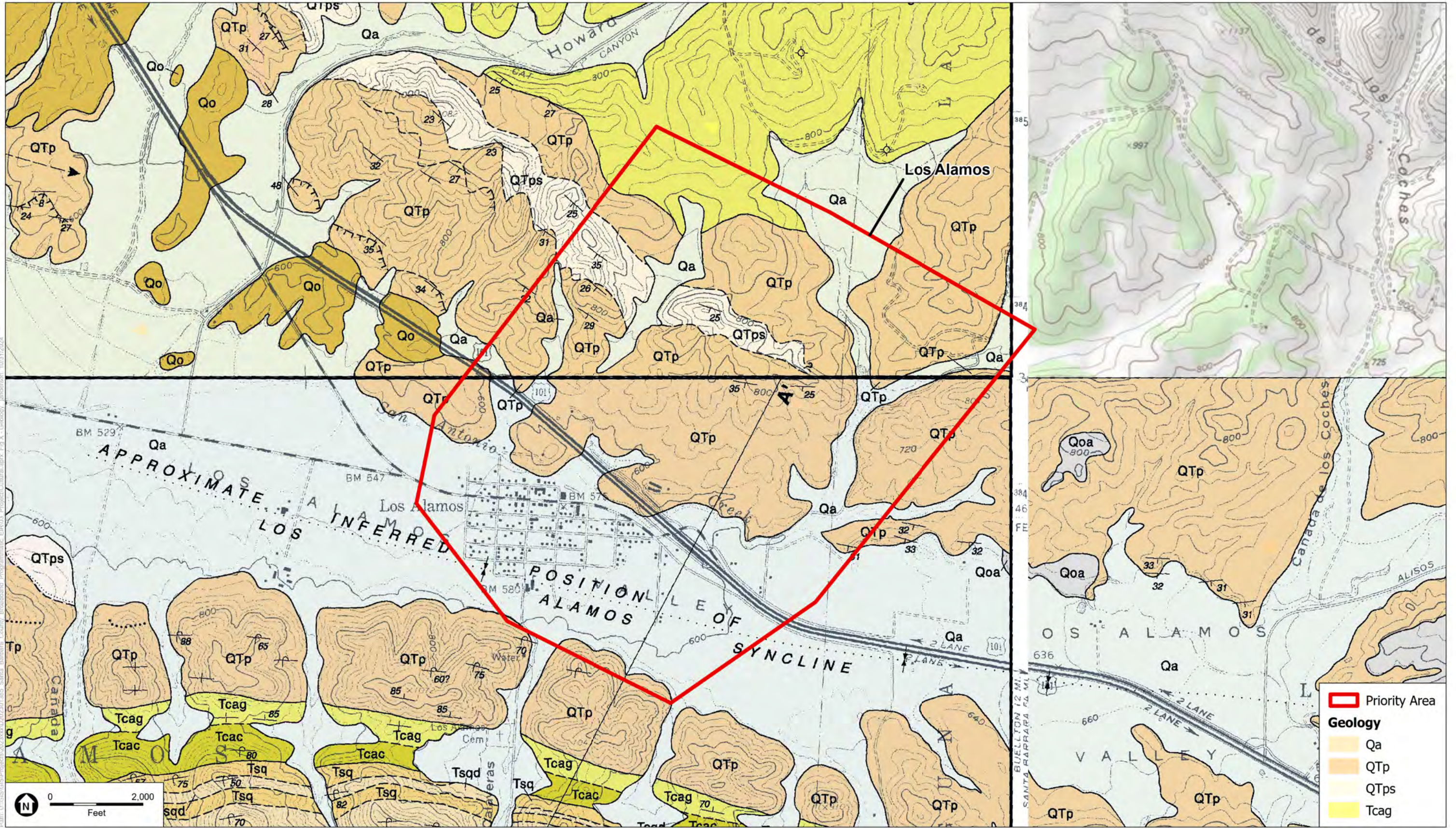
Figure X-12
 Geology
 Priority Area: Canyon West



SOURCE: USGS Topographic Series (Tajiguas and Santa Ynez); ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure X-13
 Geology
 Priority Area: **Canyon Center**

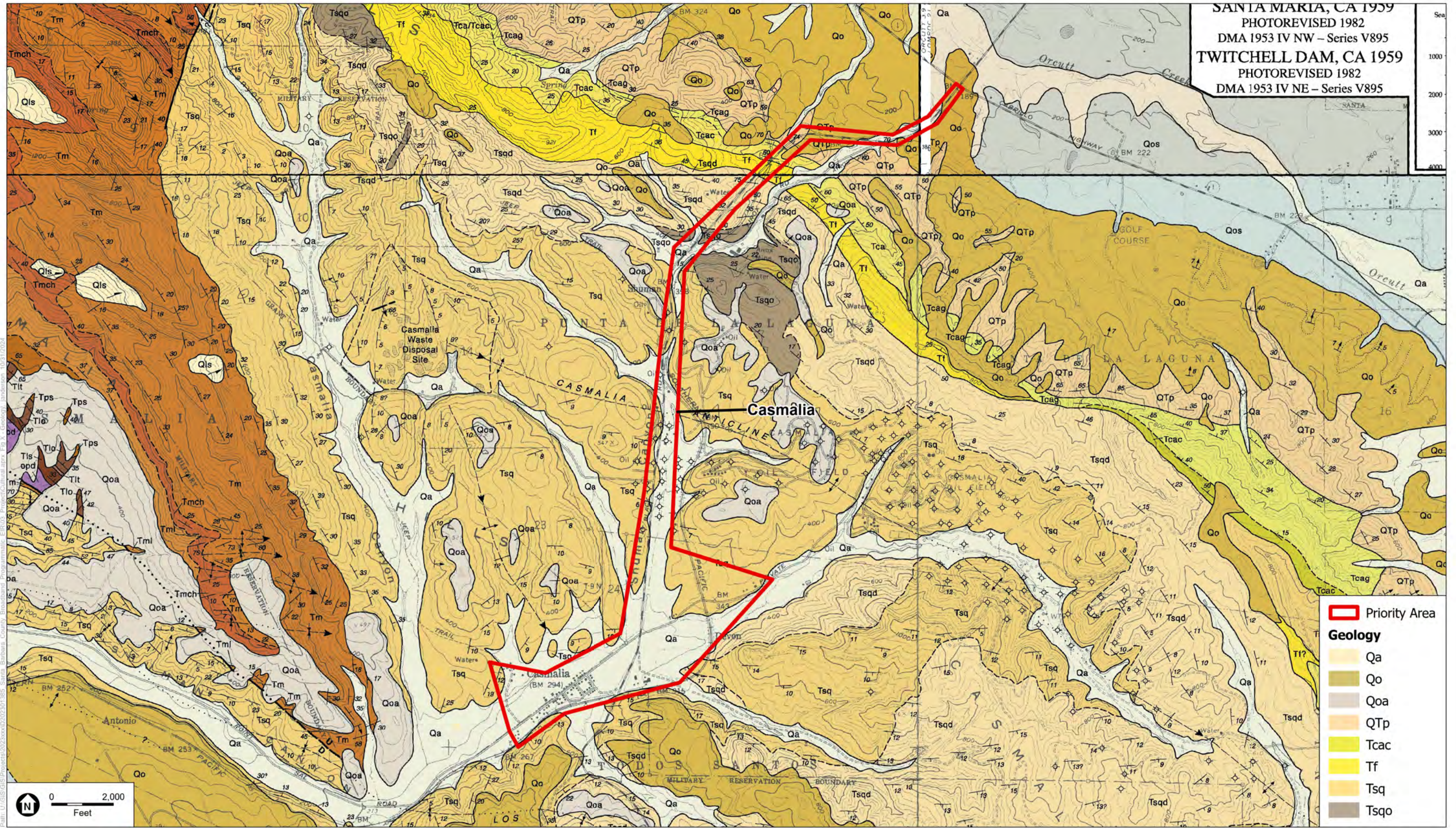


SOURCE: USGS Topographic Series (Sisquoc, Los Alamos and Foxen Canyon); ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure X-14
 Geology
 Priority Area: Los Alamos

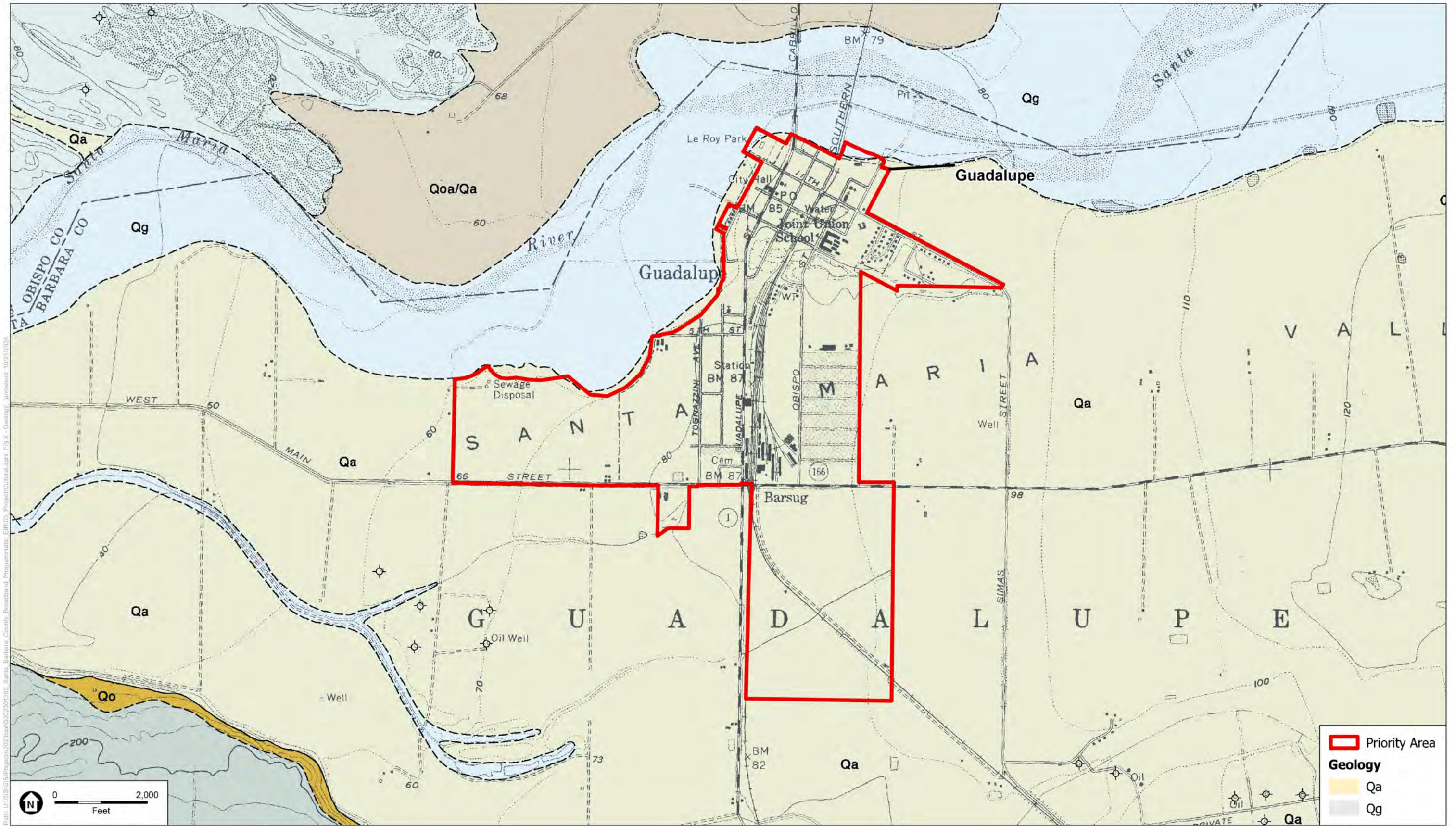




Santa Barbara County Last-Mile Broadband Program

Figure X-15
 Geology
 Priority Area: **Casmalia**





SOURCE: USGS Topographic Series (Guadalupe); ESA, 2024

Santa Barbara County Last-Mile Broadband Program

Figure X-16
 Geology
 Priority Area: **Guadalupe**

NAHC Sacred Lands File Search

NATIVE AMERICAN HERITAGE COMMISSION

August 16, 2024

James Clark
Environmental Science AssociatesVia Email to: jclark@esassoc.com

Re: Santa Barbara County Last-Mile Broadband PEIR (D202301385.1) Project, Santa Barbara County

To Whom It May Concern:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the tribes on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. Please contact all of those listed; if they cannot supply information, they may recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Cody.Campagne@nahc.ca.gov.

Sincerely,


Cody Campagne
Cultural Resources Analyst

Attachment

CHAIRPERSON
Reginald Pagaling
ChumashVICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki,
NomlakiSECRETARY
Sara Dutschke
MiwokPARLIAMENTARIAN
Wayne Nelson
LuiseñoCOMMISSIONER
Isaac Bojorquez
Ohlone-CostanoanCOMMISSIONER
Stanley Rodriguez
KumeyaayCOMMISSIONER
Laurena Bolden
SerranoCOMMISSIONER
Reid Milanovich
CahuillaCOMMISSIONER
Bennae Calac
Pauma-Yuima Band of
Luiseño IndiansEXECUTIVE SECRETARY
Raymond C.
Hitchcock
Miwok, NisenanNAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

Native American Heritage Commission
Native American Contact List
Santa Barbara County
8/16/2024

County	Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation	Counties	Last Updated
Santa Barbara	Barbareno Band of Chumash Indians	N	Florence Fishburn, Chairperson	PO Box 6687 Ventura, CA, 93005	(805) 701-1046		aflorence@spiritinthetribal.net	Chumash	Santa Barbara	6/26/2023
	Barbareno Band of Chumash Indians	N	Barbara Lopez, Cultural Resource Chair	4764 Ashdale Street Santa Barbara, CA, 93110	(805) 689-9528		chumashangels@aol.com	Chumash	Santa Barbara	6/26/2023
	Barbareno/Ventureño Band of Mission Indians	N	Cultural Resource Committee,	P.O. Box 364 Ojai, CA, 93024	(805) 746-6685		CR@vbmj.com	Chumash	Kern, Los Angeles, San Luis Obispo, Santa Barbara, Ventura	6/19/2023
	Chumash Council of Bakersfield	N	Julio Quair, Chairperson	729 Texas Street Bakersfield, CA, 93307	(661) 322-0121		chumashtribe@sbcglobal.net	Chumash	Kern, Los Angeles, San Luis Obispo, Santa Barbara, Ventura	
	Coastal Band of the Chumash Nation	N	Gabe Frausto, Chairman	P.O. Box 40653 Santa Barbara, CA, 93140	(805) 568-8053		fraustogabriel2@gmail.com	Chumash	Kern, Los Angeles, San Luis Obispo, Santa Barbara, Ventura	8/29/2023
	Northern Chumash Tribal Council	N	Violet Walker, Chairperson	P.O. Box 6533 Los Osos, CA, 93412	(760) 549-3532		violetsgwalker@gmail.com	Chumash	Kern, Los Angeles, San Luis Obispo, Santa Barbara, Ventura	6/5/2023
	Santa Ynez Band of Chumash Indians	F	Sam Cohen, Government & Legal Affairs Director	100 Via Juana Road Santa Ynez, CA, 93460			scohen@chumash.gov	Chumash	Kern, Los Angeles, San Luis Obispo, Santa Barbara, Ventura	7/6/2023
	Santa Ynez Band of Chumash Indians	F	Crystal Mendoza, Elders' Council Administrative Assistant	100 Via Juana Road Santa Ynez, CA, 93460	(805) 325-5537		cmendoza@chumash.gov	Chumash	Kern, Los Angeles, San Luis Obispo, Santa Barbara, Ventura	2/27/2024
	Santa Ynez Band of Chumash Indians	F	Wendy Treter, Cultural Resources Archaeologist	100 Via Juana Road Santa Ynez, CA, 93460	(805) 325-8630		weteter@chumash.gov	Chumash	Kern, Los Angeles, San Luis Obispo, Santa Barbara, Ventura	7/6/2023
	Santa Ynez Band of Chumash Indians	F	Nakia Zavalla, Tribal Historic Preservation Officer	100 Via Juana Road Santa Ynez, CA, 93460			nzavalla@chumash.gov	Chumash	Kern, Los Angeles, San Luis Obispo, Santa Barbara, Ventura	7/6/2023
	Xolon-Salinan Tribe	N	Karen White, Chairperson	P.O. Box 7045 Spreckels, CA, 93962	(831) 455-1012		xolon.salinan.heritage@gmail.com	Salinan	Fresno, Kern, Kings, Monterey, San Benito, San Luis Obispo, Santa Barbara	4/3/2023
	Xolon-Salinan Tribe	N	Penny Hurt, Cultural Preservation Administrator	P.O. Box 7045 Spreckels, CA, 93962	(805) 453-3675		phurt6700@gmail.com	Salinan	Fresno, Kern, Kings, Monterey, San Benito, San Luis Obispo, Santa Barbara	4/3/2023
	Yak tityu tityu yak tihini - Northern Chumash Tribe	N	Mona Tucker, Chairperson	660 Camino Del Rey Arroyo Grande, CA, 93420	(805) 748-2121		olivas.mona@gmail.com	Chumash	Kern, San Luis Obispo, Santa Barbara	5/30/2023

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Santa Barbara County Last-Mile Broadband PEIR (D202301385.1) Project, Santa Barbara County.

Record: PR03-2024-004220
Report Type: List of Tribes
Counties: Santa Barbara
NAHC Group: All

Appendix E

Energy Calculations and Modeling



E.1-1 Assumptions

Santa Barbara County Last-Mile Broadband Program

defaults are in blue

updated

9/5/2024

PROJECT CHARACTERISTICS

Location	Santa Barbara County
Electricity Demand Forecast Zone	6
Land Use Setting	Suburban
Start of Construction	3/1/2025
Operational Year	2027
Utility Company	SCE
CO2 intensity	default

LAND USE

Land Use	CalEEMod Land Use Subtype	Unit Amt	Size Metric	Lot Ac	SF	Predominant Soil Type	Description
Linear	User Defined Linear	72	miles	87.273	3801600	Sand Gravel	Underground Fiber Line
Other Non-Asphalt Surface	Other Non-Asphalt Surface	8.64	1000 sf	0.19835	8640		Concrete pad for prefab buildings

Notes:

- *For modeling purposes, it is assumed one prefab storage building per mile
- *Per Project Description, a total of 57 miles of conduit will be installed for the first 4 Priority Areas, out of the 9 total Priority Areas. The modeled quantities are based on the construction of 5 Priority Areas, which would likely be constructed simultaneously.
- *The assumed maximum width of ground disturbance would be 10 feet

CONSTRUCTION

Construction Phasing

Construction Type	Construction Phase	Start Date	End Date	Days/week	Work Days per Phase
Linear Construction	Linear, Grubbing & Land Clearing	3/1/2025	4/30/2025	5	43
	Drilling	5/1/2025	11/18/2025	5	144
	Trenching and Installation	11/19/2025	12/25/2026	5	288
Land Use Construction	Site Preparation	12/26/2026	1/15/2027	5	15
	Paving	1/16/2027	2/28/2027	5	30
Total Days					520

Notes:

- *It is assumed that for 1 mile of underground conduit, 1 drill rig is estimated to take approximately 10 days and 1 trencher would take an estimated 18 to 20 days (approximately 30 days total).
- *Based off the 24 month construction timeframe for all Priority Areas, as described in Project Description
- *The total construction schedule represents the simultaneous construction of 5 Priority Areas

Offroad Equipment

Construction Phase	Equipment	Unit Amt	Hours/Day	HP	LF	Engine Tier	Notes
Linear, Grubbing & Land Clearing	Trenchers	10	10	default	default	default	Accounts for cable plow and spider plows
	Rubber Tired Dozer	5	10	default	default	default	
	Tractors/Loaders/Backhoes	5	10	default	default	default	
Drilling	Bore/Drill Rig	5	10	default	default	default	
	Tractors/Loaders/Backhoes	10	10	default	default	default	Accounts for tractors and backhoes
	Industrial/Concrete Saw	5	10	default	default	default	
	Trenchers	5	10	default	default	default	
	Excavator	5	10	default	default	default	
Trenching and Installation	Off-Highway Trucks	10	10	default	default	default	Accounts for Line truck and utility trucks
	Trencher	10	10	default	default	default	Accounts for cable plows and trenchers
	Excavators	5	10	default	default	default	
	Dumpers	5	10	default	default	default	
	Tractors/Loaders/Backhoes	5	10	default	default	default	
	Bore/Drill Rig	10	10	default	default	default	Accounts for Drill Rig and Jackhammer
	Industrial/Concrete Saw	5	10	default	default	default	
	Air Compressor	5	10	default	default	default	
Site Preparation	Rubber Tired Dozers	5	10	default	default	default	
	Tractors/Loaders/Backhoes	5	10	default	default	default	
Paving	Pavers	5	10	default	default	default	
	Paving Equipment	5	10	default	default	default	
	Rollers	5	10	default	default	default	

Notes:

- *Equipment list based off construction equipment listed in Project Description
- *Project Description assumes construction occurring from 7a.m. - 6p.m.
- *Construction Equipment is assumed to be representative of the construction of the 5 simultaneously constructed Priority Areas

Dust from Material Movement

Phase	Material Import/Fill (cy)	Material Export/Cut (cy)	Size Metric	Acres Graded
Trenching	87040	87040	cy	default

Notes:

*Assumed that material excavated (cut) will be replaced after trenching/excavation activities with balanced material movement (fill)

Ground Disturbance

Phase	Size Metric	Unit Amt	Notes
Access Vaults	Area	15	PD notes that 1 vault per 700 feet. For 72 miles = 544 Access Vaults
	Depth	4	
	Access Vault Volume (cubic yards)	2.22	
	Total	1208.89	
Bore Entry/Exit Pits	Area	12	PD notes that 1 vault per 700 feet. For 72 miles = 544 Bore Pits
	Depth	5	
	Pit Volume (cubic yards)	2.22	
	Total	1208.89	
Horizontal Drilling	Diameter	0.33	Represents 700 feet of horizontal drilling. For 72 miles = 544
	Length	700	
	Total (cubic feet)	61.09	
	Drilling (cubic yards)	2.26	
	Total	1230.78	
Trenching	Width	1.5	Represents 700 feet of trenching. For 72 miles = 544
	Depth	4	
	Length	700	
	Total (cubic feet)	4200	
	Trenching (cubic yards)	155.56	
Total	84622.22		
Utility Poles	Diameter	1.58	Represents 1 pole, PD notes 1 pole per 300 feet. For 72 miles = 1268 poles
	Depth	10	
	Pole Volume (cubic yards)	0.73	
	Total	924.68	

Notes:

*Total amounts are representative of ground disturbance in all 5 Priority Areas

*Specifications of dimensions noted in the Project Description

*In areas where conditions are unsuitable for drilling, trenching would be needed to install the conduits. Therefore, either drilling or trenching would occur. As a conservative estimate, because trenching would create greater material movement, it was used to calculate cut/fill amounts

*It is assumed that utility poles are to be used where areas where trenching would be difficult for placing fiber optic line underground (e.g., rocky areas) or areas characterized by extreme topography. Therefore, because trenching would create more cubic yards of material movement than utility pole installation, it was conservatively used to calculate cut/fill amounts

Trips & VMT

truck hauling capacity 14 cy

Phase Name	# of worker trips/day	# vendor trips/day	# haul trips/day	Trip length worker (mi)	Trip length vendor (mi)	Trip length haul (mi)	Vehicle Class Worker	Vehicle Class Vendor	Vehicle Class Hauling
All Phases	50	50	50	default	default	default	LDA,LDT1,LDT2	HHDT,MHDT	HHDT

Notes:

*Assumes crews of 5 members per priority area

*Assumes 10 vendor and 10 haul trips per day for concrete, materials, etc. per priority area

E.1-2 Construction Energy Calculations and Modeling

**SBCAG Broadband Program Project
Construction Energy Analysis**

Annual Fuel Summary

Heavy-Duty Construction Equipment	
496,353	Total Project Consumption
248,517	Annual Consumption
Haul Trucks	
88,527	Total Project Consumption
44,324	Annual Consumption
Vendor Trucks	
19,731	Total Project Consumption
9,879	Annual Consumption
Workers	
8,078	Total Project Consumption
4,044	Annual Consumption
108,257	Project Consumption of diesel for Haul Trucks and Vendors
54,203	Annual Consumption
604,610	Total Gallons Diesel
8,078	Total Gallons Gasoline

2.00 Estimated Project Construction Duration (years)

302,720 Annual Average Gallons Diesel
4,044 Annual Average Gallons Gasoline

Santa Barbara County			Percent of Annual Project Compared to Santa Barbara County	
Source	Fuel Type	Gallons		
Workers	Gasoline	170,000,000		0.0024%
Off-Road/Vendor/Haul Trucks	Diesel	34,600,000		0.8749%

Notes:

1 Gasoline and diesel amounts from CEC, 2023. Available: <https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting>

Annual Electricity Summary

Temporary Construction Trailer - Electricity 40,936 kWh/year
Water Conveyance for Dust Control 256,989 kWh/year
Total 297,925 kWh/year

72,933,000,000 | Total PG&E, 2023
0.00000041% Project percentage of PG&E

Park Zone	Source	Acreage/Day	Number of Days	Total Construction Water Use (Mgal)	Electricity Demand from Water Conveyance (MWh)	Annual Electricity Demand from Water Conveyance (MWh)
Lower South	Trenching and Installation	87.273	288	75.404	513.3	257.0
Total				75.404	513.274	256.989

CalEEMod Water Electricity Factors	Electricity Intensity Factor To Supply (kWh/Mgal)	Electricity Intensity Factor To Treat (kWh/Mgal)	Electricity Intensity Factor To Distribute (kWh/Mgal)	Electricity Intensity Factor For Wastewater Treatment (kWh/Mgal)
	3044	725	1537	1501

Sources and Assumptions:
 CalEEMod Appendix G, Table G-32
 -Electricity Intensity Factors - California Emissions Estimator Model (CalEEMod).
 -Estimated construction water use assumed to be generally equivalent to landscape irrigation, based on a factor of 20.94 gallons per year per square foot of landscaped area within the Los Angeles area (Mediterranean climate), which assumes high water demand landscaping materials and an irrigation system efficiency of 85%.
 Factor is therefore $(20.94 \text{ GAL/SF/year}) \times (43,560 \text{ SF/acre}) / (365 \text{ days/year}) / (0.85) = 2,940 \text{ gallons/acre/day}$, rounded up to 3,000 gallons/acre/day.
 (U.S. Department of Energy, Energy Efficiency & Renewable Energy, Federal Energy Management Program. "Guidelines for Estimating Unmetered Landscaping Water Use." July 2010, Page 12, Table 4 - Annual Irrigation Factor - Landscaped Areas with High Water Requirements).

**SBCAG Broadband Program Project
Construction Energy Analysis**

Temporary Construction Trailer - Electricity

Land Use	Square Feet	Energy Use per year (kWh)	Total Energy Use (kWh)	Energy Use per SF
General Office	2,000	40,936	81,760.25	20.5
Note: Energy use per sf is derived from CalEEMod User Guide, Appendix G, Table G-28 for the Statewide average for General Office Building land use				

SBCAG Broadband Program Project
 Construction Energy Analysis
 Off-Road Equipment

Equipment ≤ 100 hp
 pounds diesel fuel/hp-hr (lb/hp-hr):² 0.408 lb/hp-hr
 diesel density (lb/gal):¹ 7.11 lb/gal
 diesel gallons/hp-hr: 0.0574 gal/hp-hr
 Total hp-hr: 4,563,974 hp-hr
 Total diesel gallons: 261,939 gal

Equipment > 100 hp
 pounds diesel fuel/hp-hr (lb/hp-hr):¹ 0.367 lb/hp-hr
 diesel density (lb/gal):¹ 7.11 lb/gal
 diesel gallons/hp-hr: 0.0516 gal/hp-hr
 Total hp-hr: 4,540,664 hp-hr
 Total diesel gallons: 234,414 gal

Total diesel gallons (off-road equipment): 496,353 gal

[1. OFFROAD2017 Emission Factor Documentation](#)

Construction Phase	Equipment	Fuel Type	Number	Hours/Day	HP	Load	Days	Total hp-hr
Site Preparation	Rubber Tired Dozers	Diesel	5	10	367	0.4	15	110,100
Site Preparation	Tractors/Loaders/Backhoes	Diesel	5	10	84	0.37	15	23,310
Paving	Pavers	Diesel	5	10	81	0.42	30	51,030
Paving	Paving Equipment	Diesel	5	10	89	0.36	30	48,060
Paving	Rollers	Diesel	5	10	36	0.38	30	20,520
Linear, Grubbing & Land Clearing	Trenchers	Diesel	10	10	40	0.5	43	86,000
Linear, Grubbing & Land Clearing	Rubber Tired Dozers	Diesel	5	10	367	0.4	43	315,620
Linear, Grubbing & Land Clearing	Tractors/Loaders/Backhoes	Diesel	5	10	84	0.37	43	66,822
Drilling and Plowing	Bore/Drill Rigs	Diesel	5	10	83	0.5	144	298,800
Drilling and Plowing	Tractors/Loaders/Backhoes	Diesel	10	10	84	0.37	144	447,552
Drilling and Plowing	Concrete/Industrial Saws	Diesel	5	10	33	0.73	144	173,448
Drilling and Plowing	Trenchers	Diesel	5	10	40	0.5	144	144,000
Drilling and Plowing	Excavators	Diesel	5	10	36	0.38	144	98,496
Trenching and Installation	Off-Highway Trucks	Diesel	10	10	376	0.38	288	4,114,944
Trenching and Installation	Trenchers	Diesel	10	10	40	0.5	288	576,000
Trenching and Installation	Excavators	Diesel	5	10	36	0.38	288	196,992
Trenching and Installation	Dumpers/Tenders	Diesel	5	10	16	0.38	288	87,552
Trenching and Installation	Tractors/Loaders/Backhoes	Diesel	5	10	84	0.37	288	447,552
Trenching and Installation	Bore/Drill Rigs	Diesel	10	10	83	0.5	288	1,195,200
Trenching and Installation	Concrete/Industrial Saws	Diesel	5	10	33	0.73	288	346,896
Trenching and Installation	Air Compressors	Diesel	5	10	37	0.48	288	255,744
Total - >100 hp								4,540,664
Total - <100 hp								4,563,974

**Santa Barbara County Broadband
Total On-Road Fuel Consumption**

gal/mile

2024Hauling Hauling	0.16534457
2024Vendor Vendor	0.13876713
2024Worker Worker	0.03808277
2025Hauling Hauling	0.17177294
2025Vendor Vendor	0.14415027
2025Worker Worker	0.03581366
2026Hauling Hauling	0.16947176
2026Vendor Vendor	0.1426924
2026Worker Worker	0.03503044
2027Hauling Hauling	0.16702144
2027Vendor Vendor	0.14116525
2027Worker Worker	0.03434517
2028Hauling Hauling	0.15595442
2028Vendor Vendor	0.13307229
2028Worker Worker	0.03513338

Source	Fuel Type	Total Fuel Use (gal)
Hauling	Diesel	88,527
Vendor	Diesel	19,731
Worker	Gasoline	8,078
Fuel Type	Total Fuel Use	Annual Fuel Use
Diesel	108,257	54,203
Gasoline	8,078	4,044
Duration of Construction		
Start	3/1/2025	
End	2/28/2027	
	2.0	years

Construction Phase	Daily One-Way Trips	Haul Days per Phase (days)	Work Hours per Day (hours/day)	One-Way Trip Distance per Day (miles)	Idling per Day (minutes)	Regional Emissions (gallons)				
						gal/mile	gal/min	gal/day	Total Gallons/yr	
<u>Linear, Grubbing and Land Cleari</u>										
	2025									
Total Haul Trips	0									
Hauling	50	43	10	20.0	15	0.17	0.00E+00	172		7,386
Vendor	50	43	10	5.3	15	0.14	0.00E+00	38		1,643
Worker	50	43	10	8.8	0	0.04	0.00E+00	16		678
<u>Drilling</u>										
	2025									
Total Haul Trips	0									
Hauling	50	144	10	20.0	15	0.17	0.00E+00	172		24,735
Vendor	50	144	10	5.3	15	0.14	0.00E+00	38		5,501
Worker	50	144	10	8.8	0	0.04	0.00E+00	16		2,269
<u>Trenching and Installation</u>										
	2025									
Total Haul Trips	0									
Hauling	50	31	10	20.0	15	0.17	0.00E+00	172		5,325
Vendor	50	31	10	5.3	15	0.14	0.00E+00	38		1,184
Worker	50	31	10	8.8	0	0.04	0.00E+00	16		488
<u>Trenching and Installation</u>										
	2026									
Total Haul Trips	0									
Hauling	50	257	10	20.0	15	0.17	0.00E+00	169		43,554
Vendor	50	257	10	5.3	15	0.14	0.00E+00	38		9,718
Worker	50	257	10	8.8	0	0.04	0.00E+00	15		3,961
<u>Site Preparation</u>										
	2026									
Total Haul Trips	0									
Hauling	50	4	10	20.0	15	0.17	0.00E+00	169		678
Vendor	50	4	10	5.3	15	0.14	0.00E+00	38		151
Worker	50	4	10	8.8	0	0.04	0.00E+00	15		62
<u>Site Preparation</u>										
	2027									
Total Haul Trips	0									
Hauling	50	11	10	20.0	15	0.17	0.00E+00	167		1,837
Vendor	50	11	10	5.3	15	0.14	0.00E+00	37		411
Worker	50	11	10	8.8	0	0.03	0.00E+00	15		166
<u>Paving</u>										
	2027									
Total Haul Trips	0									
Hauling	50	30	10	20.0	15	0.17	0.00E+00	167		5,011
Vendor	50	30	10	5.3	15	0.14	0.00E+00	37		1,122
Worker	50	30	10	8.8	0	0.03	0.00E+00	15		453

Santa Barbara County Last-Mile Broadband Program Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Santa Barbara County Last-Mile Broadband Program
Construction Start Date	3/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.10
Precipitation (days)	27.8
Location	Los Alamos, CA, USA
County	Santa Barbara
City	Unincorporated
Air District	Santa Barbara County APCD
Air Basin	South Central Coast
TAZ	3361
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Linear	72.0	Mile	87.3	0.00	—	—	—	—
Other Non-Asphalt Surfaces	8.64	1000sqft	0.20	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	15.7	13.0	99.9	129	0.32	3.55	1.45	4.99	3.25	0.39	3.64	—	34,580	34,580	1.45	0.94	10.7	34,907
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.3	13.5	105	130	0.34	3.55	1.45	4.99	3.25	0.39	3.64	—	34,628	34,628	1.48	0.97	0.28	34,953
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.1	9.19	71.1	91.7	0.22	2.20	1.02	3.22	2.01	0.28	2.28	—	24,469	24,469	1.03	0.67	3.11	24,698
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.03	1.68	13.0	16.7	0.04	0.40	0.19	0.59	0.37	0.05	0.42	—	4,051	4,051	0.17	0.11	0.51	4,089

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	11.4	9.40	86.4	81.3	0.17	3.55	1.44	4.99	3.25	0.39	3.64	—	17,904	17,904	0.80	0.83	10.7	18,182

2026	15.7	13.0	99.9	129	0.32	3.08	1.45	4.54	2.82	0.39	3.21	—	34,580	34,580	1.45	0.94	10.1	34,907
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	16.3	13.5	105	130	0.34	3.55	1.45	4.99	3.25	0.39	3.64	—	34,628	34,628	1.48	0.97	0.28	34,953
2026	15.7	13.0	100	130	0.32	3.08	1.45	4.54	2.82	0.39	3.21	—	34,575	34,575	1.45	0.94	0.26	34,893
2027	10.9	10.2	62.5	58.8	0.13	2.43	1.44	3.87	2.24	0.39	2.63	—	15,118	15,118	0.66	0.79	0.24	15,369
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	5.30	4.33	39.4	48.1	0.11	1.36	0.85	2.20	1.24	0.23	1.47	—	10,786	10,786	0.48	0.50	2.77	10,949
2026	11.1	9.19	71.1	91.7	0.22	2.20	1.02	3.22	2.01	0.28	2.28	—	24,469	24,469	1.03	0.67	3.11	24,698
2027	1.13	1.03	4.14	4.60	0.01	0.15	0.16	0.31	0.14	0.04	0.18	—	1,217	1,217	0.05	0.08	0.44	1,244
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.97	0.79	7.19	8.79	0.02	0.25	0.15	0.40	0.23	0.04	0.27	—	1,786	1,786	0.08	0.08	0.46	1,813
2026	2.03	1.68	13.0	16.7	0.04	0.40	0.19	0.59	0.37	0.05	0.42	—	4,051	4,051	0.17	0.11	0.51	4,089
2027	0.21	0.19	0.76	0.84	< 0.005	0.03	0.03	0.06	0.03	0.01	0.03	—	201	201	0.01	0.01	0.07	206

3. Construction Emissions Details

3.1. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipm	7.54	6.34	58.6	56.0	0.10	2.52	—	2.52	2.31	—	2.31	—	10,432	10,432	0.42	0.08	—	10,468
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.69	0.66	< 0.005	0.03	—	0.03	0.03	—	0.03	—	122	122	< 0.005	< 0.005	—	123
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.12	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	20.3	20.3	< 0.005	< 0.005	—	20.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.21	0.16	1.77	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	302	302	0.01	0.01	0.03	306
Vendor	0.07	0.04	1.38	0.64	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	872	872	0.03	0.12	0.05	910
Hauling	0.27	0.07	5.07	1.69	0.02	0.07	0.90	0.97	0.04	0.25	0.30	—	3,614	3,614	0.19	0.56	0.17	3,787
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.55	3.55	< 0.005	< 0.005	0.01	3.61
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.01	10.7
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.4	42.4	< 0.005	0.01	0.03	44.5

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.59	0.59	< 0.005	< 0.005	< 0.005	0.60
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.77
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	0.01	7.37

3.3. Site Preparation (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.33	6.16	56.2	54.9	0.10	2.38	—	2.38	2.19	—	2.19	—	10,432	10,432	0.42	0.08	—	10,468
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.65	1.61	< 0.005	0.07	—	0.07	0.06	—	0.06	—	306	306	0.01	< 0.005	—	307
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	50.7	50.7	< 0.005	< 0.005	—	50.9

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.15	1.65	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	296	296	0.01	0.01	0.03	301	
Vendor	0.07	0.03	1.33	0.61	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	854	854	0.03	0.12	0.05	892	
Hauling	0.27	0.07	4.86	1.64	0.02	0.04	0.90	0.95	0.04	0.25	0.30	—	3,535	3,535	0.19	0.56	0.16	3,708	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.70	8.70	< 0.005	< 0.005	0.02	8.85	
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.1	25.1	< 0.005	< 0.005	0.02	26.2	
Hauling	0.01	< 0.005	0.14	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	104	104	0.01	0.02	0.08	109	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.44	1.44	< 0.005	< 0.005	< 0.005	1.47	
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.15	4.15	< 0.005	< 0.005	< 0.005	4.34	
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	17.2	17.2	< 0.005	< 0.005	0.01	18.0	

3.5. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	2.74	2.30	21.7	31.1	0.04	0.93	—	0.93	0.86	—	0.86	—	4,722	4,722	0.19	0.04	—	4,738
Paving	7.62	7.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.19	1.78	2.56	< 0.005	0.08	—	0.08	0.07	—	0.07	—	388	388	0.02	< 0.005	—	389
Paving	0.63	0.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.33	0.47	< 0.005	0.01	—	0.01	0.01	—	0.01	—	64.3	64.3	< 0.005	< 0.005	—	64.5
Paving	0.11	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.15	1.65	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	296	296	0.01	0.01	0.03	301
Vendor	0.07	0.03	1.33	0.61	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	854	854	0.03	0.12	0.05	892
Hauling	0.27	0.07	4.86	1.64	0.02	0.04	0.90	0.95	0.04	0.25	0.30	—	3,535	3,535	0.19	0.56	0.16	3,708
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.02	0.02	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	24.4	24.4	< 0.005	< 0.005	0.04	24.8
Vendor	0.01	< 0.005	0.11	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	70.2	70.2	< 0.005	0.01	0.07	73.4
Hauling	0.02	0.01	0.40	0.13	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	291	291	0.02	0.05	0.22	305
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.03	4.03	< 0.005	< 0.005	0.01	4.10
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.6	11.6	< 0.005	< 0.005	0.01	12.1
Hauling	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	0.04	50.5

3.7. Linear, Grubbing & Land Clearing (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.8	9.06	79.7	77.0	0.12	3.47	—	3.47	3.20	—	3.20	—	13,019	13,019	0.53	0.11	—	13,064
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.8	9.06	79.7	77.0	0.12	3.47	—	3.47	3.20	—	3.20	—	13,019	13,019	0.53	0.11	—	13,064
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road	1.27	1.07	9.39	9.07	0.01	0.41	—	0.41	0.38	—	0.38	—	1,534	1,534	0.06	0.01	—	1,539
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.19	1.71	1.66	< 0.005	0.07	—	0.07	0.07	—	0.07	—	254	254	0.01	< 0.005	—	255
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.23	0.16	1.87	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	315	315	0.02	0.01	1.39	321
Vendor	0.08	0.04	1.40	0.67	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	888	888	0.04	0.12	2.26	928
Hauling	0.29	0.07	5.13	1.78	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,682	3,682	0.22	0.59	7.09	3,869
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.22	0.18	1.91	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	308	308	0.02	0.01	0.04	313
Vendor	0.08	0.04	1.44	0.69	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	889	889	0.04	0.12	0.06	927
Hauling	0.29	0.07	5.27	1.80	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,683	3,683	0.22	0.59	0.18	3,863
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.3	36.3	< 0.005	< 0.005	0.07	37.0
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	105	105	< 0.005	0.01	0.12	109
Hauling	0.03	0.01	0.63	0.21	0.01	0.01	0.11	0.11	0.01	0.03	0.03	—	434	434	0.03	0.07	0.36	455
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.02	6.02	< 0.005	< 0.005	0.01	6.12
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.3	17.3	< 0.005	< 0.005	0.02	18.1

Hauling	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	71.8	71.8	< 0.005	0.01	0.06	75.4
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3.9. Drilling and Plowing (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.92	4.96	44.6	65.7	0.10	1.55	—	1.55	1.43	—	1.43	—	9,730	9,730	0.39	0.08	—	9,763
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.92	4.96	44.6	65.7	0.10	1.55	—	1.55	1.43	—	1.43	—	9,730	9,730	0.39	0.08	—	9,763
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.34	1.96	17.6	25.9	0.04	0.61	—	0.61	0.56	—	0.56	—	3,839	3,839	0.16	0.03	—	3,852
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.43	0.36	3.21	4.73	0.01	0.11	—	0.11	0.10	—	0.10	—	636	636	0.03	0.01	—	638
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.23	0.16	1.87	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	315	315	0.02	0.01	1.39	321
Vendor	0.08	0.04	1.40	0.67	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	888	888	0.04	0.12	2.26	928
Hauling	0.29	0.07	5.13	1.78	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,682	3,682	0.22	0.59	7.09	3,869
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.22	0.18	1.91	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	308	308	0.02	0.01	0.04	313
Vendor	0.08	0.04	1.44	0.69	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	889	889	0.04	0.12	0.06	927
Hauling	0.29	0.07	5.27	1.80	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,683	3,683	0.22	0.59	0.18	3,863
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	0.74	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	122	122	0.01	0.01	0.24	124
Vendor	0.03	0.02	0.57	0.27	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	350	350	0.02	0.05	0.39	366
Hauling	0.12	0.03	2.10	0.70	0.02	0.03	0.35	0.38	0.02	0.10	0.12	—	1,453	1,453	0.09	0.23	1.21	1,525
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	20.1	20.1	< 0.005	< 0.005	0.04	20.5
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	58.0	58.0	< 0.005	0.01	0.06	60.6
Hauling	0.02	0.01	0.38	0.13	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	241	241	0.01	0.04	0.20	253

3.11. Trenching and Installation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	15.7	13.2	98.3	126	0.29	3.43	—	3.43	3.15	—	3.15	—	29,748	29,748	1.21	0.24	—	29,850
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32	1.11	8.27	10.6	0.02	0.29	—	0.29	0.27	—	0.27	—	2,503	2,503	0.10	0.02	—	2,512
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.51	1.93	< 0.005	0.05	—	0.05	0.05	—	0.05	—	414	414	0.02	< 0.005	—	416
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.22	0.18	1.91	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	308	308	0.02	0.01	0.04	313	
Vendor	0.08	0.04	1.44	0.69	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	889	889	0.04	0.12	0.06	927	
Hauling	0.29	0.07	5.27	1.80	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,683	3,683	0.22	0.59	0.18	3,863	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.02	0.02	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.0	26.0	< 0.005	< 0.005	0.05	26.4	
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	74.7	74.7	< 0.005	0.01	0.08	78.0	
Hauling	0.02	0.01	0.45	0.15	< 0.005	0.01	0.08	0.08	< 0.005	0.02	0.02	—	310	310	0.02	0.05	0.26	325	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.30	4.30	< 0.005	< 0.005	0.01	4.37	
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.01	12.9	
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.3	51.3	< 0.005	0.01	0.04	53.9	

3.13. Trenching and Installation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	15.1	12.6	93.5	125	0.29	3.00	—	3.00	2.76	—	2.76	—	29,787	29,787	1.21	0.24	—	29,889
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	15.1	12.6	93.5	125	0.29	3.00	—	3.00	2.76	—	2.76	—	29,787	29,787	1.21	0.24	—	29,889
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.6	8.88	65.7	88.2	0.20	2.11	—	2.11	1.94	—	1.94	—	20,926	20,926	0.85	0.17	—	20,998
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipm	1.94	1.62	12.0	16.1	0.04	0.39	—	0.39	0.35	—	0.35	—	3,465	3,465	0.14	0.03	—	3,476
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.21	0.15	1.72	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	308	308	0.02	0.01	1.29	314
Vendor	0.08	0.04	1.34	0.62	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	872	872	0.03	0.12	2.10	912
Hauling	0.27	0.07	4.92	1.67	0.02	0.07	0.90	0.97	0.04	0.25	0.30	—	3,613	3,613	0.19	0.56	6.68	3,793
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.21	0.16	1.77	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	302	302	0.01	0.01	0.03	306
Vendor	0.07	0.04	1.38	0.64	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	872	872	0.03	0.12	0.05	910
Hauling	0.27	0.07	5.07	1.69	0.02	0.07	0.90	0.97	0.04	0.25	0.30	—	3,614	3,614	0.19	0.56	0.17	3,787
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.15	0.11	1.20	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	212	212	0.01	0.01	0.39	216
Vendor	0.05	0.03	0.97	0.44	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	613	613	0.02	0.09	0.64	640
Hauling	0.19	0.05	3.58	1.18	0.02	0.05	0.63	0.67	0.03	0.18	0.21	—	2,539	2,539	0.14	0.40	2.03	2,662
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	35.1	35.1	< 0.005	< 0.005	0.06	35.7
Vendor	0.01	0.01	0.18	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	101	101	< 0.005	0.01	0.11	106
Hauling	0.03	0.01	0.65	0.21	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	420	420	0.02	0.07	0.34	441

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	12/26/2026	1/15/2027	5.00	15.0	—
Paving	Paving	1/16/2027	2/28/2027	5.00	30.0	—
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	3/1/2025	4/30/2025	5.00	43.0	—
Drilling and Plowing	Linear, Grading & Excavation	5/1/2025	11/18/2025	5.00	144	—
Trenching and Installation	Linear, Trenching	11/19/2025	12/25/2026	5.00	288	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	5.00	10.0	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	5.00	10.0	84.0	0.37
Paving	Pavers	Diesel	Average	5.00	10.0	81.0	0.42
Paving	Paving Equipment	Diesel	Average	5.00	10.0	89.0	0.36

Paving	Rollers	Diesel	Average	5.00	10.0	36.0	0.38
Linear, Grubbing & Land Clearing	Trenchers	Diesel	Average	10.0	10.0	40.0	0.50
Linear, Grubbing & Land Clearing	Rubber Tired Dozers	Diesel	Average	5.00	10.0	367	0.40
Linear, Grubbing & Land Clearing	Tractors/Loaders/Back hoes	Diesel	Average	5.00	10.0	84.0	0.37
Drilling and Plowing	Bore/Drill Rigs	Diesel	Average	5.00	10.0	83.0	0.50
Drilling and Plowing	Tractors/Loaders/Back hoes	Diesel	Average	10.0	10.0	84.0	0.37
Drilling and Plowing	Concrete/Industrial Saws	Diesel	Average	5.00	10.0	33.0	0.73
Drilling and Plowing	Trenchers	Diesel	Average	5.00	10.0	40.0	0.50
Drilling and Plowing	Excavators	Diesel	Average	5.00	10.0	36.0	0.38
Trenching and Installation	Off-Highway Trucks	Diesel	Average	10.0	10.0	376	0.38
Trenching and Installation	Trenchers	Diesel	Average	10.0	10.0	40.0	0.50
Trenching and Installation	Excavators	Diesel	Average	5.00	10.0	36.0	0.38
Trenching and Installation	Dumpers/Tenders	Diesel	Average	5.00	10.0	16.0	0.38
Trenching and Installation	Tractors/Loaders/Back hoes	Diesel	Average	5.00	10.0	84.0	0.37
Trenching and Installation	Bore/Drill Rigs	Diesel	Average	10.0	10.0	83.0	0.50
Trenching and Installation	Concrete/Industrial Saws	Diesel	Average	5.00	10.0	33.0	0.73
Trenching and Installation	Air Compressors	Diesel	Average	5.00	10.0	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	50.0	8.80	LDA,LDT1,LDT2
Site Preparation	Vendor	50.0	5.30	HHDT,MHDT
Site Preparation	Hauling	50.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	50.0	8.80	LDA,LDT1,LDT2
Paving	Vendor	50.0	5.30	HHDT,MHDT
Paving	Hauling	50.0	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	50.0	8.80	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	50.0	5.30	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	50.0	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Drilling and Plowing	—	—	—	—
Drilling and Plowing	Worker	50.0	8.80	LDA,LDT1,LDT2
Drilling and Plowing	Vendor	50.0	5.30	HHDT,MHDT
Drilling and Plowing	Hauling	50.0	20.0	HHDT
Drilling and Plowing	Onsite truck	—	—	HHDT
Trenching and Installation	—	—	—	—
Trenching and Installation	Worker	50.0	8.80	LDA,LDT1,LDT2
Trenching and Installation	Vendor	50.0	5.30	HHDT,MHDT
Trenching and Installation	Hauling	50.0	20.0	HHDT
Trenching and Installation	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
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5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Paving	0.00	0.00	0.00	0.00	87.5
Trenching and Installation	87,040	87,040	0.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Linear	87.3	100%
Other Non-Asphalt Surfaces	0.20	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	6.86	annual days of extreme heat

Extreme Precipitation	5.85	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	45.1	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
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Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	11.6
AQ-PM	5.49
AQ-DPM	4.74
Drinking Water	74.4
Lead Risk Housing	24.6
Pesticides	80.6
Toxic Releases	7.85
Traffic	9.24

Effect Indicators	—
CleanUp Sites	27.5
Groundwater	91.8
Haz Waste Facilities/Generators	61.6
Impaired Water Bodies	77.3
Solid Waste	95.0
Sensitive Population	—
Asthma	21.7
Cardio-vascular	22.9
Low Birth Weights	46.5
Socioeconomic Factor Indicators	—
Education	54.8
Housing	16.3
Linguistic	33.3
Poverty	29.2
Unemployment	19.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	51.81573207
Employed	89.04144745
Median HI	57.39766457
Education	—
Bachelor's or higher	52.99627871
High school enrollment	8.995252149
Preschool enrollment	79.78955473

Transportation	—
Auto Access	76.73553189
Active commuting	34.12036443
Social	—
2-parent households	98.02386757
Voting	95.64994226
Neighborhood	—
Alcohol availability	42.91030412
Park access	29.57782625
Retail density	4.131913255
Supermarket access	27.678686
Tree canopy	56.03746952
Housing	—
Homeownership	70.96111895
Housing habitability	39.17618375
Low-inc homeowner severe housing cost burden	39.58680867
Low-inc renter severe housing cost burden	27.78134223
Uncrowded housing	43.53907353
Health Outcomes	—
Insured adults	38.07262928
Arthritis	0.0
Asthma ER Admissions	83.7
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0

Life Expectancy at Birth	44.2
Cognitively Disabled	88.7
Physically Disabled	74.5
Heart Attack ER Admissions	64.6
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	60.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.2
SLR Inundation Area	0.0
Children	67.0
Elderly	27.8
English Speaking	67.2
Foreign-born	28.6
Outdoor Workers	53.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	87.6
Traffic Density	11.4
Traffic Access	0.0
Other Indices	—
Hardship	38.1

Other Decision Support	—
2016 Voting	95.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	28.0
Healthy Places Index Score for Project Location (b)	67.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Based off the 24-month construction timeframe, as described in Project Description
Construction: Off-Road Equipment	Assumptions articulated in the Project Assumptions sheet.
Construction: Dust From Material Movement	See assumptions sheet
Construction: Trips and VMT	see assumptions sheet

Appendix F

Greenhouse Gas Emissions Calculations and Modeling



F.1-1 Assumptions

Santa Barbara County Last-Mile Broadband Program

defaults are in blue

updated

9/5/2024

PROJECT CHARACTERISTICS

Location	Santa Barbara County
Electricity Demand Forecast Zone	6
Land Use Setting	Suburban
Start of Construction	3/1/2025
Operational Year	2027
Utility Company	SCE
CO2 intensity	default

LAND USE

Land Use	CalEEMod Land Use Subtype	Unit Amt	Size Metric	Lot Ac	SF	Predominant Soil Type	Description
Linear	User Defined Linear	72	miles	87.273	3801600	Sand Gravel	Underground Fiber Line
Other Non-Asphalt Surface	Other Non-Asphalt Surface	8.64	1000 sf	0.19835	8640		Concrete pad for prefab buildings

Notes:

- *For modeling purposes, it is assumed one prefab storage building per mile
- *Per Project Description, a total of 57 miles of conduit will be installed for the first 4 Priority Areas, out of the 9 total Priority Areas. The modeled quantities are based on the construction of 5 Priority Areas, which would likely be constructed simultaneously.
- *The assumed maximum width of ground disturbance would be 10 feet

CONSTRUCTION

Construction Phasing

Construction Type	Construction Phase	Start Date	End Date	Days/week	Work Days per Phase
Linear Construction	Linear, Grubbing & Land Clearing	3/1/2025	4/30/2025	5	43
	Drilling	5/1/2025	11/18/2025	5	144
	Trenching and Installation	11/19/2025	12/25/2026	5	288
Land Use Construction	Site Preparation	12/26/2026	1/15/2027	5	15
	Paving	1/16/2027	2/28/2027	5	30
Total Days					520

Notes:

- *It is assumed that for 1 mile of underground conduit, 1 drill rig is estimated to take approximately 10 days and 1 trencher would take an estimated 18 to 20 days (approximately 30 days total).
- *Based off the 24 month construction timeframe for all Priority Areas, as described in Project Description
- *The total construction schedule represents the simultaneous construction of 5 Priority Areas

Offroad Equipment

Construction Phase	Equipment	Unit Amt	Hours/Day	HP	LF	Engine Tier	Notes
Linear, Grubbing & Land Clearing	Trenchers	10	10	default	default	default	Accounts for cable plow and spider plows
	Rubber Tired Dozer	5	10	default	default	default	
	Tractors/Loaders/Backhoes	5	10	default	default	default	
Drilling	Bore/Drill Rig	5	10	default	default	default	
	Tractors/Loaders/Backhoes	10	10	default	default	default	Accounts for tractors and backhoes
	Industrial/Concrete Saw	5	10	default	default	default	
	Trenchers	5	10	default	default	default	
	Excavator	5	10	default	default	default	
Trenching and Installation	Off-Highway Trucks	10	10	default	default	default	Accounts for Line truck and utility trucks
	Trencher	10	10	default	default	default	Accounts for cable plows and trenchers
	Excavators	5	10	default	default	default	
	Dumpers	5	10	default	default	default	
	Tractors/Loaders/Backhoes	5	10	default	default	default	
	Bore/Drill Rig	10	10	default	default	default	Accounts for Drill Rig and Jackhammer
	Industrial/Concrete Saw	5	10	default	default	default	
	Air Compressor	5	10	default	default	default	
Site Preparation	Rubber Tired Dozers	5	10	default	default	default	
	Tractors/Loaders/Backhoes	5	10	default	default	default	
Paving	Pavers	5	10	default	default	default	
	Paving Equipment	5	10	default	default	default	
	Rollers	5	10	default	default	default	

Notes:

- *Equipment list based off construction equipment listed in Project Description
- *Project Description assumes construction occurring from 7a.m. - 6p.m.
- *Construction Equipment is assumed to be representative of the construction of the 5 simultaneously constructed Priority Areas

Dust from Material Movement

Phase	Material Import/Fill (cy)	Material Export/Cut (cy)	Size Metric	Acres Graded
Trenching	87040	87040	cy	default

Notes:

*Assumed that material excavated (cut) will be replaced after trenching/excavation activities with balanced material movement (fill)

Ground Disturbance

Phase	Size Metric	Unit Amt	Notes
Access Vaults	Area	15	PD notes that 1 vault per 700 feet. For 72 miles = 544 Access Vaults
	Depth	4	
	Access Vault Volume (cubic yards)	2.22	
	Total	1208.89	
Bore Entry/Exit Pits	Area	12	PD notes that 1 vault per 700 feet. For 72 miles = 544 Bore Pits
	Depth	5	
	Pit Volume (cubic yards)	2.22	
	Total	1208.89	
Horizontal Drilling	Diameter	0.33	Represents 700 feet of horizontal drilling. For 72 miles = 544
	Length	700	
	Total (cubic feet)	61.09	
	Drilling (cubic yards)	2.26	
	Total	1230.78	
Trenching	Width	1.5	Represents 700 feet of trenching. For 72 miles = 544
	Depth	4	
	Length	700	
	Total (cubic feet)	4200	
	Trenching (cubic yards)	155.56	
Total	84622.22		
Utility Poles	Diameter	1.58	Represents 1 pole, PD notes 1 pole per 300 feet. For 72 miles = 1268 poles
	Depth	10	
	Pole Volume (cubic yards)	0.73	
	Total	924.68	

Notes:

*Total amounts are representative of ground disturbance in all 5 Priority Areas

*Specifications of dimensions noted in the Project Description

*In areas where conditions are unsuitable for drilling, trenching would be needed to install the conduits. Therefore, either drilling or trenching would occur. As a conservative estimate, because trenching would create greater material movement, it was used to calculate cut/fill amounts

*It is assumed that utility poles are to be used where areas where trenching would be difficult for placing fiber optic line underground (e.g., rocky areas) or areas characterized by extreme topography. Therefore, because trenching would create more cubic yards of material movement than utility pole installation, it was conservatively used to calculate cut/fill amounts

Trips & VMT

truck hauling capacity 14 cy

Phase Name	# of worker trips/day	# vendor trips/day	# haul trips/day	Trip length worker (mi)	Trip length vendor (mi)	Trip length haul (mi)	Vehicle Class Worker	Vehicle Class Vendor	Vehicle Class Hauling
All Phases	50	50	50	default	default	default	LDA,LDT1,LDT2	HHDT,MHDT	HHDT

Notes:

*Assumes crews of 5 members per priority area

*Assumes 10 vendor and 10 haul trips per day for concrete, materials, etc. per priority area

F.1-2 Construction Greenhouse Gas Calculations and Modeling

SBCAG Broadband Program

Construction Annual GHG

Year	Metric Tons/Year		Total
	CalEEMod	Water + Construction Office	
2025	1,812.7	46.3	1,859.0
2026	4,089.0	47.4	4,136.4
2027	205.9	0.5	206.4
Total	6,107.6	94.2	6,201.8
Amortized - 30 years	203.6	3.1	206.7

SBCAG Broadband Program
 Construction GHG
 Construction Water Energy Estimates

Source	Acreage/Day	Number of Days	Total Construction Water Use (Mgal)	Electricity Demand from Water Conveyance (MWh)	Annual Electricity Demand from Water Conveyance (MWh)
Trenching and Installation	87.273	288	75.404	513.3	257.0
Total			75.404	513.3	257.0

CalEEMod Water Electricity Factors	Electricity Intensity Factor To Supply (kWh/Mgal)	Electricity Intensity Factor To Treat (kWh/Mgal)	Electricity Intensity Factor To Distribute (kWh/Mgal)	Electricity Intensity Factor For Wastewater Treatment (kWh/Mgal)
	3044	725	1537	1501

Sources and Assumptions:

CalEEMod Appendix G, Table G-32

-Electricity Intensity Factors - California Emissions Estimator Model (CalEEMod).

-Estimated construction water use assumed to be generally equivalent to landscape irrigation, based on a factor of 20.94 gallons per year per square foot of landscaped area within the Los Angeles area (Mediterranean climate), which assumes high water demand landscaping materials and an irrigation system efficiency of 85%. Factor is therefore (20.94 GAL/SF/year) x (43,560 SF/acre) / (365 days/year) / (0.85) = 2,940 gallons/acre/day, rounded up to 3,000 gallons/acre/day. (U.S. Department of Energy, Energy Efficiency & Renewable Energy, Federal Energy Management Program. "Guidelines for Estimating Unmetered Landscaping Water Use." July 2010. Page 12, Table 4 - Annual Irrigation Factor – Landscaped Areas with High Water Requirements).

Electricity Emission Factor (MT CO2/MWh)	Electricity Emission Factor (lbs CO2/MWh)	Total GHG Emissions Per Year
0.16	203.98	40.88
Electricity Emission Factor (MT CH4/MWh)	Electricity Emission Factor (lbs CH4/MWh)	
1.50E-05	0.033	
Electricity Emission Factor (MT N2O/MWh)	Electricity Emission Factor (lbs N2O/MWh)	
1.81E-06	0.004	

SBCAG Broadband Program
 Construction GHG Analysis

Temporary Construction Trailer - Electricity

Land Use	Square Feet	Energy Use per year (kWh)	Total Energy Use (kWh)	Energy Use per SF
General Office	2,000	40,936	81,760.25	20.5

Note: Energy use per sf is derived from CalEEMod User Guide, Appendix G, Table G-28 for the Statewide average for General Office Building land use

Electricity Emission Factor	Electricity Emission Factor	Total GHG Emissions Per Year	Year	Proportion of Year Worked	GHG Emissions Per Construction Year
(MT CO2/MWh)	(lbs CO2/MWh)	6.51	2025	0.84	5.46
0.16	203.98		2026	1.00	6.51
(MT CH4/MWh)	(lbs CH4/MWh)		2027	0.16	1.04
1.50E-05	0.033				
(MT N2O/MWh)	(lbs N2O/MWh)				
1.81E-06	0.004				

Santa Barbara County Last-Mile Broadband Program Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Santa Barbara County Last-Mile Broadband Program
Construction Start Date	3/1/2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.10
Precipitation (days)	27.8
Location	Los Alamos, CA, USA
County	Santa Barbara
City	Unincorporated
Air District	Santa Barbara County APCD
Air Basin	South Central Coast
TAZ	3361
EDFZ	6
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Southern California Gas
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Linear	72.0	Mile	87.3	0.00	—	—	—	—
Other Non-Asphalt Surfaces	8.64	1000sqft	0.20	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	15.7	13.0	99.9	129	0.32	3.55	1.45	4.99	3.25	0.39	3.64	—	34,580	34,580	1.45	0.94	10.7	34,907
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	16.3	13.5	105	130	0.34	3.55	1.45	4.99	3.25	0.39	3.64	—	34,628	34,628	1.48	0.97	0.28	34,953
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.1	9.19	71.1	91.7	0.22	2.20	1.02	3.22	2.01	0.28	2.28	—	24,469	24,469	1.03	0.67	3.11	24,698
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.03	1.68	13.0	16.7	0.04	0.40	0.19	0.59	0.37	0.05	0.42	—	4,051	4,051	0.17	0.11	0.51	4,089

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	11.4	9.40	86.4	81.3	0.17	3.55	1.44	4.99	3.25	0.39	3.64	—	17,904	17,904	0.80	0.83	10.7	18,182

2026	15.7	13.0	99.9	129	0.32	3.08	1.45	4.54	2.82	0.39	3.21	—	34,580	34,580	1.45	0.94	10.1	34,907
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	16.3	13.5	105	130	0.34	3.55	1.45	4.99	3.25	0.39	3.64	—	34,628	34,628	1.48	0.97	0.28	34,953
2026	15.7	13.0	100	130	0.32	3.08	1.45	4.54	2.82	0.39	3.21	—	34,575	34,575	1.45	0.94	0.26	34,893
2027	10.9	10.2	62.5	58.8	0.13	2.43	1.44	3.87	2.24	0.39	2.63	—	15,118	15,118	0.66	0.79	0.24	15,369
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	5.30	4.33	39.4	48.1	0.11	1.36	0.85	2.20	1.24	0.23	1.47	—	10,786	10,786	0.48	0.50	2.77	10,949
2026	11.1	9.19	71.1	91.7	0.22	2.20	1.02	3.22	2.01	0.28	2.28	—	24,469	24,469	1.03	0.67	3.11	24,698
2027	1.13	1.03	4.14	4.60	0.01	0.15	0.16	0.31	0.14	0.04	0.18	—	1,217	1,217	0.05	0.08	0.44	1,244
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.97	0.79	7.19	8.79	0.02	0.25	0.15	0.40	0.23	0.04	0.27	—	1,786	1,786	0.08	0.08	0.46	1,813
2026	2.03	1.68	13.0	16.7	0.04	0.40	0.19	0.59	0.37	0.05	0.42	—	4,051	4,051	0.17	0.11	0.51	4,089
2027	0.21	0.19	0.76	0.84	< 0.005	0.03	0.03	0.06	0.03	0.01	0.03	—	201	201	0.01	0.01	0.07	206

3. Construction Emissions Details

3.1. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipm	7.54	6.34	58.6	56.0	0.10	2.52	—	2.52	2.31	—	2.31	—	10,432	10,432	0.42	0.08	—	10,468
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.69	0.66	< 0.005	0.03	—	0.03	0.03	—	0.03	—	122	122	< 0.005	< 0.005	—	123
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.13	0.12	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	20.3	20.3	< 0.005	< 0.005	—	20.3
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.21	0.16	1.77	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	302	302	0.01	0.01	0.03	306
Vendor	0.07	0.04	1.38	0.64	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	872	872	0.03	0.12	0.05	910
Hauling	0.27	0.07	5.07	1.69	0.02	0.07	0.90	0.97	0.04	0.25	0.30	—	3,614	3,614	0.19	0.56	0.17	3,787
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.55	3.55	< 0.005	< 0.005	0.01	3.61
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.2	10.2	< 0.005	< 0.005	0.01	10.7
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.4	42.4	< 0.005	0.01	0.03	44.5

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.59	0.59	< 0.005	< 0.005	< 0.005	0.60
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.70	1.70	< 0.005	< 0.005	< 0.005	1.77
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	0.01	7.37

3.3. Site Preparation (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	7.33	6.16	56.2	54.9	0.10	2.38	—	2.38	2.19	—	2.19	—	10,432	10,432	0.42	0.08	—	10,468
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.18	1.65	1.61	< 0.005	0.07	—	0.07	0.06	—	0.06	—	306	306	0.01	< 0.005	—	307
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	50.7	50.7	< 0.005	< 0.005	—	50.9

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.15	1.65	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	296	296	0.01	0.01	0.03	301	
Vendor	0.07	0.03	1.33	0.61	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	854	854	0.03	0.12	0.05	892	
Hauling	0.27	0.07	4.86	1.64	0.02	0.04	0.90	0.95	0.04	0.25	0.30	—	3,535	3,535	0.19	0.56	0.16	3,708	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.01	0.01	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.70	8.70	< 0.005	< 0.005	0.02	8.85	
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.1	25.1	< 0.005	< 0.005	0.02	26.2	
Hauling	0.01	< 0.005	0.14	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	104	104	0.01	0.02	0.08	109	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.44	1.44	< 0.005	< 0.005	< 0.005	1.47	
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.15	4.15	< 0.005	< 0.005	< 0.005	4.34	
Hauling	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	17.2	17.2	< 0.005	< 0.005	0.01	18.0	

3.5. Paving (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	2.74	2.30	21.7	31.1	0.04	0.93	—	0.93	0.86	—	0.86	—	4,722	4,722	0.19	0.04	—	4,738
Paving	7.62	7.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.19	1.78	2.56	< 0.005	0.08	—	0.08	0.07	—	0.07	—	388	388	0.02	< 0.005	—	389
Paving	0.63	0.63	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.33	0.47	< 0.005	0.01	—	0.01	0.01	—	0.01	—	64.3	64.3	< 0.005	< 0.005	—	64.5
Paving	0.11	0.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.20	0.15	1.65	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	296	296	0.01	0.01	0.03	301
Vendor	0.07	0.03	1.33	0.61	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	854	854	0.03	0.12	0.05	892
Hauling	0.27	0.07	4.86	1.64	0.02	0.04	0.90	0.95	0.04	0.25	0.30	—	3,535	3,535	0.19	0.56	0.16	3,708
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.02	0.02	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	24.4	24.4	< 0.005	< 0.005	0.04	24.8
Vendor	0.01	< 0.005	0.11	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	70.2	70.2	< 0.005	0.01	0.07	73.4
Hauling	0.02	0.01	0.40	0.13	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02	—	291	291	0.02	0.05	0.22	305
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.03	4.03	< 0.005	< 0.005	0.01	4.10
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	11.6	11.6	< 0.005	< 0.005	0.01	12.1
Hauling	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	48.1	48.1	< 0.005	0.01	0.04	50.5

3.7. Linear, Grubbing & Land Clearing (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.8	9.06	79.7	77.0	0.12	3.47	—	3.47	3.20	—	3.20	—	13,019	13,019	0.53	0.11	—	13,064
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.8	9.06	79.7	77.0	0.12	3.47	—	3.47	3.20	—	3.20	—	13,019	13,019	0.53	0.11	—	13,064
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road	1.27	1.07	9.39	9.07	0.01	0.41	—	0.41	0.38	—	0.38	—	1,534	1,534	0.06	0.01	—	1,539
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.23	0.19	1.71	1.66	< 0.005	0.07	—	0.07	0.07	—	0.07	—	254	254	0.01	< 0.005	—	255
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.23	0.16	1.87	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	315	315	0.02	0.01	1.39	321
Vendor	0.08	0.04	1.40	0.67	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	888	888	0.04	0.12	2.26	928
Hauling	0.29	0.07	5.13	1.78	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,682	3,682	0.22	0.59	7.09	3,869
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.22	0.18	1.91	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	308	308	0.02	0.01	0.04	313
Vendor	0.08	0.04	1.44	0.69	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	889	889	0.04	0.12	0.06	927
Hauling	0.29	0.07	5.27	1.80	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,683	3,683	0.22	0.59	0.18	3,863
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	36.3	36.3	< 0.005	< 0.005	0.07	37.0
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	105	105	< 0.005	0.01	0.12	109
Hauling	0.03	0.01	0.63	0.21	0.01	0.01	0.11	0.11	0.01	0.03	0.03	—	434	434	0.03	0.07	0.36	455
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.02	6.02	< 0.005	< 0.005	0.01	6.12
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	17.3	17.3	< 0.005	< 0.005	0.02	18.1

Hauling	0.01	< 0.005	0.11	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	71.8	71.8	< 0.005	0.01	0.06	75.4
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3.9. Drilling and Plowing (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.92	4.96	44.6	65.7	0.10	1.55	—	1.55	1.43	—	1.43	—	9,730	9,730	0.39	0.08	—	9,763
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	5.92	4.96	44.6	65.7	0.10	1.55	—	1.55	1.43	—	1.43	—	9,730	9,730	0.39	0.08	—	9,763
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.34	1.96	17.6	25.9	0.04	0.61	—	0.61	0.56	—	0.56	—	3,839	3,839	0.16	0.03	—	3,852
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.43	0.36	3.21	4.73	0.01	0.11	—	0.11	0.10	—	0.10	—	636	636	0.03	0.01	—	638
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.23	0.16	1.87	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	315	315	0.02	0.01	1.39	321
Vendor	0.08	0.04	1.40	0.67	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	888	888	0.04	0.12	2.26	928
Hauling	0.29	0.07	5.13	1.78	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,682	3,682	0.22	0.59	7.09	3,869
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.22	0.18	1.91	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	308	308	0.02	0.01	0.04	313
Vendor	0.08	0.04	1.44	0.69	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	889	889	0.04	0.12	0.06	927
Hauling	0.29	0.07	5.27	1.80	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,683	3,683	0.22	0.59	0.18	3,863
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.07	0.74	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	122	122	0.01	0.01	0.24	124
Vendor	0.03	0.02	0.57	0.27	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	350	350	0.02	0.05	0.39	366
Hauling	0.12	0.03	2.10	0.70	0.02	0.03	0.35	0.38	0.02	0.10	0.12	—	1,453	1,453	0.09	0.23	1.21	1,525
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.01	0.13	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	20.1	20.1	< 0.005	< 0.005	0.04	20.5
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	58.0	58.0	< 0.005	0.01	0.06	60.6
Hauling	0.02	0.01	0.38	0.13	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	241	241	0.01	0.04	0.20	253

3.11. Trenching and Installation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	15.7	13.2	98.3	126	0.29	3.43	—	3.43	3.15	—	3.15	—	29,748	29,748	1.21	0.24	—	29,850
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.32	1.11	8.27	10.6	0.02	0.29	—	0.29	0.27	—	0.27	—	2,503	2,503	0.10	0.02	—	2,512
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.51	1.93	< 0.005	0.05	—	0.05	0.05	—	0.05	—	414	414	0.02	< 0.005	—	416
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.22	0.18	1.91	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	308	308	0.02	0.01	0.04	313	
Vendor	0.08	0.04	1.44	0.69	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	889	889	0.04	0.12	0.06	927	
Hauling	0.29	0.07	5.27	1.80	0.05	0.07	0.90	0.97	0.04	0.25	0.30	—	3,683	3,683	0.22	0.59	0.18	3,863	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.02	0.02	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.0	26.0	< 0.005	< 0.005	0.05	26.4	
Vendor	0.01	< 0.005	0.12	0.06	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	74.7	74.7	< 0.005	0.01	0.08	78.0	
Hauling	0.02	0.01	0.45	0.15	< 0.005	0.01	0.08	0.08	< 0.005	0.02	0.02	—	310	310	0.02	0.05	0.26	325	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.30	4.30	< 0.005	< 0.005	0.01	4.37	
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	0.01	12.9	
Hauling	< 0.005	< 0.005	0.08	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	51.3	51.3	< 0.005	0.01	0.04	53.9	

3.13. Trenching and Installation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipment	15.1	12.6	93.5	125	0.29	3.00	—	3.00	2.76	—	2.76	—	29,787	29,787	1.21	0.24	—	29,889
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	15.1	12.6	93.5	125	0.29	3.00	—	3.00	2.76	—	2.76	—	29,787	29,787	1.21	0.24	—	29,889
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	10.6	8.88	65.7	88.2	0.20	2.11	—	2.11	1.94	—	1.94	—	20,926	20,926	0.85	0.17	—	20,998
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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Off-Road Equipm	1.94	1.62	12.0	16.1	0.04	0.39	—	0.39	0.35	—	0.35	—	3,465	3,465	0.14	0.03	—	3,476
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.21	0.15	1.72	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	308	308	0.02	0.01	1.29	314
Vendor	0.08	0.04	1.34	0.62	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	872	872	0.03	0.12	2.10	912
Hauling	0.27	0.07	4.92	1.67	0.02	0.07	0.90	0.97	0.04	0.25	0.30	—	3,613	3,613	0.19	0.56	6.68	3,793
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.21	0.16	1.77	0.00	0.00	0.31	0.31	0.00	0.07	0.07	—	302	302	0.01	0.01	0.03	306
Vendor	0.07	0.04	1.38	0.64	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	872	872	0.03	0.12	0.05	910
Hauling	0.27	0.07	5.07	1.69	0.02	0.07	0.90	0.97	0.04	0.25	0.30	—	3,614	3,614	0.19	0.56	0.17	3,787
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.15	0.11	1.20	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	212	212	0.01	0.01	0.39	216
Vendor	0.05	0.03	0.97	0.44	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	613	613	0.02	0.09	0.64	640
Hauling	0.19	0.05	3.58	1.18	0.02	0.05	0.63	0.67	0.03	0.18	0.21	—	2,539	2,539	0.14	0.40	2.03	2,662
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.02	0.22	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	35.1	35.1	< 0.005	< 0.005	0.06	35.7
Vendor	0.01	0.01	0.18	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	101	101	< 0.005	0.01	0.11	106
Hauling	0.03	0.01	0.65	0.21	< 0.005	0.01	0.11	0.12	0.01	0.03	0.04	—	420	420	0.02	0.07	0.34	441

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
-------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	12/26/2026	1/15/2027	5.00	15.0	—
Paving	Paving	1/16/2027	2/28/2027	5.00	30.0	—
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	3/1/2025	4/30/2025	5.00	43.0	—
Drilling and Plowing	Linear, Grading & Excavation	5/1/2025	11/18/2025	5.00	144	—
Trenching and Installation	Linear, Trenching	11/19/2025	12/25/2026	5.00	288	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	5.00	10.0	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	5.00	10.0	84.0	0.37
Paving	Pavers	Diesel	Average	5.00	10.0	81.0	0.42
Paving	Paving Equipment	Diesel	Average	5.00	10.0	89.0	0.36

Paving	Rollers	Diesel	Average	5.00	10.0	36.0	0.38
Linear, Grubbing & Land Clearing	Trenchers	Diesel	Average	10.0	10.0	40.0	0.50
Linear, Grubbing & Land Clearing	Rubber Tired Dozers	Diesel	Average	5.00	10.0	367	0.40
Linear, Grubbing & Land Clearing	Tractors/Loaders/Back hoes	Diesel	Average	5.00	10.0	84.0	0.37
Drilling and Plowing	Bore/Drill Rigs	Diesel	Average	5.00	10.0	83.0	0.50
Drilling and Plowing	Tractors/Loaders/Back hoes	Diesel	Average	10.0	10.0	84.0	0.37
Drilling and Plowing	Concrete/Industrial Saws	Diesel	Average	5.00	10.0	33.0	0.73
Drilling and Plowing	Trenchers	Diesel	Average	5.00	10.0	40.0	0.50
Drilling and Plowing	Excavators	Diesel	Average	5.00	10.0	36.0	0.38
Trenching and Installation	Off-Highway Trucks	Diesel	Average	10.0	10.0	376	0.38
Trenching and Installation	Trenchers	Diesel	Average	10.0	10.0	40.0	0.50
Trenching and Installation	Excavators	Diesel	Average	5.00	10.0	36.0	0.38
Trenching and Installation	Dumpers/Tenders	Diesel	Average	5.00	10.0	16.0	0.38
Trenching and Installation	Tractors/Loaders/Back hoes	Diesel	Average	5.00	10.0	84.0	0.37
Trenching and Installation	Bore/Drill Rigs	Diesel	Average	10.0	10.0	83.0	0.50
Trenching and Installation	Concrete/Industrial Saws	Diesel	Average	5.00	10.0	33.0	0.73
Trenching and Installation	Air Compressors	Diesel	Average	5.00	10.0	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	50.0	8.80	LDA,LDT1,LDT2
Site Preparation	Vendor	50.0	5.30	HHDT,MHDT
Site Preparation	Hauling	50.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	50.0	8.80	LDA,LDT1,LDT2
Paving	Vendor	50.0	5.30	HHDT,MHDT
Paving	Hauling	50.0	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	50.0	8.80	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	50.0	5.30	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	50.0	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Drilling and Plowing	—	—	—	—
Drilling and Plowing	Worker	50.0	8.80	LDA,LDT1,LDT2
Drilling and Plowing	Vendor	50.0	5.30	HHDT,MHDT
Drilling and Plowing	Hauling	50.0	20.0	HHDT
Drilling and Plowing	Onsite truck	—	—	HHDT
Trenching and Installation	—	—	—	—
Trenching and Installation	Worker	50.0	8.80	LDA,LDT1,LDT2
Trenching and Installation	Vendor	50.0	5.30	HHDT,MHDT
Trenching and Installation	Hauling	50.0	20.0	HHDT
Trenching and Installation	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
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5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Paving	0.00	0.00	0.00	0.00	87.5
Trenching and Installation	87,040	87,040	0.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Linear	87.3	100%
Other Non-Asphalt Surfaces	0.20	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	6.86	annual days of extreme heat

Extreme Precipitation	5.85	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	45.1	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
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Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	11.6
AQ-PM	5.49
AQ-DPM	4.74
Drinking Water	74.4
Lead Risk Housing	24.6
Pesticides	80.6
Toxic Releases	7.85
Traffic	9.24

Effect Indicators	—
CleanUp Sites	27.5
Groundwater	91.8
Haz Waste Facilities/Generators	61.6
Impaired Water Bodies	77.3
Solid Waste	95.0
Sensitive Population	—
Asthma	21.7
Cardio-vascular	22.9
Low Birth Weights	46.5
Socioeconomic Factor Indicators	—
Education	54.8
Housing	16.3
Linguistic	33.3
Poverty	29.2
Unemployment	19.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	51.81573207
Employed	89.04144745
Median HI	57.39766457
Education	—
Bachelor's or higher	52.99627871
High school enrollment	8.995252149
Preschool enrollment	79.78955473

Transportation	—
Auto Access	76.73553189
Active commuting	34.12036443
Social	—
2-parent households	98.02386757
Voting	95.64994226
Neighborhood	—
Alcohol availability	42.91030412
Park access	29.57782625
Retail density	4.131913255
Supermarket access	27.678686
Tree canopy	56.03746952
Housing	—
Homeownership	70.96111895
Housing habitability	39.17618375
Low-inc homeowner severe housing cost burden	39.58680867
Low-inc renter severe housing cost burden	27.78134223
Uncrowded housing	43.53907353
Health Outcomes	—
Insured adults	38.07262928
Arthritis	0.0
Asthma ER Admissions	83.7
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0

Life Expectancy at Birth	44.2
Cognitively Disabled	88.7
Physically Disabled	74.5
Heart Attack ER Admissions	64.6
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	60.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.2
SLR Inundation Area	0.0
Children	67.0
Elderly	27.8
English Speaking	67.2
Foreign-born	28.6
Outdoor Workers	53.6
Climate Change Adaptive Capacity	—
Impervious Surface Cover	87.6
Traffic Density	11.4
Traffic Access	0.0
Other Indices	—
Hardship	38.1

Other Decision Support	—
2016 Voting	95.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	28.0
Healthy Places Index Score for Project Location (b)	67.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Based off the 24-month construction timeframe, as described in Project Description
Construction: Off-Road Equipment	Assumptions articulated in the Project Assumptions sheet.
Construction: Dust From Material Movement	See assumptions sheet
Construction: Trips and VMT	see assumptions sheet

Appendix G

Noise and Groundborne Vibration Calculations

Project: Santa Barbara County Broadband Project

Construction Noise Impact on Sensitive Receptors

Leq to L10 factor 3

				R1 at 25 feet from all pieces of equipment				
Construction Phase Equipment Type	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance (ft)	Lmax	Leq	L10	Estimated Noise Shielding, dBA
Demolition					96	92		
Tractor	1	84	40%	25	90	86	89	0
Tractor	1	84	40%	25	90	86	89	0
Dozer	1	85	40%	25	91	87	90	0
Tractor/Loader/Backhoe	1	80	40%	25	86	82	85	0
Drilling					99	93		
Drill Rig Truck	1	84	20%	25	90	83	86	0
Tractor/Loader/Backhoe	1	80	40%	25	86	82	85	0
Tractor/Loader/Backhoe	1	80	40%	25	86	82	85	0
Concrete Saw	1	90	20%	25	96	89	92	0
Tractor	1	84	40%	25	90	86	89	0
Excavator	1	85	40%	25	91	87	90	0
Trenching and Installation					101	96		
Dump Truck	1	84	40%	25	90	86	89	0
Dump Truck	1	84	40%	25	90	86	89	0
Tractor	1	84	40%	25	90	86	89	0
Tractor	1	84	40%	25	90	86	89	0
Excavator	1	85	40%	25	91	87	90	0
Dump Truck	1	84	40%	25	90	86	89	0
Tractor/Loader/Backhoe	1	80	40%	25	86	82	85	0
Drill Rig Truck	1	84	20%	25	90	83	86	0
Drill Rig Truck	1	84	20%	25	90	83	86	0
Concrete Saw	1	90	20%	25	96	89	92	0
Compressor (air)	1	80	40%	25	86	82	85	0
Site Preparation					92	88		
Dozer	1	85	40%	25	91	87	90	0
Tractor/Loader/Backhoe	1	80	40%	25	86	82	85	0
Paving					96	91		
Paver	1	85	50%	25	91	88	91	0
Pavement Scarafier	1	85	20%	25	91	84	87	0
Roller	1	85	20%	25	91	84	87	0
Maximum Combined Noise Levels					96.1			

Source for Ref. Noise Levels: LA CEQA Guides, 2006 & FHWA RCNM, 2005



Table 1. CA/T equipment noise emissions and acoustical usage factors database.

CA/T Noise Emission Reference Levels and Usage Factors					
filename: EQUIPLST.xls					
revised: 7/26/05					
Equipment Description	Impact Device ?	Acoustical Use Factor (%)	Spec 721.560 Lmax @ 50ft (dBA, slow)	Actual Measured Lmax @ 50ft (dBA, slow) <small>(samples averaged)</small>	No. of Actual Data Samples (Count)
Other Equipment	No	50%	85	-- N/A --	0
Auger Drill Rig	No	20%	85	84	36
Tractor/Loader/Backhoe	No	40%	80	78	372
Bar Bender	No	20%	80	-- N/A --	0
Blasting	Yes	#VALUE!	94	-- N/A --	0
Boring Jack Power Unit	No	50%	80	83	1
Chain Saw	No	20%	85	84	46
Clam Shovel (dropping)	Yes	20%	93	87	4
Compactor (ground)	No	20%	80	83	57
Compressor (air)	No	40%	80	78	18
Concrete Batch Plant	No	15%	83	-- N/A --	0
Concrete Mixer Truck	No	40%	85	79	40
Concrete Pump Truck	No	20%	82	81	30
Concrete Saw	No	20%	90	90	55
Crane	No	16%	85	81	405
Dozer	No	40%	85	82	55
Drill Rig Truck	No	20%	84	79	22
Drum Mixer	No	50%	80	80	1
Dump Truck	No	40%	84	76	31
Excavator	No	40%	85	81	170
Flat Bed Truck	No	40%	84	74	4
Forklift	No	10%	75		
Front End Loader	No	40%	80	79	96
Generator	No	50%	82	81	19
Generator (<25KVA, VMS signs)	No	50%	70	73	74
Gradall	No	40%	85	83	70
Grader	No	40%	85	-- N/A --	0
Grapple (on backhoe)	No	40%	85	87	1
Horizontal Boring Hydr. Jack	No	25%	80	82	6
Hydra Break Ram	Yes	10%	90	-- N/A --	0
Impact Pile Driver	Yes	20%	95	101	11
Jackhammer	Yes	20%	85	89	133
Man Lift	No	20%	85	75	23
Mounted Impact Hammer (hoe ram)	Yes	20%	90	90	212
Pavement Scarafier	No	20%	85	90	2
Paver	No	50%	85	77	9
Pickup Truck	No	40%	55	75	1
Pneumatic Tools	No	50%	85	85	90
Pumps	No	50%	77	81	17
Refrigerator Unit	No	100%	82	73	3
Rivit Buster/chipping gun	Yes	20%	85	79	19
Rock Drill	No	20%	85	81	3
Roller	No	20%	85	80	16
Sand Blasting (Single Nozzle)	No	20%	85	96	9
Scraper	No	40%	85	84	12
Shears (on backhoe)	No	40%	85	96	5
Slurry Plant	No	100%	78	78	1
Slurry Trenching Machine	No	50%	82	80	75
Soil Mix Drill Rig	No	50%	80	-- N/A --	0
Tractor	No	40%	84	-- N/A --	0
Vacuum Excavator (Vac-truck)	No	40%	85	85	149
Vacuum Street Sweeper	No	10%	80	82	19
Ventilation Fan	No	100%	85	79	13
Vibrating Hopper	No	50%	85	87	1
Vibratory Concrete Mixer	No	20%	80	80	1
Vibratory Pile Driver	No	20%	95	101	44
Warning Horn	No	5%	85	83	12
Welder	No	40%	73	74	5

Note that the criteria in Section 7.2, Step 4 do not apply to qualitative assessments.

Step 3: Use a Quantitative Construction Vibration Assessment

Use a quantitative construction vibration assessment to estimate vibration for appropriate projects per Section 7.2, Step 1b.

For quantitative construction vibration assessments, follow the recommended procedure in this step. Vibration source levels from typical construction equipment and operations are provided below, and procedures on how to estimate construction vibration for damage and annoyance are provided in Steps 3a and 3b, respectively.

- Vibration Source Levels from Construction Equipment** – Table 7-4 presents average source levels in terms of velocity for various types of construction equipment measured under a wide variety of construction activities. The approximate rms vibration velocity levels were calculated from the PPV limits using a crest factor of 4, representing a PPV-rms difference of 12 dB. Note that although the table gives one level for each piece of equipment, there is considerable variation in reported ground vibration levels from construction activities. The data in Table 7-4 provide a reasonable estimate for a wide range of soil conditions.⁽⁶⁶⁾⁽⁶⁷⁾⁽⁶⁸⁾⁽⁶⁹⁾

Table 7-4 Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 ft, in/sec	Approximate Lv* at 25 ft
Pile Driver (impact)	upper range	1.518	112
	typical	0.644	104
Pile Driver (sonic)	upper range	0.734	105
	typical	0.17	93
Clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.21	94
Hoe Ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

* RMS velocity in decibels, VdB re 1 micro-in/sec

3a. Damage Assessment

Assess for building damage for each piece of equipment individually.

Construction vibration is generally assessed in terms of peak particle velocity (PPV), as described in Section 5.1.

- Determine the vibration source level (PPV_{ref}) for each piece of equipment at a reference distance of 25 ft as described above and in Table 7-4.
- Use Eq. 7-2 to apply the propagation adjustment to the source reference level to account for the distance from the equipment to the receiver. Note that the equation is based on point sources with normal propagation conditions.

$$PPV_{equip} = PPV_{ref} \times \left(\frac{25}{D}\right)^{1.5} \quad \text{Eq. 7-2}$$

where:

PPV_{equip} = the peak particle velocity of the equipment adjusted for distance, in/sec
 PPV_{ref} = the source reference vibration level at 25 ft, in/sec
 D = distance from the equipment to the receiver, ft

3b. Annoyance Assessment

Assess for annoyance for each piece of equipment individually. Ground-borne vibration related to human annoyance is related to rms velocity levels, expressed in VdB as described in Section 5.1.

Estimate the vibration level (L_v) using Eq. 7-3.

$$L_{v.distance} = L_{vref} - 30 \log\left(\frac{D}{25}\right) \quad \text{Eq. 7-3}$$

where:

$L_{v.distance}$ = the rms velocity level adjusted for distance, VdB
 L_{vref} = the source reference vibration level at 25 ft, VdB
 D = distance from the equipment to the receiver, ft

Step 4: Assess Construction Vibration Impact

Compare the predicted vibration levels from the Quantitative Construction Vibration Assessment with impact criteria to assess impact from construction vibration.

Assess potential damage effects from construction vibration for each piece of equipment individually. Note that equipment operating at the same time could increase vibration levels substantially, but predicting any increase could be difficult. The criteria presented in this section should be used during the environmental impact assessment phase to identify problem locations that must be addressed during the engineering phase.

Compare the PPV and approximate L_v for each piece of equipment determined in Section 7.2, Step 3 to the vibration damage criteria in Table 7-5, which is presented by building/structural category, to assess impact.⁽⁷⁰⁾⁽⁷¹⁾ The approximate rms vibration velocity levels were calculated from the PPV limits using a crest factor of 4.

Appendix H

Tribal Consultation





Santa Ynez Band of Chumash Indians
Tribal Elders' Council

P.O. Box 517 ♦ Santa Ynez ♦ CA ♦ 93460

Phone: (805)688-7997 ♦ Fax: (805)688-9578

Friday, June 14, 2024

Santa Barbara County Association of Governments
260 North San Antonio Road, Suite B
Santa Barbara, CA 93110

Att.: Fred Luna, Project Manager-Transportation Projects

Re: Santa Barbara County Last-Mile Broadband Program

Dear Mr. Luna:

Thank you for contacting the Tribal Elders' Council for the Santa Ynez Band of Chumash Indians. We would like to have a formal consultation with regards to the above-mentioned project.

Please contact Cultural Resource Archaeologist, Dr. Wendy Teeter at your earliest availability for a time and date. You may contact her via email, phone or mail. See below for contact information.

wteeter@chumash.org ; (805) 325-8630
P.O. Box 517, Santa Ynez, CA 93460

Thank you for your time and attention to this matter.

Sincerely Yours,

Crystal Mendoza

Crystal Mendoza
Administrative Assistant | Cultural Resources
Santa Ynez Band of Chumash Indians | Tribal Hall
(805) 325-5537
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